Risk management on the housing market: with a focus on low income households

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Overview

Risk exists when the outcome of future events is unknown. With risk management though, individuals, firms, states and other organizations and entities investigate what may happen in the future, in order to explore and choose different techniques to deal with these risks. This licentiate thesis is about risk management on the housing market, with a focus on low income households. Following three papers make up the thesis:

1. Policies to increase access to home ownership for low-income households,
2. Mortgage and home equity insurances for home owners and rent insurance for tenants,
3. The valuation of residential rental options.

Policies to increase access to home ownership for low-income households

The first paper, co-authored with Mikael Attehög, provides a systematic overview of a wide selection of methods or strategies used in different countries to expand but also to maintain home ownership among low income households. The strategies are divided into the four distinct time periods of a typical ‘housing career’: Down payment accumulation stage, transaction stage, ownership stage and selling stage. This article shows that there exist a large number of instruments that can be introduced if there is an interest in increasing access to home ownership for low-income households. One of the main messages delivered in this paper is that it is important to implement a set of measures that not only reduces the barriers to enter home-ownership, but also helps low-income households to handle the economic risks that home-ownership implies, in order for increased home-ownership to be sustainable. The risk mitigating insurance policies discussed in section 4 and 5 in this paper (i.e. mortgage and home equity insurance policies) might therefore be an important part of a package of measures to increase home ownership.

Moreover, considering the weak financial situation of most governments, direct subsidies and grants are probably not very interesting from a government perspective. Trends in housing policy also show that governments are relying more on markets to allocate living space among households. Policies that help the market to work better might therefore be more interesting, e.g. focusing on the households ability to signal their characteristics and strengthening various insurance markets so that they become open to more households at a reasonable price. The government would work more as a “facilitator” than as an implementer.

Mortgage and home equity insurances for home owners and rent insurance for tenants

Structural changes on the labor market (e.g. the growth of more temporarily forms of employment, self-employment and low paid work), an increasing number of relationships breakdowns, and deterioration of social security benefits are all examples of threats against sustainable ownership. Moreover, the sharp increase in real house prices the last eight years has resulted in more households being highly leveraged. Therefore, mortgage and home equity insurance policies presented in the first paper appear to be even more important. Thus this second paper discusses these insurances in more detail compared with the presentation in the first paper. In particular, problems and possible solutions associated with these insurance policies are provided.

Again, considering that trend in housing policy goes toward more reliance on markets’ ability to allocate resources, it is not unlikely that traditional rent regulation policies will be
weakened in the future. Consequently, this second paper also discusses a rental insurance policy as an alternative to traditional rent regulation. The essence of this policy is that landlords should be obliged to offer tenants rental insurance against strong increases in market rents.

The main instrument of the insurance policy is the rental option. It is a call option in the sense that a tenant who owns this option has the right, but not the obligation, to reside in the current apartment after the next rent review, paying a rent that is the lower of the market rent and the strike price (or strike rent). In other words, a tenant who owns this option will only exercise it if the market rent exceeds the strike price at the time of the rent review (the maturity date). On the other hand, the tenant will not exercise this option if the market rent ends up below the strike price, since he or she can pay the lower market rent for the following rental period. While a tenant who owns an option has a right to exercise it, the landlord is always obliged to fulfil his part of the option agreement as soon as a tenant chooses to exercise the option.

*The valuation of residential rental options*

While the first two papers aim at a broad audience interested in housing policy for increasing home ownership among low income households in general, and in risk mitigating devices for home owners and tenants in particular, this third paper only studies one insurance instrument; the proposed rental option. Furthermore, this paper discusses how such insurance could be valued. Because of the option-like features of the proposed insurance policy, this paper studies the valuation problem using option-pricing theories. Therefore, unlike the two first papers, this third paper is somewhat technical in its presentation.

One of the most interesting and important questions to study when discussing a new rent insurance instrument like the rent option studied here, is whether the insurance can be sold to tenants at a reasonable price. Indeed, the rental insurance policy not only presupposes that a landlord should be obliged to offer his tenants rental insurance, it also presupposes that there should be a price ceiling associated with the insurance. Such a rule could e.g. fix that the maximum insurance premium should not exceed 5 percent of the current rent a tenant pays. I will show that such a level might be reasonably also from the perspective of what is a "correct" price of the option. Interestingly, simulations show that it is possible to obtain “correct” insurance premiums that in fact also seem to be reasonable, thus increasing the possibility of successful marketing of the proposed insurance policy.

This paper also develops a formula for pricing a residential option with respect to a tenant’s so called outside option in which two new parameters are introduced; the tenant’s transaction cost of moving and moving threshold. This formula provides a potentially useful way of conceptualizing the way households actually might think at the time of deciding to buy an option. Simulation results show, as could be expected, that the value of an option increases with higher transaction cost of moving, and decreases with higher moving threshold.
Policies to increase access to home ownership for low-income households

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Policies to increase access to home ownership for low-income households

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Abstract

The purpose of this review article is to give a systematic overview of strategies to make home ownership affordable to more households. The strategies are divided into the four distinct time periods of a typical ‘housing career’: Down payment accumulation stage, transaction stage, ownership stage and selling stage. Research show that home ownership is the preferred choice of a majority of households. Although home ownership rates have been on the increase since World War II, there are recent signs in some large economies that this trend has been halted. It is argued that little is known on the effectiveness of a specific strategy and that a wide range of strategies are needed should the government wish to encourage home ownership. Moreover, considering the weak financial situation of most governments, direct subsidies and grants are probably not very interesting from a government perspective.

Keywords: Home ownership, low-income housing, housing policy, housing risk, mortgage
1. INTRODUCTION

   a. Background

The purpose of this article is to give a systematic overview of strategies to make home ownership affordable for more households. Home-ownership has been regarded as the preferred choice of tenure by society in most OECD-countries since World War II. Although many countries have had policies emphasizing tenure neutrality (e.g. Sweden and the Netherlands), home ownership has often been supported with a wide range of methods that make ownership economically attractive, such as grants for construction, repairs and maintenance; interest subsidies; income support and tax breaks (Yates and Whitehead 2001). Home ownership rates were therefore climbing for many years. In the United States, the home ownership rate rose from 50 to 66 percent between 1950 and 1980 (Stegman 1995). In the United Kingdom, home ownership rates increased from 40 to 68 percent between the end of World War II and 2000 (Ford et al. 2001). Countries such as, for example, Australia (Berry 1999) and Spain (Eastaway and Varo, 2002) have also experienced growth of homeownership rates.

There have, however, been signs recently in some countries that the increase of homeownership rates has been halted or that it is even slowly reversing. These countries include Australia (Berry 1999), United States (Stegman 1995) and United Kingdom (Yates and Whitehead 2001). One reason for this trend shift may simply be that it is marginally more difficult to increase homeownership rates at an already high rate. Other important factors can be changes in the welfare state, and a higher degree of labour market insecurity that makes buying a house a riskier undertaking than previously.

Many researchers have described the benefits of homeownership (e.g. Mulder and Wagner 1998; Vandell 2000; Rohe et al. 2002). First, the quality of living is better. For example, owner-occupied homes usually have a garden (an attribute that most households appreciate). Second, long-term home ownership have historically helped households to accumulate wealth. Third, there are many other positive effects from home ownership that are less tangible. These benefits are, for example, neighbourhood stability, better developmental outcomes for children, self-esteem, community participation and other social behaviours, and status.

There are also disadvantages with homeownership. First, a large part of the household wealth is tied to only one asset. Second, homeownership creates a barrier to move. Homeowners are therefore less likely than renters to move where jobs are available. Third, Glaeser and Shapiro (2002) describe the political dimension. They explain that homeowners “face incentives to raise prices by any means possible”. Homeowners have an incentive to reduce the supply of housing and follow the NotInMyBackYard-principle.

Homeownership rates do not only have an income dimension. Ethnic minority groups and immigrants are also less likely to buy a home (Sirmans and McPherson 2003). For instance, the 1990 US census statistics show that minorities and immigrants are less likely to be homeowners even after controlling for income (Ratner 1996). Similar results can be found in Europe. The difference may be explained by a lack of knowledge, shortage of affordable housing, low incomes, a cultural gap and the financial system.
b. Purpose, methodology and relation to earlier studies

The overall purpose of this article is to describe and discuss a selection of policies that would make home ownership both more affordable and accessible for low-income groups. A large number of secondary information and data from international periodicals and publications have been reviewed and analysed.

The main academic contribution of this article is that it systematically organizes a wide range of policies available to policy makers from the perspective of which period the support is directed at. Four distinct periods are identified, namely the period when the:

- household accumulates the resources necessary;
- transaction is carried out and the house is bought;
- house is owned and maintained; and
- house is sold.

Whitehead and Scanlon (2002) have previously reviewed fiscal instruments to provide affordable housing in a large selection of OECD-countries. They identify and describe briefly forty-two more or less different methods used in one or many countries. They divided their instruments into six categories subdivided into supply-side or demand-side mechanisms and further subdivided the instruments into taxes, subsidies and regulations. Our belief is that from a policy perspective it is more appropriate to focus on what kind of problem the instrument is aimed to solve, and then a division into the four periods above seems more fruitful.

The focus is not on what is the “best” approach as this can be expected to differ between countries and the specific situation on the housing market. In the final section there is, however, a discussion about what could be the most interesting policies from a Swedish perspective.

2. THE PERIOD BEFORE BUYING

Many potential first-time homebuyers face problems with (lender imposed) down payment constraints because of insufficient liquidity (wealth, capital endowments). Therefore, households that plan to change from rental accommodation to ownership must usually adapt their savings behaviour and consumption expenditures many years before they actually buy a house. Different policies that may help first-time buyers to overcome the down payment constraint are presented in this section.

First-time homebuyers might also suffer from lack of knowledge about the economic risks (e.g. interest rate and price risks) associated with purchasing a house. Another set of policies that may help first-time homebuyers is indeed aiming at improving homebuyer education and counselling. Counsellled borrowers may behave in such a manner that they exhibit a significantly smaller hazard rate of default compared to non-counselleled borrowers, and together with saving behaviour this can make it possible for the prospective home buyer to “signal” their qualities. Below are some examples of such programs.

a. Encourage households to save towards a down payment

One group of measures that may assist renters to become homeowners are those aiming at increasing the incentives to save for the down payment. These policies are not purely targeted at helping low-income households, but households with low initial wealth. Especially young
households with limited wealth for down payments have sometimes been the explicit targets for such government policies (Hendershot and White 2000). Much of the material presented below draws on Metzhak (2001) and more detailed information about the savings programs can be found in that report.

i. Registered Home Ownership Savings Plan scheme and Home Buyers’ Plan

To promote home ownership in Canada and especially to help young renters to save for home purchase, the Canadian federal government introduced the Registered Home Ownership Savings Plan (RHOSP) in 1974. The program ended in 1985.

RHOSP was a response to the large increase in real house prices in Canada in the 1970s, which made it harder for many young renters to save for home purchase. RHOSP enabled renters to establish a special account that allowed a dollar-for-dollar tax deduction for savings targeted for a down payment. The allowed annual tax deduction was limited to $1,000 (double for married couples) and lifetime individual contributions were limited to $10,000 plus earnings (and consequently $20,000 plus earnings for married couples). All interests earned on these accounts were free of tax. Previous homeowners and spouses of homeowners were not eligible.

Engelhardt (1997) studies whether the RHOSP promoted home ownership, and the empirical analyses indicates that the program increased the annual rate of transition from renting to owning for younger households by 20 percent. Moreover, participation peaked around 20 percent for renters with heads aged 25 to 29 and then declined with age. Over time a greater proportion of households aged 35 to 39 participated.

ii. EL Home savings account

A somewhat similar measure to the Canadian RHOSP account is the French Épargne Logement (EL) home savings accounts or just the EL plan. This measure converts preliminary saving into an option to borrow in the future at a pre-specified mortgage rate. Interest earned on the savings is tax-free.

The stated goal of the EL plan is “to provide housing loans to persons who previously saved for this purpose and use the savings to finance their first home”. The EL consists of two plans: Compete d’épargne Logement (CEL) and Plan d’épargne Logement (PEL). In 1965, the EL plan began as CEL and was augmented in 1969 to include PEL. Whereas PEL is a fixed savings plan, CEL is more flexible, since the amount to be saved is not fixed and withdrawals are allowed.

With CEL, a household is entitled to a low-interest mortgage loan after 18 months and a bonus of up to French Franc (FF) 7,500 depending on the amount saved. As soon as a customer has signed a CEL or a PEL plan, the interest rate for both savings and mortgages are fixed. Thus, depending on how mortgage interest rates change over the savings period, the option may or may not become profitable. The French government determines the interest rates as well as other plan conditions and the conditions are regularly changed with changes in the economic conditions.

With PEL, households sign a contract to save fixed amounts for at least four years, and PEL customers then have the right to borrow at a low mortgage rate with a bonus of up to FF10,000. The interest paid on CEL deposits is lower than the interest paid on PEL deposits, which can be seen, as the price CEL customers have to pay for having a more flexible plan. The ratio of mortgage interest to savings determines the borrowing limit.
The EL plans play an important role in housing finance. According to the French Housing Survey (1996-1997), the mean mortgage was FF430,000. Among those loans, 33 percent were EL plan mortgages.

iii. Bausparkassen

Both Tomann (1996) and Metzhak (2001) argue that a mortgage system with “conservative” banks makes it difficult for households with a modest income to receive mortgage loan. For example, German banks require 25-30 percent down payment. A positive effect of the high down payment requirement is that it lowers the risk of default due to high price volatility, but it also prevents households with low liquidity or wealth to enter the ownership market.

In Germany, the home ownership rate is relatively small in comparison to that of other developed countries (42 percent in former West Germany and about 29 percent in former East Germany). Therefore, an increased home-ownership rate became a major housing policy concern in Germany in the 1990s.

Bausparkassen is a popular savings program operated by the German building societies (Bausparkassen), which encourages households to save for a down payment. The Bausparkassen program arose after World War I and is considered to play an important role in financing homeownership for low-income households.

A household that participates in the program saves a specific amount per month at a low interest rate until a predestined total savings amount is achieved. The household is then eligible for a predetermined loan at a low interest rate. The savings are tax-deductible or generate a tax credit (for low-to-medium incomes).

iv. Rent a home with an option to buy

Potential homebuyers may for different reasons find it difficult to enter ownership. For instance, they may have difficulties in saving enough funds for the down payment, bad credit history or they may hesitate to borrow a large amount of money because of insecure future employment situation or income level. Those buyers who need an extended period to raise funds or to evaluate their future employment situation, but still want to live in a house, have in some cases an opportunity to enter an agreement to rent a house with an option to buy it later. These kinds of agreements can also be considered as a second chance for potential buyers with bad credit records. Commonly, a portion of the rent is considered to be part of a future down payment and the money is forfeited if the renter decides not to buy the home. This type of agreement has been offered potential homebuyers in the USA.

b. Improve homebuyer education and counselling

In US, there exist several homeownership counselling programs given by both non-profit organisations (e.g. community groups) as well as ordinary firms (e.g. brokers, lenders). Furthermore, it has become more usual that borrowers are required by lenders to undergo some kind of homebuyer education in order to obtain mortgage loans, and in particular so called affordable mortgage products (see below).

A few studies (e.g. Hartarska et al. 2002) find some support that counselled borrowers, who are expected to better understand how to receive and maintain a mortgage, exhibit a smaller default rate than non-counselled borrowers. Gates et al. (2002) argue that homebuyer education and counselling programs have profound implications for expanding homeownership opportunities, as well as for developing credit-scoring models that can be
used to increase the success of different affordable lending programs for both lenders and borrowers.

A home ownership-counselling program funded by HUD (U.S. Department of Housing and Urban Development) is the Homeownership Education and Learning Program (HELP).

The HELP program gives potential first-time homebuyers classroom instructions within four major themes: household budgeting and priority setting (e.g. saving for down payment), the process of shopping a home (e.g. the nature of the purchase agreement), the process of finding a mortgage lender (e.g. different types of mortgages) and the closing process. To be eligible, a household must have a relatively low income.

First-time homebuyers that have completed a counselling program like HELP can enjoy a reduction of their upfront Federal Housing Agency (FHA) mortgage insurance premium by 100 basis points.

3. THE BUYING PERIOD

a. Introduction

The different savings plans mentioned above are aiming at helping households to save towards a down payment to overcome down payment constraints. Direct assistance schemes aiming at helping households with limited wealth are less usual. An example though is the Australian First Home Owners Scheme (FHOS) adopted in 1983 but ended in 1990. FHOS like programs are now used in a few other countries. For instance, Ireland provides an up-front down payment grant (roughly 5 percent down payment subsidy) and Germany also utilizes a grant paid out over a number of years (Yates, 2003; Hendershott and White, 2000; Merrill et al. 1999).

An alternative strategy to reduce the down payment constraint is to increase the maximum loan-to-value (LTV) ratio. In the US, two the government-sponsored associations, Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Association), offer a smorgasbord of different mortgage instruments that might ease the LTV restriction. Freddie Mac’s Affordable Gold program (AG) is an example of a high LTV ratio instrument that will be presented below.

i. First Home Owner’s Scheme and First Home Owner’s grant

An ownership subsidy measure used in Australia was the First Home Owners Scheme (FHOS). FHOS provided first-time home owners with benefits equivalent almost to $6,000 in present value if their taxable income were less than 130 percent of the average male’s weekly earnings, and if the household head had more than one person that depended on his or her support. Without any dependants, the benefit was reduced. Households that borrowed money could choose among three alternatives: to take the subsidy as an up-front lump sum, a cash flow subsidy declining over five years, or a combination. The first alternative was the most popular choice.

The program was ended in 1990, partly because of high costs, and partly because of a number of criticisms. Yates (2003) refers to different researchers that argue that the FHOS merely brought forward home purchase for those who ultimately would have entered ownership anyway. For example, Bourassa et al. (1994) estimates that during its existence, the FHOS caused the ownership rate for 21- to 25-year-olds to rise from 28.5 to 37.1 percent, but also that the elimination of the FHOS measure would have delayed purchase by an average of two years for young households.
Australia implemented a tax reform in July 2000 and the introduction of a broad goods and services tax (GST) of 10 percent was a major component of the reform. To offset the anticipated impact on house prices of the introduction of the GST, the First Home Owner’s grant (FHOG) was introduced in July 2000 to assist first home buyers. Thus, a stated rationale for the re-introduction of a direct assistance measure after a decade of no direct assistance like the FHOS, was to deal with problems of access to home ownership caused by increasing house prices (Yates, 2003). FHOG provides eligible applicants with a one-off $7,000 payment.

\textit{ii. Freddie Mac’s Affordable Gold program}

In US, expanding homeownership opportunities is a long-standing objective and, in recent years, there has been a push to increase home ownership (Goldberg and Harding 2003; Quercia \textit{et al.} 2003).

Freddie Mac does not originate mortgages itself, but purchases mortgages from lenders and package them into securities that can be sold to investors. Through this securitization process, Freddie Mac aims at lowering housing costs by reducing mortgage rates for homebuyers, and increase access to home financing for low- to middle-income homeowners and renters.

In 1992, Freddie Mac introduced the Affordable Gold (AG) program. The AG program is created to relieve the maximum loan-to-value (LTV) ratio restriction for households that are wealth constrained (low level of savings/capital) but are characterized by having other positive mortgage underwriting criteria (e.g. good credit or stable income).

The AG Program consists of three major affordable loan products: AG 3/2, AG 5, and AG 97. The AG 97 scheme allows a maximum LTV ratio of 97 percent (i.e. a purchaser may buy a house with only 3 percent down payment), while the AG 5 scheme makes it possible for minority groups (e.g. Black and Hispanic households) to buy a house with a LTV ratio of 95 percent.

These lending products allow flexibility in other aspects too. The AG 3/2 allows a down payment of 5 percent, but only 3 percent must come from the borrowers themselves, while the remaining 2 percent may come from e.g. family gifts, government grant, sweat equity, and unsecured personal loan. In 1998, Freddie Mac launched the AG Alt 97 Mortgage program and again, the maximum LTV ratio is 97 percent, but alternative sources of funds for the down payment is allowed, while the AG 97 program requires that the entire 3 percent down payment comes from the borrower’s own resources.

All schemes typically require that borrowers have attended a course in home ownership (see above) and that borrowers purchase private sector mortgage insurance (PMI). In general, most lenders in the US market require that borrowers acquire a PMI if the down payment is less than 20 percent of the purchase price. This shifts most of the risk involved in securitizing the mortgage onto the PMI company (Caplin \textit{et al.} 1997). The different mortgage instruments in the AG program have different mortgage insurance requirements. Typically, potential borrowers’ income cannot exceed 100 percent of the local area’s median income.

Fanny Mae has introduced a set of low down payment mortgage solutions very similar to those offered by Freddie Mac. For example, Fanny 97 requires a down payment of only 3 percent, similar to the AG 97 instrument. The Fanny Mae counterpart to Freddie Mac’s AG Alt 97 is called Flex 97.

There exists evidence that these programs have contributed to an increase in homeownership rates in US. The empirical results of the works by Bostic and Surette (2001) and Quercia \textit{et al.} (2003) suggest that the affordable lending efforts of the last two decades, may account for the
increase in homeownership among low-income families. For instance, the growth in homeownership during the second half of the 1990’s, has to a relatively large extent came from minority households that have lower average and median wealth than white households. The data also revealed that mortgage lending to low and moderate-income households increased by 30 percent from 1993 through 1996, while lending to middle and upper income buyers increased by only 10 percent. Especially the two similar products AG Alt 97 and Flex 97 are likely to have the greatest impact on increasing homeownership opportunities for underserved households (Quercia et al. 2003).

ii. Measures that enable a more objective risk assessment

As we have seen above, more flexible mortgage products like those with very low down payments requirements might help households to enter homeownership. An important prerequisite for the development of such products though is that lenders have access to good information about their mortgage prospects.

Households can signal low credit risks by participating in savings plans like the French EL savings plan, or the German Bausparkassen, but also by undergoing a home buyer counselling program. For instance, the Bausparkassen system with its requirement that potential borrowers must accumulate savings before being eligible for a loan might help lenders to separate good and bad credit risks. Similarly, the EL Plan, which also requires that potential borrowers must save according to a plan, provides credit-worthiness information to lenders. Having access to such information can thus improve home ownership opportunity for a marginal mortgage applicant, who the lender might otherwise not know to be a good mortgage prospect.

Another factor that presumably has contributed to the increase in sub-prime lending is changes in how mortgage applications are processed and how mortgage loan portfolios are managed in the credit market. Those changes are to a large extent driven by the development in the information technology, and over the past decade automatic underwriting systems have become the tool of choice in mortgage lending decisions (Bostic and Surette 2001; Gates et al. 2002). For instance, Freddie Mac introduced its automatic underwriting system 1995, the Loan Prospector, followed by Fannie Mae’s Desktop Underwriting System. Since the two systems are quite similar only Freddie Mac’s Loan Prospector will be presented here.

First, note that Freddie Mac and Fannie Mae support and constitute the so-called secondary market for residential mortgages; they do not originate mortgages themselves, but they guarantee the credit risk of delivered loans (for more information about the secondary market, see e.g. Brueggeman and Fisher 2002). Therefore lenders pay a fee in order to receive such insurance. Because Freddie Mac and Fannie Mae guarantee credit risk on mortgages they do not originate, accurate risk assessment is crucial (Gates et al. 2002).

The Loan Prospector is a statistically based automatic underwriting system that uses two different databases in order to evaluate the borrower and the property respectively. These databases contain standardized credit information about individuals (credit history and repayment capacity) and standardized information about residential properties and their values (value of collateral) respectively.

Statistical data from a large number of observations on the actual performance of mortgages makes it possible to calculate mortgage default risk. Avery et al. (1996) evaluated the Loan Prospector and found that it can predict mortgage defaults in a satisfactory way. Other possible positive effects for lenders include a reduction in costs, faster service to potential borrowers and a decrease in the risk from charges of discrimination, compared to manual underwriting.
The Loan Prospector system brings other benefits to the borrowers as well. In addition to the fact that the Loan Prospector can distinguish between high- and low-risk loans better than manual underwriters do (Gates et al. 2002), borrowers also benefit from a reduction in closing costs, less paperwork and faster mortgage approvals, as well as less exposure to the subjectivity of the approval process due to human judgements. These benefits are likely to be more important for renters, minorities and low-income households than for other groups, which is consistent with the stated purpose of the Loan Prospector system: to increase the homeownership rate by reducing closing and administrative costs through a mortgage application and underwriting system that is viewed as fair and impartial, and which employs an integrated statistical analysis of the numerous factors affecting loan eligibility (Metzhak 2001).

Both Gates et al. (2002) and Bostic and Surette (2001) suggest that the introduction of automatic underwriting systems may have had a positive effect on higher approval rates for lower-income families, and therefore also has may have caused an increase in homeownership rates for underserved groups. But still, those suggestions must be verified.

### iii. Reduced transaction costs

The importance of transaction costs for the residential housing market varies substantially between countries. In average, transaction costs are estimated to be about 13.8 percent of the price in France, 9.0 percent in USA, 7.1 percent in Germany and only 2.0 percent in the United Kingdom (Maclennan et al. 1998). Transaction costs can consist of, for instance, capital gains tax, brokerage fee, the direct cost of a move and stamp duty. It is only the last of these that is of relevance for this article. Capital gains tax and brokerage fees only affect households who already own their house and all households may be able to reduce the cost of a move by doing the work themselves.

Andrew et al. (2003) shows that the present stamp duty structure in the United Kingdom will punish specific regions and first-time buyers. In UK, it will especially punish buyers in the South-eastern part of the country and Greater London as house prices have increased considerably more in these regions than elsewhere. The trend of the UK housing market is not unique. Most countries in Western Europe have experienced an increased regional polarization of the development of house prices and an overall strong performance of housing markets.

Countries apply different tax scales on property transactions. Whereas buyers in Sweden will need to pay a flat rate of 1.5 percent of the price in stamp duty, buyers in United Kingdom will have to pay a percentage of the sales price ranging from 0 percent (if the price is below £60,000) to 4 percent (if the price is above £500,000) (Andrew et al. 2003). The second method should in general be advantageous for low-income households, as they will be looking for affordable houses. Andrew et al. (2003) shows empirically that there are an unproportionally large number of transactions just below each break point. This implies that the market adjusts the price to avoid tax.

### iv. Mortgage brokers

In the United States and the United Kingdom, there are many companies that provide this service. Mortgage brokers can help low-income households to find the most affordable loans. The National Association of Mortgage Brokers (NAMB) in the USA even indicates on their website that their objective is to assist low-income households. Moreover, NAMB claim that two-third of the American mortgagors already use a mortgage broker.
Mortgage brokers can be instrumental in increasing competition and thereby reducing loan interest rates and improving terms. Inexperienced households typically face an information problem regarding complex mortgage terms and different interest rates. It is also often difficult to compare different lenders. On the United Kingdom site, www.ukmortgageonline.com, it is possible to compare the exact terms of about 105 lenders without any costs. There is also a "mortgage wizard" that will help the lender to fill in an application form with all the necessary information. Since comparisons between lenders are very easy and visible, it is reasonable to believe that this facility increase competition on the UK lending market. Governments in countries without a similar service may wish to increase competition by setting up a similar facility.

4. THE PERIOD OF OWNERSHIP

In many developed countries, owner-occupation has increased strongly since the late 1950s and today, owner-occupation reaches much further down on the income scale than it did some decades ago (Kemp and Pryce 2002). An increasing amount of relationship breakdowns and changes in the labour market also result in a larger share of low-income homeowners (Burrows and Wilcox 2000). Since homeownership attainability is not only based on the ability to save enough money for the necessary down payment, but also based on the ability to afford continuing payments after a purchase (Quercia et al. 2003), it is important to focus on methods that can support low-income households to enjoy a sustainable ownership and not only to help low-income households to enter ownership.

a. Measures that can reduce property tax and mortgage costs

i. Property tax relief for low-income households

Property values have increased during recent year in many European countries and in some areas dramatically (SOU 2003:3 - Sweden; Andrew et al. 2003 - United Kingdom). Governments in many countries have introduced methods to alleviate the situation for certain groups of the population. In this context, it is relevant for policy makers to discuss if all low-income groups or only certain groups should benefit from property tax relief, and what would be the negative consequences on the economic system from a reduction of the tax for specific groups. For instance, should both pensioners and families with small children benefit? Should there be a distinction between first-time buyers with big loans and "long-time” property owners with a modest loan burden?

France, Sweden and the United Kingdom have introduced property tax relief for newly constructed and/or renovated houses (Whitehead and Scanlon, 2002). A method that more target low-income groups has been introduced in Sweden, namely the so-called "limitation rule” which is applied on property taxes. Property taxes may not be higher than five percent of the gross household income unless the values of the property and/or other household assets exceed a specified level.

Many states in USA have introduced legislation that curb the impact of the property tax on low-income households, for instance the state of Massachusetts that adopted the Proposition 2½ in 1980. Proposition 2½ contains two limitations (Town of Shrewsbury 2003):

- The property tax levy ceiling (the amount raised) can never exceed 2.5 percent of the full cash value of all taxable property in the city or town.
- The property tax levy cannot increase from year to year by more than 2.5 percent, with certain exceptions as adopted by the voters.

Most low-income households have relatively small margins and they are therefore especially affected by dramatic increases in property taxes. Younger households with children often have the smallest margins and highest debt burden. For these households, it is especially important to have time to plan for all costs and they would therefore benefit considerably from systems that limit the increase in the property tax.

Bradbury et al. (2001) evaluated proposition 2½ with data for the period 1990-1994. They find that some Massachusetts communities faced ”significant fiscal stress” as a consequence from proposition 2½. The communities were experiencing a period of a relatively quick increase of the need for school spending as well as a cut in government transfers. Policy makers would need to evaluate the significance of this result.

**ii. Mortgage interest deduction**

Mortgage interest deduction (MID) is a common feature in taxation policies. Comparing 14 OECD-countries, about half of these countries allowed mortgage interest deduction (Whitehead and Scanlon 2001). Mortgage interest deduction is also usually a considerable fiscal burden in countries that allow it. For instance, it was expected to cost the United States treasury 52 billion US-dollars in 1998 (Bourassa and Grigsby 2000). Some countries (e.g. the Netherlands) compensate the loss of fiscal revenues with taxation on the imputed rental values of the owner-occupied homes.

The rationale and ”fairness” of MID is a very complex issue and MID cannot be evaluated separately as the various fiscal instruments are delicately intertwined. At the crossroads in any assessment of MID would be to decide whether owner-occupied housing is mostly a durable consumption good (such as a car) or mostly an investment (such as shares or bonds). Whereas a pure investment only provides monetary values to its owner, durable consumption goods also provide non-monetary values (SOU 2000). Although the existence of mortgage interest deductions is frequently questioned, it is not meaningful in this report to get too involved in these discussions. Our analysis will mainly focus on issues relevant to vertical equity effects between income groups and possibilities to increase homeownership.

Bourassa and Grigsby (2000) state that many opponents to the deduction argue that MID provides undue benefits to higher-income households at the expense of low-income households. They explain that 90 percent of MID goes to households with annual earnings above 500,000 US-dollars. Scanlon and Whitehead (2001) believe that mortgage rates deductible at the taxpayer’s marginal tax rates favours high earners. However, Weicher (2000) claims that this is fair as high-income earners pay considerably more in tax in the first place. Bourassa and Grigsby (2000) also argue that there may be a tenure neutrality problem as homeowners are favoured over renters although they also mention that most of the deduction is probably anyhow capitalized into house prices. Weicher (2000) and Vandell (2000) argue that the many positive implications (less crime, neighbourhood development, child development, etc) from home-ownership compared to renting justifies MID. Weicher continues his argument with claiming that the homeownership favouritism in the US context is actually related to the non-taxation of imputed rents and not MID.

Both Englund (2002) and Weicher (2000) state that it is necessary to keep MID for efficiency and equity reasons as homeowners with an equity would otherwise be favoured to homeowners who finance their home investments with high LTVs. Follain and Melamed (1998) conclude that young families and upper-middle income groups (due to the MID system
in the United States) benefit mostly. It is likely that young families and first-time buyers would be affected by the removal of MID in most countries as they usually have a lower equity share.

Many countries have policy instruments targeting specific groups. In Belgium and France, the amount deductible depend on the family size and, in Ireland, first-time buyers are allowed more mortgage interest deductions during the first five years after purchase (Scanlon and Whitehead 2001).

In the United States, there are two methods to deduct mortgage interest, the itemized and the standardized method. The deductions are more substantial with the itemized method but this method is only profitable for households with high incomes. In Sweden thirty percent of a negative net interest balance up to a maximum of 100 000 SEK is deductible and, above this level, MID allowance is reduced.

Most high-income earners would arguably find ways to live in owner-occupied housing independently of the existence of mortgage interest deductions. In fact, Rosen (1989) calculated that the absence of MID would only have decreased homeownership from 63.7 percent to 62.0 percent in the United States in 1988. According to Bourassa and Grigsby (2000), the interpretation of Rosen’s calculations is not altogether clear, as the measurement period is too short. Moreover, Capozza et al. (1997) also find that changes in tax advantages have little impact on home ownership and housing investment. Glaeser and Shapiro (2002) also concludes that MID has little impact on home ownership rates and suggest that other government policies, such as those which reduce down payment levels for low-income households, are much more effective in influencing the homeownership rate. Anderson and Roy (2000) assess the distributional effects, and their analysis show that removing MID and property taxes would make the income tax substantially more progressive. Furthermore, Vandell (2000) believes that removing the mortgage interest deductions entirely may otherwise actually improve the relative situation for low-income groups since “downward filtering” might find more of the housing stock available and affordable than previously.

iii. Shared-Appreciation Mortgage (SAM)

With a loan based on the principle of shared appreciation mortgage, the buyer will gain some advantages in the form of reduced interest costs in return for giving up some of the appreciation to the lender. SAMs are rather flexible as the terms can be adjusted fairly easily depending on the needs of the borrower.

The Bank of Scotland in the United Kingdom has offered two versions of SAMs since 1997. In one version, an interest rate of zero percent is offered on an amount up to a maximum of 25 percent of the value of the property in return for an appreciation of three times the loan-to-value ratio. For instance, if the loan were equivalent to 10 percent of the value of the property then the Bank of Scotland would obtain 30 percent of the appreciation. This version was expected to appeal to cash-poor elderly households.

In the other version, borrowers were allowed any amount with an interest rate that was 2 percent lower than the standard home interest rate in 1997. However, the bank would obtain a share of the appreciation equal to the loan to value ratio, e.g. if the value of the loan equals 60 percent of the property value then the Bank of Scotland would get 60 percent of the appreciation. It was expected that this loan would appeal to those with a large existing mortgage or to buyers with a large down payment but a relatively low income. There are some terms that apply to both versions. Notably, the Bank does not share in any depreciation and it is therefore protected against any downturns.
SAMs has been much more common in the United States than in Europe. Terms are often negotiable in the US and depend on factors such as loan-to-value ratio, how the lenders estimate the potential of the specific property and how risk averse the lender is. A 40/40 split is common which means that the borrower will get an interest level, which is 40 percent lower than the standard interest rate for homes on the market in return for 40 percent of the appreciation. There are some stipulations regarding SAMs in the United States that may be important to mention, e.g. that it is usually strictly regulated that only the borrower is allowed to use the property. This is partly motivated by the inherent moral hazard problem with SAMs (Schiller and Weiss 2000).

However, although SAMs have been discussed for many decades, it has been slow to break through. This may have to do with the conservative and careful nature of the banking sector as well as the moral hazard problem, but it may also be the customers who feel that letting go of a large chunk of the appreciation is somehow against one of the main reasons for owning property; the creation of an economic foundation for one’s family.

b. Measures that promotes improvement and renovation

i. Improvement and renovation grants

There is probably a very strong correlation between the quality of the house and family income. It is often older and/or not so well maintained housing that is within an affordable price range for low-income households. It is generally believed that much of the supplied low-cost housing are made available indirectly through a filtering process rather than through new construction (Malpezzi and Green 1996).

A comprehensive housing condition survey in the UK from 1996 provides detailed information on the quality of housing. The survey shows that the majority of the households living in poor housing conditions are homeowners. In fact, households in the lowest income quintile are three times more likely to live in housing in need of modernisation than households in the highest income quintile (Burrows and Wilcox 2000). In addition, the survey shows that more of the households in the lowest income quintile live in owner-occupied dwellings in poor condition than in any other tenure (Burrows and Wilcox 2000).

Although their dwellings often are in worse shape, low-income groups still spend a larger proportion of their income on maintenance than wealthier households (Malpezzi and Green 1996). Low-income households in the UK spend roughly four per cent in average of their household income on maintenance, which still amounts to less in actual figures than what, for instance, English councils in average spend on rental units (Burrows and Wilcox 2000).

Provision of a system that encourage maintenance and renovation can be important if the objective of the policy-maker is to attract low-income household into ownership of their dwellings and increase the number of homeowners. Leather (2000) provides an overview of the development of renovation grants in the UK from its origin in the 1940s. It was relatively easy to obtain renovation grants in the 1980s. However, the government changed its policies in the 1990s and maintenance and renovation are now mainly the economic responsibility of the homeowner. It has become very difficult to attain renovation grants. Leather further argues that the new policy direction favours to a large extent elderly and disabled households (Leather, 2000). As a comparison, the trend of diminishing availability of renovation grants also applies to Sweden.

Some of the previous and existing systems of renovation grants have been means-tested and some have not. As governments will continue to be financially restrained, means testing is
likely to be a component of future grants systems. It is also likely that the main objective of grant systems may be on ascertaining that all homes reach a specified minimum standard level. Furthermore, one option would be to replace capital grants with aid to meet the interest costs of loans for renovation. Another option would be to encourage existing homeowners to use the equity built into the property values.

An interesting aspect of maintenance is suggested by Gyourko and Tracy (2003). They suggest that maintenance could play an important role in consumption smoothing. A household in an owner-occupied dwelling would carry out major repairs when the household can afford it and mainly do basic maintenance when, for instance, a household member in working age is unemployed. Since ownership is more rare among low-income groups, they are to some extent denied this opportunity to buffer between good and bad times.

c. Measures that can assist mortgagors in financial distress

i. Overview

A number of articles from different academic disciplines point out the trend of increasing insecurity in households’ incomes. Two common causes are increasing insecurity in the labour market and the rising incidence of relationship breakdown, but also the increase in long term absence from work due to illness. But owning a home, especially when the owner has borrowed money for the purchase of the home, has traditionally been associated with stable household incomes founded on secure employments and stable relationships. Thus, an increasing income risk in combination with an augmenting supply of mortgage credit to low-income households may result in an increase in the incidence of mortgage arrears and possessions. Income risk also plays an important role in a household’s tenure choice decision; higher income uncertainty decreases the probability of owning (Robst et al. 1999).

The experience of mortgage repossession and the following rehousing can be enormously stressful. For instance, Burrows et al. (1999) examined the social consequences of mortgage repossessions for 30 families with children in UK. They found that repossession often led to long-term poverty and substantial debt. Women were particularly vulnerable in cases where the repossession was the result of relationship breakdown.

In UK, a key objective of housing policy is sustainable owner occupation and in a world of increasing uncertainty, the presence and effectiveness of safety nets for homeowners to provide support with mortgage (and eventually interest) payments due to considerable income losses is a key policy issue. Therefore, there is a large literature on safety net provision provided in UK: the state safety net ISMI (Income Support for Mortgage Interest) and the private insurance MPPI (Mortgage Payments Protection Insurance). In the following section, ISMI and MPPI will be presented.

In developed housing finance markets, like US and Hong Kong markets, mortgage insurance has become an important tool not only to protect borrowers against mortgage arrears and possessions but also to assist borrowers in receiving higher amounts of housing loans than would have been possible otherwise. Mortgage insurance has also become an important instrument to cover some of the risks incurred by housing finance institutions or investors in mortgage-backed securities (Tiwari 2001).

ii. Income Support for Mortgage Interest and Mortgage Payment Protection Insurance

Mortgage Payment Protection Insurance (MPPI) is a private insurance system while the Income Support for Mortgage Interest (ISMI) is provided by the state. The insurance policies
cover a mortgager’s monthly mortgage repayments if he or she is unable to work because of unemployment, accident, or sickness. MPPI covers both interest payments and amortisation, while ISMI covers only interest payments (Keogh and Pryce 2002). There are also some other differences, for instance, while MPPI covers single parents following a relationship breakdown or death of a partner, ISMI does not regard relationship breakdown as an eligible criterion. Another difference is that ISMI takes into account a household’s savings, while MPPI payouts are independent of a householder’s financial resources (Ford et al. 1999).

There is an on-going debate in UK whether MPPI is an effective private insurance system or not (Ford et al. 1999; Keogh and Pryce 2002, and Kemp and Pryce 2002). A background to the MPPI debate is the policy changes of 1995 regarding the state safety net ISMI.

From the introduction of the ISMI in 1948, no substantial change was made until 1987. During that period, the state safety net covered full mortgage for those eligible. However, after the changes in 1987 mortgage borrowers eligible for ISMI were entitled to half interest payments for the two first months, and full eligible interest thereafter. But it was the 1995 reform that restricted the safety net for mortgagors in several important ways. For instance, by delaying ISMI payments much further compared to the 1987 changes, and implementing more restrictive eligibility criteria. Another important change was that the calculations of the size of the assistance were based on a “standard interest rate” instead of actual mortgage interest payments. (Details about the 1995 changes can be found in Kemp and Pryce 2002).

An argument for the reduction in the state safety net was to shift responsibility for mortgage payment protection from the state to the mortgagor. The Government expected that homeowners would take out private MPPI to a greater extent after the 1995 reform. Though UK researchers have found that affordability is an important driver of MPPI take-up rates. In other words, low-income mortgagors found it harder to afford a private insurance. Low-income borrowers were especially likely to develop arrears. Low-income households that were dependent on ISMI only, had few other financial resources that could be used to pay mortgage interest during the “wait” period. For those who had bought a private insurance (MPPI), about 4 in 5 did avoid arrears, but about 1 in 5 did not. Moreover, many mortgagors who were denied MPPI payouts developed arrears. For a more exhaustive summary of the effectiveness of MPPI and ISMI, see Ford et al. (1999) and Keogh and Pryce (2002). The researchers conclude that private MPPI has a role to play, but that private insurance is not a good enough substitute for a state-provided protection, especially for low-income groups.

5. THE SELLING PERIOD: MEASURES TO COPE WITH PRICE RISK

Choosing to own a home is both a consumption decision and an investment decision and typically, an investment in a house results in a heavily unbalanced and leveraged portfolio. Home equity may, especially for low-income households, be the dominant form of wealth. Thus, the house price risk that particularly low-income owners may be exposed to, cannot be diversified away because of wealth constraints.

Several studies show that price risks reduce the desirability to buy a home (e.g. see Caplin et al. 2003; Turner 2000; and Robst et al. 1999). Different proposals have been put forth to reduce the price risk a homeowner faces. Case et al. (1993) propose an opening of futures and option markets on real estate to better allow diversification and hedging. Caplin et al. (1997) propose the development of a new “partnership market”, in which would-be homeowners can exercise an option of owning part of a house. The other part would be financed with an institutional investor. Shiller and Weiss (1999) propose some choices for the design of home equity insurance policies, including pass-through futures and options, and a life-event-
triggered insurance policy. Using a rich source of data on house prices in Stockholm, Englund \textit{et al.} (2000) argue that homeowners can actually gain from improved hedging opportunities of their investments in housing, for instance by taking positions in a price index for owner-occupied housing.

However, neither of these proposals has been implemented in practice with success so far. For instance, most homeowners are unsophisticated financial managers and unfamiliar with derivatives like futures and options (Case \textit{et al.} 1995), while implementing a housing partnership market would imply a fundamentally new set of market institutions (Caplin \textit{et al.} 1997). Yet another problem is that the attractiveness of a derivatives market in housing index futures depends on the quality and integrity of the indices (Englund \textit{et al.} 2000).

Another risk-reducing instrument that actually is currently being tested is home equity insurance, in which insurance payouts are based on changes in a house price index. A pilot project has been initiated in Syracuse, New York. The development and implementation of the home equity insurance pilot project in Syracuse, New York, are documented in Goetzmann \textit{et al.} (2003).³

The equity insurance product is called "Home Equity Protection" (HEP). The basic idea is the following: when a homeowner signs up for the HEP, he or she actually buys a put option. The put option gives the owner the right to sell a futures contract at a price pegged to average home prices in his or her ZIP-code.⁴ When the house owner sells the home, and if the house prices then have dropped in the homeowner’s ZIP-code, the owner will exercise the put option and receive money from the insurer, no matter what the actual selling price is. The owner will not exercise the option if home prices have increased. The homeowner can choose the size of the protection, the “Protected Value”, and typically it should be close to the current value of the home.

One advantage of basing insurance payouts on the changes of a local house price index, instead of changes in the price of individual homes, is that homeowners can be insured against changes in local prices, but still have incentives to invest in keeping their own house in good condition. Thus, basing HEP payments on changes in price index solves an important moral hazard problem. According to Goetzmann \textit{et al.} (2003), a fundamental question in developing the insurance product in Syracuse was how to best construct an index for the insurance purposes.

The insurance has duration of 30 years and it is only available after a three-year waiting period from the time of enrolment. The insurance premium is set to 1.5 percent of the Protected Value of the home. This is a one-time fee covering the thirty-year life of the insurance product and it is supposed to equate insurance premiums to expected payouts (including administrative costs).

6. CONCLUDING REFLECTIONS

This article has shown that there exist a large number of instruments that can be introduced if there is an interest in increasing access to home ownership for low-income households. With this in mind, we would like to make the following concluding reflections:

- In order for increased home-ownership to be sustainable it is important to implement a set of measures that not only reduces the barriers to enter home-ownership, but also helps low-income households to handle the economic risks that home-ownership implies. The
insurance policies discussed in section 4 and 5 might therefore an important part of a package of measures to increase home ownership.

- The knowledge of the effectiveness of the different policies are limited, and this could be an argument for not thinking in terms of what is the most efficient measure but instead focusing on a set of measures that do not depend upon the effectiveness of a specific measure. The type of measure that is appropriate will also depend on the economic situation, cultural context and general beliefs in the specific country.

- Given the rather weak financial situation of most governments, direct subsidies and grants are probably not very interesting from a government perspective. Trying to limit these to very limited groups always raises questions of fairness and lead to strategic behaviour from the households. Policies that help the market to work better might therefore be more interesting, e.g. focusing on the households ability to signal their characteristics and strengthening various insurance markets so that they become open to more households at a reasonable price. The government would work more as a “facilitator” than as an implementer.

NOTES

1 Several studies show the impact of income and wealth constraints on individual home ownership propensities. Linneman and Wachter (1989) and Zorn (1989) find that both income and wealth (down payment) constraints reduce homeownership propensities. Jones (1989) provides evidence that wealth or down payment constraint plays a prominent, and perhaps the critical role in determining the tenure transition to first-time homeownership (see also Boehm 1993; Engelhardt 1994; Jones 1995, and Haurin et al. 1997).

2 This figure and the figure in the next paragraph are based on conditions for 1999.

3 “Frequently Asked Questions” about the HEP program can be downloaded from www.nw.org/network/comstrat/homeEquity/default.asp.

4 In general, a futures contract is an agreement to buy or sell an asset at a certain time in the future at a predetermined price. Option on futures gives the buyer the right (but not the obligation) to buy or sell a futures contract at a later date at a price agreed upon today.

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Mortgage and Home Equity Insurances for Home Owners and Rent Insurance for Tenants

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Mortgage and home equity insurance for home owners and rent insurance for tenants

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Abstract

Households face many different kinds of risks that are related to ownership and tenancy. For instance, home owners face both financial and capital risk, whereas tenants face risks related to rent level. The present paper focuses on mortgage and home equity insurance devices for home owners, and rent insurance instruments for tenants. Mortgage and home equity insurances might improve both households’ as well as lenders possibilities to manage risks related to home purchases, financial commitments and lending. Mortgage insurance instruments aims at mitigating the risk of mortgage default and loan losses resulting from a foreclosure process, while home equity insurance provide protection against capital losses. Furthermore, these insurance instruments might also be usable for expanding home ownership for low-income households. This paper also discusses a rental insurance policy as an alternative to traditional rent regulation. A main feature of this policy is that landlords are supposed to be obliged to offer tenants rental insurance against strong increases in market rents.

Keywords: Home ownership, low-income housing, mortgage insurance, housing policy, home equity insurance, rent insurance
1. Introduction

The word “sustainability” has become a popular and important word in economic policy making, especially when macroeconomic growth with generational and environmental considerations is discussed. From an economic point of view, sustainability can be interpreted as “the possibility that the things we value in the present will continue to exist in the future” (Harris and Goodwin 2003). Sustainable owner occupation and tenancy may from this point of view imply that a home owner or a tenant have enough means to stay in their existing home, even during (temporal) periods of harsh economic circumstances. Indeed, the question of sustainable owner occupation and tenancy plays a prominent part in the current housing policy debate in some countries. For instance, the last eight years of British housing policy debate concerns sustainable owner occupation (see Ford et al. 2001; Ford and Burrows 1999; Ford and Wilcox 1998).

The background to the British debate can be traced back to the structural changes on the British housing market, financial market, labour market and household structures as well as the 1995 changes on the state-provided mortgage safety net (see below). The structural changes have resulted in more households facing higher degree of income uncertainties, high debt-income ratios as well as high loan-to-value ratios. These structural changes are not characteristic for Britain only, but also for a large number of other European countries. To maintain sustainable owner occupation and tenancy in a risky society (e.g. a society where many households face volatile incomes, rent increases and equity values), and thus to increase the households’ utility and well-being, the presence of effective insurance devises that can neutralize, or at least mitigate, some of the most important risks, may be of great importance.

Indeed, if a person is risk averse, which most people probably are, he or she will be willing to pay to avoid risk. This is the basis for all insurance. The purpose of this report is to describe a selection of insurance instruments that households can buy to reduce risks they face as home owners or tenants. I also discuss mortgage insurance products that protect lenders (owners or investors of a loan) if the borrower defaults. A special treatment of risks related to condominiums are left out in this paper since some of the risks that households living in condominiums face are rather similar to those that house-owners are exposed to (e.g. capital risk).

Households face many different kinds of risks that are related to ownership and tenancy. For instance, Lind (1999a) describes risks related to owner-occupation (expenditure risks and capital risk) as well as risks related to tenancy (e.g. risks related to rent level, renewal of rental contracts and maintenance). In addition to those risks, Lind reflects over political risks on the housing market, especially risks concerning the uncertainty related to government regulations and subsidies.

The present paper focuses on mortgage and home equity insurance devices for home owners, and rent insurance instruments for tenants. These devices are probably most interesting to discuss from a Swedish perspective. The text about mortgage and home equity insurance policies is based on published literature that analyses and discusses the experiences from the British and the US housing markets. On the other hand, the discussion about rent insurance is based upon a hypothetical case, in which a insurance policy has replaced a rent regulation system. The idea of substituting rent regulation for more sophisticated contracts like rent insurance devices is developed in Lind (1999b) and the purpose here is to develop a
framework of how such rent insurance devices can be shaped in a little bit more detail. In a forthcoming paper, I will discuss how such rent insurances can be priced. To keep this paper within limits, any detailed specification of rules, conditions and prices regarding the insurance objects are omitted.

This paper is organized as follows. Section 2 presents and discusses two types of mortgage insurance instruments; mortgage insurance for the US housing financing markets, and mortgage insurance that is a part of the residential housing policy environment in UK. Another type of insurance device for the home ownership market, home equity insurance, is presented and discussed in section 3. Section 4 presents a rent insurance instrument that could be an alternative to rent regulation. Finally, section 5 concludes this paper.
2. Mortgage insurances

It can be argued that the theory of credit rationing and imperfect information (see Stiglitz and Weiss 1981) is the theoretical basis for the existence of mortgage insurances. Lenders ration mortgage credit to potential home buyers in mainly two ways: they limit access to credit only to those who make an enough large down payment; and second, they limit eligibility for credit to those able to satisfy lender-imposed payment-to-income constraints (Buckley et al. 2003).

In this paper, two different categories of mortgage insurances are presented. The first category refers to insurances that protect mortgage borrowers (and indirectly lenders) from mortgage foreclosure caused by income losses due to accident, sickness or unemployment. The second category concerns insurances that protect lenders against losses that result from defaults on home mortgages (i.e. if the borrower does not repay the loan). ¹

The main difference from a borrower’s perspective between the two categories is that whereas insurances that protect borrowers are aiming at helping borrowers to stay in their house during periods of income losses (e.g. due to involuntary unemployment), insurances that protect lenders are aiming at helping households with no or little wealth to get access to low down payment mortgage solutions. ² But this distinction between the two categories is perhaps a bit exaggerated, since it should be easier for a household to obtain a mortgage loan when lenders expect that the household’s ability to pay interest and amortization is sufficient.

Mortgage insurances that protect lenders play an active role in the US housing financing markets, while the second category of mortgage insurances is a part of the residential housing policy environment in UK. In the sections that follow, we will describe and discuss the two categories of mortgage insurances that exist in Britain and the US respectively.

2.1 Mortgage insurances that protects borrowers (Britain)

The UK housing policy has been characterized by promotion of building houses for owner occupation, transforming rental housing to owner-occupation, and by obtaining sustainable owner occupation. Indeed, home-ownership has been promoted as the preferred tenure by both the big political parties (Conservative and Labour) in the post-war period (e.g. see Pryce and Keoghan 2002). But the growth of home ownership in Britain, from 29 percent 1945 to 68 percent 1990 (Angel 2000), resulting in an extension of homeownership down the socio-economic scale, in combination with the deregulation of the financial markets and higher house prices, has considerably increased the risk for mortgage arrears and possessions. A growing insecurity on the labour market and a high rate of relationship breakdowns, resulting in an increase in household income risk, has further increased the risk of mortgage default. Indeed, Ford and Wilcox (1998) state a number of interrelated characteristics of sustainable home ownership in the UK: long term credit contract, which requires secure and continuous employment or equivalent secure (replacement) income from public or private safety net, income that can adjust to increasing mortgage interest rates, enough income to cover home

¹ Another mortgage insurance is the mortgage life insurance, which pays off a mortgage if the borrower dies or becomes disabled.

² Atterhög and Song (2003) presents public policy solutions that provide tax subsidy savings schemes to help potential home buyers to overcome lender-imposed down-payment constraints. This paper only discusses insurance solutions.
maintenance expenses and costs for insurance premium (including mortgage payment insurance or income maintenance insurance) and finally two income households.

The changes in the labour market are thus a potential threat against sustainable home ownership. Ford and Wilcox (1998) discuss three aspects of changing labour market structures and their impact on sustainable home ownership: the growth of employment instabilities, the rising incidence of unemployment and the growth of low paid employment. They argue that the impact of the changes in the labour market may result in badly maintained houses and financial difficulties resulting in mortgage arrears and possessions. To avoid an increase in the number of households facing financial difficulties, the presence and effectiveness of safety-nets to provide support with mortgage (and eventually interest) payments due to considerable income losses is thus a key policy issue.

There is a large and growing literature on safety net provision provided in Britain covering different aspects of the safety-nets. Two related key issues that are debated intensively is whether the safety-nets are effective in helping borrowers in economic distress, and if those households that most need a safety-net have access to it (see e.g. Kemp and Pryce 2002; Pryce and Keoghan 2002). Here I will summarize the debate regarding the two issues. But first, I present a very brief overview over the two safety-net accessible on the housing market.

2.1.1 Brief overview over MPPI and ISMI

Mortgage Payment Protection Insurance (MPPI) is a private insurance system as opposed to the Income Support for Mortgage Interest (ISMI), which is provided by the state. ISMI was first introduced into the Britain in 1948, while MPPI has been available in the UK since the late 1970s. The insurance policies cover a mortgager’s monthly mortgage repayments if he or she is unable to work because of unemployment, accident, or sickness. MPPI covers both interest payments and amortisation, while ISMI covers only interest payments (Pryce and Keoghan 2002). There are also some other differences, for instance, while MPPI covers single parents following a relationship breakdown or death of a partner, ISMI does not regard relationship breakdown as an eligible criterion. Another difference is that ISMI takes into account a household’s savings, while MPPI payouts are independent of a households financial resources (Ford et al. 1999). Only low-income mortgagors with no income (all members of the household must be unemployed) or no ability to work and small savings have access to state support. In February 1999, about 320 000 households in Britain were receiving ISMI (Ford and Quilgars 2001).

2.1.2 Are the ISMI and MPPI safety nets effective?

The mortgage insurance debate in UK is mainly concerned with the effectiveness of ISMI and MPPI. This is true about MPPI in particular and the focus on MPPI can be seen in the light of the October 1995 ISMI reform that restricted the state-provided safety net for mortgagors in several important ways. A major aim for the reduction in the state safety net was to shift responsibility for mortgage payment protection from the state to the mortgagor. That is, current Government policy expects that mortgage borrowers rely on private MPPI to a much greater extent after the 1995 reform of ISMI, instead of relying on the state safety net. An attendant question is whether private insurance is a good enough substitute for the state-provided protection, especially among low-income groups.

3 Details about the 1995 changes and the underlying causes to the changes can be found in Kemp and Pryce (2002) and Pryce (2002).
There are several researchers that conclude that the actual take-up of MPPI is below expectations in general, and particularly that those who are most in need for a protection are uninsured to a greater extent. They also conclude that MPPI is not a good enough substitute for ISMI, especially for low-income households. For instance, Pryce and Keoghan (2002) conclude that “neither those in the riskiest categories of employment, nor those with the least financial resources, have the highest rates of MPPI take-up” (p. 87). Also Ford and Quilgars (2001) and Kempson et al. (1999) find that low-income mortgagors are least likely to buy MPPI. In case they have access to it, they are less likely than better off borrowers to claim MPPI successfully in order to avoid arrears.

Since low-income borrowers are the most vulnerable to financial risks associated with home ownership, access to MPPI is thus, at least in theory, something that should be very appropriate for low-income borrowers. Indeed the theory of adverse selection tells us that “only bad risks apply”, i.e. the tendency of those belonging to more risky categories to get insurance. But the take-up of MPPI among low-income borrowers is significantly below that of higher-income borrowers - mostly good risks apply for MPPI. In other words, favourable selection is prevailing, and this is quite the contrary of what the theory of adverse selection predicts. Why then is MPPI take-up so low, especially among those most in need? A number of causes can provide evidence for the low take-up rate and the most important of them are probably: affordability of MPPI, coverage and effectiveness of MPPI.

Affordability is probably an important factor that can determine MPPI take-up rates. Low-income borrowers spend in general a higher share of their incomes on housing costs compared to high-income households and thus they are less likely to afford to buy MPPI. For instance, low-income borrowers, especially defined as those having access to state support, have very limited amount of liquidity (after that other household's basic expenses have been paid for) and savings to pay MPPI insurance premium.

Pryce and Keoghan (2002) find that households with a larger number of children relative to the number of adults (and thus have a higher ratio of expenses to incomes) have significantly lower MPPI take-up rates. But it is unclear whether number of children in a household affects MPPI take-up rates in a significant way. The complex relationship between MPPI take-up rates and explanatory variables, problems with measurement errors, omitted variables and problems with access to data, may cause ambiguous results. For instance, Pryce and Keoghan (2001) find that number of children in a household has no statistical significant effect on MPPI-take up, as opposed to the findings of Pryce and Keoghan (2002).

It is argued that less favourable coverage and restrictive clauses of MPPI influence take-up in a negative way. This is especially true if it is known among borrowers that the insurance policy does not cover the most relevant risks. For instance, Ford and Quilgars (2001) find that a significant proportion of low-income borrowers with MPPI were unable to claim on the policy on becoming unemployed.

A large number of households are probably in the erroneous belief that MPPI covers much larger number of different circumstances than it actually does. Ford (2000) lists a number of

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4 For instance, low-income borrowers face the highest risk of unemployment (Walker et al., 1995) and highest risk of finding a job with lower salary than their previous employment (White and Forth, 1998). On the other hand, a higher income person is more likely to find another employment with less effort (Gregg and Wadsworth, 1995).
causes for MPPI claims being rejected, based on a survey of MPPI claimants. While some of the rejections were in line with the insurance policy, surprisingly many of the rejections were open to interpretation and thus a contentious issue.

The fact that insurance companies put restrictive clauses on the MPPI policies may be based on the theory of adverse selection. In order to avoid claims based on events of frequent occurrence, insurance companies screen out bad risks, or charge high insurance premiums to prevent MPPI take-up among low-income groups (with highest risk of being unemployed). Indeed, researchers have found that insured mortgagors do not face significantly higher unemployment risks than those uninsured, indicating that insurers have been successful in avoiding overrepresentation of bad risks. Indeed, a large number of mortgagors have in fact developed arrears for reasons not covered by MPPI. There are thus strong reasons to believe that many important employment risks are not covered by MPPI because insurers have systematically screened out certain risks (Pryce and Keoghan 2002).

As mentioned above, Pryce and Keoghan (2002) argue that there may be incentive mechanisms that result in favourable selection of risks (i.e. MPPI take-up rate is lower among those facing the highest risks of being unemployed or sick). They argue that MPPI policy holders may have the opportunity to exercise an option during the twelve months of MPPI cover, to deny job offers below the expected wage. The value of the option is much higher for mortgagors with high education and lot of working experience than mortgagors with less education and working experience. There is thus a moral hazard effect: insured mortgagors, with large stock of human capital, have less incentive to accept a job offered during the insured period than if one did not have MPPI. The value of the option to wait should be lower for less skilled low-income mortgagors, and this may explain why take-up is lower among those mortgagors: this mechanism result in favourable selection.

The effectiveness of MPPI can be measured as to which extent successful claimants avoid mortgage arrears and mortgage possessions. Based on a MPPI survey, Ford (2000) and Ford and Quilgars (2001) find that about 22 percent of successful claimants (irrespective of income level) did develop arrears. But almost one third of low-income claimants developed arrears. Ford (2000) reports a number of reasons for arrears among successful MPPI claimants. For instance, successful MPPI claimants faced arrears while waiting for payments from the policy and/or because of shortfall in payments from MPPI.

The effectiveness of the diminished ISMI has also become lower after the 1995 changes, resulting in a high number of arrears (about 40 percent) among claimants (Kempson et al. 1999) and a large majority (about 80 percent) facing shortfall on their interest payments (Ford and Quilgars 2001). A number of causes to the lower effectiveness of ISMI have been proposed. Two of the most important contributors to the lower efficiency of ISMI can be found in the new ISMI rules introduced in connection with the 1995 changes: the longer waiting period (the ISMI gap) and the use of standard interest rates (the ISMI shortfall).

The changes of the 1995 reform had great impact on the waiting period before any assistance is paid out. The changes in the state safety-net distinguished between pre-October 1995 and post-October 1995 borrowers. The waiting period for those borrowers who took their loan

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5 Some common reasons: applicant had been fired or had left job voluntarily, or had ended a temporary job, or had a history of ill-health when policy taken out.
6 A longer period of unemployment may result in a depreciation of human capital and thus offset the moral hazard effect (Keoghan and Pryce 2002).
before October 1995 is eight weeks. For the next 18 weeks, borrowers only receive up to 50 percent of their eligible interest, and then full eligible interest. The most noticeable 1995 change is the nine month waiting period for post-October 1995 borrowers: a claimant receives no help with interest payments for the first 39 weeks and full eligible interest is paid thereafter. To mitigate the effects of the nine-month waiting period for mortgagors aged 60 or over (or have a partner over 60), full eligible mortgage interest is paid to them. Based on a survey, Ford and Quigars (2001) show that a significant number of ISMI claimants had difficulties to meet mortgage payments and they conclude that the extension of the ISMI wait period has had a considerable effect on the level of arrears.

The introduction of “standard interest rate” is yet another major reason for the increase in shortfall in payments that many mortgagors face (Ford and Quigars 2001). Because of the use of standard rates, borrowers may end up receiving less than the full mortgage interest they have to pay to their lenders.7 Indeed, both Ford & Quigars (2001) and Kempson et al. (1999) report that the use of standard interest rate has contributed to almost half of all those with shortfalls. Even if many of the households that faced shortfalls in payments did actually manage to fulfil their payments, and thus avoided arrears, a considerable minority developed arrears. Especially low-income claimants that were dependent on ISMI only and with few or no other financial resources (e.g. no saving, no relatives and friends with enough financial resources to help) were likely to face severe difficulties in making full payments.

2.2 Mortgage insurance that protects lenders (US market)

A high home ownership rate has been an important housing policy objective in the US for several years, and although home ownership rates have increased over the 1990s (from 64% to an historic high of 67%), there is still a policy interest in further expanding access to homeownership (Barakova et al. 2003). But the increase in home ownership has been unequally distributed among different ethnic groups and to increase homeownership opportunities for groups historically considered underserved, participants in the mortgage lending industry, such as conventional lenders, government sponsored enterprises (GSEs), and private mortgage insurers (PMIs) have made efforts to make borrowing more accessible and affordable to lower income and minority populations, for example by introducing more flexible mortgage products than the traditional loan products (Quercia et al. 2003). These efforts have been referred to as affordable lending.

To reach the stated goals of high home ownership rates, the role of large institutions like the Federal Housing Administration (FHA) and the two government sponsored enterprises (GSE), the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Association (Freddie Mac) are important. The core mission of FHA is among other things to maintain and expand affordable home ownership, contribute to building and preserving healthy neighbourhoods and communities and to stabilize credit markets in times of economic disruption. The missions of the two government sponsored enterprises are similar to that of FHA; to expand homeownership opportunities by creating financial products, services and technologies that help more families achieve homeownership (Fannie Mae) and to stabilize the mortgage markets and expand opportunities for homeownership and affordable rental housing (Freddie Mac).8

7 In case a claimant’s interest rate due to a loan is lower than the standard rate paid by ISMI, (s)he will actually make a gain.
Several articles have throughout the years demonstrated the negative effect of a number of financial barriers, especially income and down payment constraints, on home ownership opportunities. Researchers have especially found that down payment constraints are much more likely to obstruct home ownership than income constraints. While earlier studies mostly have studied income and wealth (i.e. down payment) constraints, Barakova et al. (2003) also study the effect of poor credit quality on home ownership. They find that wealth and credit constraints are the key financial barriers to home ownership whereas the income effect is of less importance. Indeed they cannot find that the income constraint is statistically significant for any of the years studied (1989, 1995 and 1998).

They also report that the importances of credit quality and income and wealth constraints on home ownership have changed since the late 1980s and they give some arguments that can explain that development. For instance, the low impact of income constraints on ownership take-up compared to earlier findings, can be explained by the development of adjustable rate mortgages during the period studied. On the other hand, the influence of credit quality based constraints has increased during the 1990s. This development reflects above all the increase in the number of households with impaired credit quality but probably also the increased use of credit scoring by mortgage lenders during this time period. The wealth constraint, which has the largest impact on home ownership, shows a declining effect between 1989 and 1998. One plausible argument for the diminishing wealth-effect over the period studied may be the introduction of more flexible mortgage instruments with no or little down payment requirements at that time.

Thus one way to help households and particularly first-time home buyers with no or little savings (wealth) to enter ownership, is to lower the down payment requirement, i.e. to increase the permitted loan-to-value (LTV) ratio. Mortgage insurance is usually not required as long as a borrower makes a down payment of more than 20 percent. But if the LTV ratio is above 80 percent borrowers are typically required to get mortgage insurance. Many lenders do accept a LTV ratio of 90 percent without mortgage insurance but not higher, since Federal regulations require that residential mortgage cannot be made in excess of 90 percent LTV ratio without mortgage insurance (Brueggeman and Fisher 1997). In order to reach the mission of increasing home ownership among households with little or no capital to meet the down payment requirements, FHA and the GSEs have developed mortgage solutions that allow very high LTV ratios, even up to 100 percent. In other words, mortgage insurance is a device used to increase the opportunities to achieve the goals stated in the missions above.

Both private mortgage insurance (PMI) companies and the government owned FHA provide mortgage insurance. PMI companies operate by collecting insurance premiums from borrowers based on the incremental risk being assumed as loan amounts rise above 80 percent. PMI usually covers the amount of loan in excess of 80 percent of the property value at the time of loan origination. Unlike PMI, the FHA mortgage insurance insures the lender completely against any default losses in the event of default and foreclosure. In the following

www.freddiemac.com/corporate/whoweare/


With Adjustable Rate Mortgages (ARMs), lenders and borrowers share the risk of interest changes. Lenders can match changes in interest costs with changes in interest revenues in a way that is more efficient compared to Fixed Interest Mortgages (FRMs), and thus provide borrowers with potentially lower interest costs (Brueggeman and Fisher, 1997).
section, I will discuss previous studies on the FHA mortgage insurance program and its effect on ownership rates among low- and moderate income households.

2.2.1 Does FHA mortgage insurance and PMI increase ownership?

The mission of the FHA is to increase home ownership rates among low- and moderate income households by insuring mortgages with high LTV ratios, and thus one of the most interesting questions to ask is whether FHA mortgage insurance activities in fact lead to higher ownership rates. Another important question adherent to the first one is if there is a need for both FHA and PMI.

At its inception in 1934, the FHA was conceived as a program to complement the private mortgage sector (Pennington-Cross and Yezer 2000) and to brace up a decimated housing industry by encouraging new credit flows (Capone Jr. 2000). In spite of the fact the Congress repeatedly has stated that FHA shall complement and not compete with the PMI industry and conventional lending,11 it is today obvious that FHA not only interacts and complements but also competes with conventional lenders (Pennington-Cross and Yezer 2000). Anyway, there exist major differences between FHA mortgage insurance products and PMI, not only because of the stated purpose of the FHA but also because of the growth and maturation of the PMI industry from 1970 to 1990.

The differences in the insurance policies have resulted in different risk profiles. For instance, FHA is more focused on high-risk and low-equity loans making FHA’s risk exposure higher than that of PMI companies. Capone Jr. (2000) and Goodman and Nichols (1997) state a number of concrete reasons that can explain the higher risk level of the outstanding FHA mortgage insurances. For instance, FHA allows higher LTV ratios, higher payment-to-income ratios and FHA is less strict when evaluating credit histories than the PMI companies. Although FHA has more lenient down payment and credit ranking requirements than PMI companies, it is more restricted when it comes to maximum loan amounts whereas PMI in general has no such restrictions.12 The higher risk profile of FHA insured mortgages is usually reflected in higher insurance premiums charged by FHA compared to PMI premiums.

Thus one argument that can explain the need for both FHA and PMI is that the maximum loan amount regulation placed on FHA insured mortgage loans restricts purchase of higher-priced houses with high LTV ratios (Brueggeman and Fisher 1997). Hence, borrowers who can afford to buy more expensive houses with low down payment prefer PMI because the loan amount can be greater than the maximum loan available under FHA. On the other hand, low income borrowers who may not qualify for PMI conventional loans are probably more likely to buy houses in price ranges that are below the maximum loan amount set by FHA.

There exist some empirical studies that have examined the relationship between FHA-insured mortgage loans and home ownership. Some of them conclude that many households become homeowners thanks to FHA mortgage insurance programs. For instance, Secura Group (1995) find that at least 150,000 households would not have been able to buy their own house in 1994 if FHA insurance programs had not existed. Other findings indicate that the FHA insurance programs do not increase home ownership. For instance, Goodman and Nicols (1997) argue against the conclusion that is drawn in Secura Group (1995); “…this conclusion

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11 Mortgage loans in US are usually classified as either conventional mortgages with or without PMI, FHA insured mortgages and VA guaranteed mortgage loans.
12 For a more detailed treatment of the PMI and FHA requirements, see Goodman and Nichols (1997).
is too strong because many of these 150,000 borrowers were buying more than a modest starter home and could have qualified for conventional financing if they had been purchasing a less expensive house” (p. 187). In fact, by studying the dynamic aspects of eligibility and selection of home mortgage financing, Goodman and Nicols (1997) show that households that are eligible for FHA insured loans become eligible for conventional loans within a few years. In other words, they conclude that FHA at most accelerates home purchase but does not enable it among households that otherwise would never be able to buy their own house. Lafayette et al. (1995) simulate how much the homeownership rate declines when FHA is not longer available. They find that disappearance of FHA would lower ownership rate by as little as 0.1 to 0.2 percentage points. In other words, the FHA mortgage insurance program is estimated to increase homeownership by about 0.1 to 0.2 percentage points. Yet another study that point out the small effect of FHA on ownership rate is Önder (2001). He concludes that the FHA insurance program has an limited effect in increasing home ownership in distressed and low-income census tracts and MSAs. 13

It is important to notice that all the empirical results must be interpreted with caution. Önder (2001) states several motives that can give rise to questionable results, for instance problems with unavailability of data.

Even if several empirical results from the last 10 years indicate that FHA has a limited effect on home ownership rates, there is no doubt that federal government intervention in the housing market through FHA in the first 20 years (about 1934 to 1944) increased home ownership in a significant way (Vandell 1995). As we have seen above, it is difficult to stipulate whether FHA mortgage insurance activities have increased ownership the last decades or not.

The future of FHA has been discussed lively the last ten years (e.g. see Vandell 1995; Pennington-Cross and Yezer 2000). The difficulty of establishing the effect of FHA activities on ownership, especially among low- and moderate income households and the decline of FHA market share14 are two major considerations in the ongoing debate.

PMI does most likely help to increase home ownership opportunities, especially among low-income and wealth-constrained households. Bostic and Surette (2001) and Quercia et al. (2003), provide evidence that affordable lending efforts the last two decades have contributed to an increase in homeownership rates in US. Especially low down payment mortgage products (e.g. Freddie Mac’s Affordable Gold program and Fannie Mae’s affordable lending products) are likely to have high impact on increasing homeownership opportunities for underserved households (Quercia et al. 2003). Since such lending products require that borrowers take out PMI, it can be argued that PMI improves opportunities for low-income low-wealth households to enter home ownership.

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13 Metropolitan Statistical Areas, see www.census.gov/population/www/estimates/metroarea.html.
14 The decline in FHA market share is among other things related to competition from PMI, the focus on high-risk and high LTV ratio loans. See Vandell (1995) for a discussion about the causes of the decline in FHA market shares.
2.3 Improved MPPI – a Swedish perspective

Many developed countries have experienced an increase in home ownership since the end of World War II and this may indicate that home ownership is the preferred tenure. Angel (2000) report that among 20 industrialized countries, ownership rates grew by one-third, on average, from 43 percent in 1945 to 59 percent in 1990. We have seen that private and government mortgage insurance solutions that protects lenders (who offer very low down payment mortgages) in case a borrower defaults, may help first-time home buyers to overcome lender-imposed down payment constraints. Next step is to promote sustainable home ownership. But there exist threats against sustainable ownership. Ford and Wilcox (1998) conclude that the combination of structural changes on the labor market (e.g. the growth of more temporarily forms of employment, self-employment and low paid work), an increasing number of relationships breakdowns and a larger proportion of low-income home owners has resulted in a rising (but cyclical) trend in number of mortgage arrears and in number of borrowers facing payment difficulties in Britain. These threats against sustainable ownership are probably typical for other developed countries too, especially in countries with many low-income home owners with high mortgage loans.

We have seen that it may be justified to promote the existence of insurance devices in order to reach higher rates of owner occupancy and sustainable ownership. But the overview of the two different categories of mortgage insurance policies that exist in Britain and the US respectively has shown that neither of the two countries’ mortgage insurance solutions suffices to attain those goals. For instance, whereas nobody denies the fact that private MPPI and state-provided ISMI do sustain home ownership in many cases (Ford and Quilgars 2001), the researchers have also shown that both MPPI and ISMI are ineffective, especially for low-income mortgagors, i.e. those who are most in need. In the same manner, research has not yet been able to establish the effectiveness of FHA mortgage insurance activities on ownership rates in the US housing market, particularly for those households with low or moderate incomes the last decades. But still, mortgage insurance may be able to play an important role in housing finance, especially in order to help households with low incomes and low wealth to reach sustainable ownership. The lessons learned from the US and British experiences with mortgage insurance devices may thus provide a useful backdrop for countries who consider implementing such solutions.

For countries with relatively low house ownership rates, (e.g. Sweden), the existence of efficient mortgage insurance protection that can mitigate some mortgage-related risks, may still be good instruments to expand home ownership. This can be especially true if the goal is to increase opportunities for low-income and/or low-wealth households living in rental apartments to buy their first own home and to enjoy sustainable living. Table 2.1 below summarizes the available insurance alternatives discussed above that can play important roles in promoting both a higher rate of ownership and sustainable ownership.

### Table 2.1. A classification of mortgage insurance devices used in Britain and US

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<th>State provided insurance</th>
<th>Private insurance</th>
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<tr>
<td>Payment to borrower</td>
<td>ISMI (Britain)</td>
<td>MPPI (Britain)</td>
</tr>
<tr>
<td>Payment to lender</td>
<td>FHA (US)</td>
<td>PMI (US)</td>
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However, it is from a Swedish perspective outside the scope of this paper to discuss all the
different mortgage insurance instruments that protect both borrowers and lenders. This holds
particularly for fiscal policies that affect housing. But currently, some major Swedish lenders
offer borrowers to take out insurance policy that protects the repayment of mortgages in case
of involuntary unemployment, inability to work due to sickness/accident or death. It may thus
be suitable to start a Swedish mortgage insurance discussion based on how private mortgage
payment insurance aiming at mitigating mortgage-related risks due to income losses can be
improved. This discussion is based on the British MPPI experiences.15

The British debate regarding the effectiveness of both the state-provided ISMI and the private
alternative MPPI concerns to a large extent if MPPI is a good enough substitute for the state-
provided protection. A starting point for this debate is the large October 1995 cuts in ISMI
(see above). In reducing the state-provided insurance, government policy is that mortgagors
are expected to find protection against mortgage-related risks due to unemployment, sickness
and accident in the private insurance market. Indeed, the government’s aim has been to
advocate the take-up of MPPI, since it is argued that MPPI is more extensive than ISMI
because it covers both interest payments and amortization. But researchers have found that
neither those with the lowest incomes, nor those with the least liquid wealth have the highest
rates of MPPI take-up (see above). In other words, it is not very likely that those mortgagors
who choose to not buy private mortgage insurance, do so because they are in stable
employment, or have enough liquid wealth to cover periods of income losses, e.g. due to
unemployment.

Why has the performance of MPPI been so ineffective? That is, why are there problems with
low take-up rates, especially among those at greatest risks,16 high number of both rejected
claims and successful claims resulting in arrears? Some plausible explanations can be found
in the literature. For instance, Pryce and Keoghan (2002) argue that those belonging to the
riskiest categories and who choose to remain uninsured do so because their risks are not
covered by the insurance policies and/or that they cannot afford such policies. Ford (2000)
argues that inadequate knowledge and information, attitudinal (e.g. negative attitudes to
insurance in general) and psycho-social influences have a negative impact on take-up rates.

In order to improve the efficiency of different insurance devices, two questions need to be
answered; first, how can the efficiency of market solutions be improved, and second, what
government contributions can be required.

The first step is to find out how market solutions alone shall be capable to provide adequate
mortgage insurance coverage. To obtain this we must require an insurance policy to fulfill at
least three requirements: high take-up rates, especially among those most in need; minimum
number of rejected claims; minimum number of successful claims resulting in arrears. In
order to fulfill these requirements, several aspects regarding the insurance policy must be
addressed. To keep the discussion within limits, I will briefly discuss two issues below:
information and education; pricing and coverage. Other aspects of importance (e.g. efficient

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15 It is not known to me whether is exists any research done on this subject (i.e. on Swedish mortgage insurance
solutions).

16 Defined in terms of the risk of unemployment, reduced or low wages or those with potential access to ISMI
(see Ford 2000).
handling of claims in order to minimize turnover times and lender forbearance) are left out in this discussion.

2.3.1 Information and knowledge

Studies have shown that a large number of claims are being rejected. For instance, Ford (2000) reports that about a third of claims were rejected between 1995 and 2000, with a higher proportion of claims for unemployment rejected than for accident or sickness. Hence many borrowers have bought MPPI with wrong expectation on the policy. This high rejection rate can most likely be explained by the low level of awareness of the terms and conditions of such policies (Kempson et al. 1999). This problem thus implies considerable information and knowledge problems.

To overcome these problems, both those who sell the insurance policy and those who borrow must achieve a firm knowledge about the insurance product. For instance, sellers must make efforts to learn all the relevant facts that belong to the insurance policy. But they also have to be trained at explaining facts and consequences in a pedagogical way, asking suitable questions. Further, it is of ethical importance that sellers refuse insurance demanded by households if the insurance cover is inappropriate.

Pre-purchase home ownership counseling may in the first place be the most important way to educate potential home owners. For instance, Hirad and Zorn (2001) find that classroom or individual setting (as opposed to home study and telephone counseling), have a significant effect at reducing delinquency rates in the US. They also conclude that such counseling can play a crucial role in expanding affordable home ownership opportunities. Thus, potential home buyers can gain necessary knowledge about mortgage insurance products by participating in counseling programs. If such counseling is not available, or inadequately provided, sellers of mortgage insurances must take on the responsibility for providing critical knowledge to borrowers.

The rising rate of mortgage defaults and foreclosure in the US has lead to a discussion concerning the provision of home ownership sustainability training aiming at preventing households from experiencing mortgage repayments problems. For instance, Wiranovski (2003) advocates post-purchase education and counseling to existing home owners as a complement to pre-purchase counseling. Above all, he recommends that the education and counseling shall be both integrated into the business models of financial services and other industries, and comprehensive over the timeline of the mortgage. Such education and counseling may include budgeting and repair, analysis of current and future financial position, and information concerning updated eligibility criteria for mortgage insurance policies.

2.3.2 Pricing and coverage

With better informed borrowers, the number of inappropriate sales and refused claims could be much reduced. But still, many households with low or unstable incomes and low savings, i.e. those most vulnerable to changing economic circumstances, may not choose to purchase a mortgage insurance. Research on MPPI has shown that there exist a poor match between those who take out such insurance and those that most need it. High insurance premiums and/or bad coverage may be two explanations why there exists such a poor match. Particularly low income mortgagors may have disincentives to take-up mortgage insurance due to high insurance premiums. Since private insurance companies (or private lenders providing mortgage insurance) require that insurance premiums be high enough to provide
competitive return, it can be very difficult to solve the problem with the poor match in the absence of state intervention. Thus, while education and counseling may lower the number of refused claims, it is uncertain whether high-risk groups can have access to insurance products due to high costs and/or bad coverage. This sad fact can possibly to a large extent be explained by the theory of economics of imperfect (e.g. asymmetric) information.

Indeed, the economics of imperfect information may help to explore how insurance markets operate and why perfect insurance markets do not exist. Particularly, adverse selection and moral hazard are two basic insurance problems that originate from imperfect information. The problem of adverse selection arises if potential insurance buyers have more information than insurance companies about which risk category they belong to. If an insurance company must charge a single premium that reflects the average risk of those who take up the policy, because the insurer cannot distinguish between high-risk and low-risk individuals, more high-risk individuals will be attracted to the policy (i.e. adverse selection of customers), making it unprofitable to sell insurance. Because private insurance companies are aiming at maximizing profitability, they try to mitigate the effects of adverse selection.

Research on MPPI take-up has shown that insured borrowers do not have significantly higher unemployment risks than uninsured borrowers (see above). This may be indicative of the success that insurance companies have managed to screen out bad risks and identify a profitable niche market (Pryce and Keogh 2002). For instance, MPPI contracts are surrounded with many clauses precluding certain categories of claims, and especially those who have more insecure forms of employment are excluded from protection (for a list of exclusion clauses, see Ford and Kempson 1997). If the effects of adverse selection result in an inadequate protection for high-risk persons, then Government regulation (e.g. forcing all mortgagors to buy an insurance; forcing insurers to cover more risks) or state-provision may be requisite policy.

There exist evidence that households commit insurance fraud in order to collect payments from insurance companies and from social security systems. Insurance fraud is an extreme form of moral hazard (the effect of insurance on behavior). More “normal” forms of moral hazard can be that insured persons have less incentives to avoid losses (ex-ante moral hazard) or that insured persons have no or small incentives to mitigate further losses after a loss have occurred (ex-post moral hazard, see Skipper 1998). The latter form of moral hazard may result in favorable selection of risks (see above). This means that high-skilled insured workers have more incentives than low-income, lower-skilled workers to purchase mortgage insurance. Since there exist evidence that lower skilled mortgagors with low-paid employments have higher risks of being unemployed (or sick), this again result in an inadequate protection for high-risk persons. If insurance companies offer better insurance coverage (e.g. due to competition or on statutory basis), problems with moral hazard may increase.

To conclude, the efficiency of mortgage insurance (defined as rate of successful claims) may be increased by education a counseling, but there is no easy solution to the problem of adverse selection and moral hazard. Thus market failure may prevail in a market for mortgage insurances leaving the households that most need protection uninsured. An important question left out in this paper is whether the private insurance sector actually prices risks correctly, or

17 The concept of moral hazard was introduced in the economics literature by Arrow (1963), and the concept of adverse selection was first introduced by Akerlof (1970). The original analysis of insurance markets under imperfect information and adverse selection is treated in Rothschild and Stiglitz (1976).
if risks are overestimated for certain household groups. This should indeed be an interesting future field of research.
3 Home equity insurance

Choosing to own a home is both a consumption decision and an investment decision and typically, an investment in a house result in a heavily unbalanced and leveraged portfolio. Home equity may especially for low-income households’ be the dominant form of wealth. Thus, the house price risk that particularly low-income owners may be exposed to, cannot be diversified away because of wealth constraints.

Several studies show that price risks reduce the desirability to buy a home (e.g. Caplin et al. 2003; Turner 2000; Robst et al. 1999). Different proposals have been put forth to reduce the price risk a homeowner faces. Caplin et al. (1997) propose the development of a new “partnership market”, in which would-be home owners can exercise an option of owning part of a house. The other part would be financed with an institutional investor. This way, home owners can share the price risk with an institutional investor. Case et al. (1993) propose an opening of futures and option markets on real estate to better allow diversification and hedging. Shiller and Weiss (1999) propose some alternatives for the design of home equity insurance policies, including pass-through futures and options, and a life-event-triggered insurance policy. Using a rich source of data on housing prices in Stockholm, Sweden, Englund et al. (2000) argue that homeowners can actually gain from improved hedging opportunities of their investments in housing, for instance by taking positions in a price index for owner-occupied housing.

However, neither of these proposals has been implemented in practice with success so far. For instance, most homeowners are unsophisticated financial managers and certainly inexperienced using derivatives like futures and options (Case et al. 1995), while implementing a housing partnership market would imply a fundamentally new set of market institutions (Caplin et al. 1997). Yet another problem is that the attractiveness of a derivatives market in housing index futures depends on the quality and integrity of the indexes (Englund et al., 2000). Thus, the absence of hedging and housing partnership markets are among other things, due to knowledge, legal and practical problems.

One risk-reducing instrument that actually is currently being tested is home equity insurance, in which insurance payouts are based on changes in a house price index. The pilot project is centred on Syracuse, New York and a brief summary of the insurance program is presented in the next section.

The development and implementation of the home equity insurance pilot project in Syracuse, New York, are documented in Goetzmann et al. (2003)18. The equity insurance product is called "Home Equity Protection" (HEP), since it cannot be classified as an insurance product under the local (State of New York) insurance regulatory law (for instance, homeowners can decide when to sell the home, while an insurer must pay money only on the happening of a fortuitous event). The program started July 1, 2002 and in the end of July the first HEP product was sold to a homeowner.

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The basic idea behind the HEP product is the following: when a homeowner signs up for the HEP, he or she actually buys a put option. The put option gives the owner the right to sell a futures contract at a price pegged to average home prices in his or her ZIP-code\textsuperscript{19}. When the house owner sells the home, and if the house prices then have dropped in the home owner’s ZIP-code, the owner will exercise the put option and receive money from the insurer, no matter what the size of the actual selling price is. The owner will not exercise the option if home prices have increased. The homeowner can choose the size of the protection, the so called Protected Value, and typically it should be close to the current value of the home.

Since the index (repeat sales house price index) is supposed to reflect the average price changes in an area defined by a ZIP-code, some households will experience losses that are either greater or smaller than the percentage change in the index. A homeowner who will sell his or her house with a profit, will receive a HEP payment if the local index has declined even if the homeowner makes a profit. Thus, one advantage of founding insurance payouts on the changes of a local house price index, instead of changes in the price of individual homes, is that homeowners can be insured against changes in local prices, but still have incentives to invest in keeping their own house in good condition. Thus, founding HEP payments on changes in price index solves an important moral hazard problem.

According to Goetzmann et al. (2003), a fundamental question in developing the insurance product in Syracuse, is how to best construct an index for the insurance purposes. They argue that while homeowner mobility, that determines the volume of insurance claims, has important impacts on the costs of insurance, the dominant determinant of payouts is the dynamic pattern of ZIP-code indices. Their choice of the ZIP-code index is based on several different criteria. For instance, coverage (how well actual losses are covered), efficiency (measures whether or not an index unintentionally pays out funds to those who actually have not suffered losses) and payout ratio (actual payout costs for an index). Given the results of their computations using different indices and geographic definitions, they proposed that the ZIP-code index should be used in developing the insurance product in Syracuse. But still, the ZIP-code index may not be optimal and since the reliance on the price index is of crucial importance, they conclude that there is a profound need for additional research on index design.

The insurance has a lifetime of 30 years and it is only available after a three-year waiting period from the time of enrolment. The size of the insurance premium is settled to 1.5 percent of the Protected Value of the home. This is a one-time fee covering the thirty-year life of the insurance product and it is supposed to equate insurance premiums to expected payouts (including administrative costs). The argument for choosing a one-time fee instead of using an annual fee, is based on the basic pooling required for the insurance to be efficient. Thus, to avoid a situation in which the pool only exists of those with high risk (adverse selection problem), the use of a one-time fee is appropriate.

\textsuperscript{19} In general, a futures contract is an agreement to buy or sell an asset at a certain time in the future at a predetermined price. Option on futures gives the buyer the right (but not the obligation) to buy or sell a futures contract at a later date at a price agreed upon today.
4. Rental insurance policy for tenants

Not all households consider ownership as the preferred tenure or do have enough means to enter home ownership. To obtain sustainable tenancy should thus be regarded as important as obtaining sustainable home ownership. Some type of rent insurance instrument for tenants could thus play an important role. Though, in the presentation that follows, I will not discuss the type of insurance instrument that aims at mitigating the risk for a tenant of being evicted due to income losses, and hence inability to fulfil rental payment obligations (i.e. a “rental version” of the mortgage payment protection insurance discussed above; “Rental Payment Protection Insurance”). This kind of income protection is traditionally given by the public system of social insurance. The starting point for the discussion here is instead how a rent insurance instrument can be designed in order to limit the risk for a tenant to be forced to move due to major increases in market rents.

Traditionally, different forms of tenancy rent regulations have been applied for many years in order to reduce such rent risks. But there exist downsides of rent controls. For instance, there is a widespread agreement that rent control systems discourage new construction (if the rents are lower than the market rent), cause abandonment, retard maintenance, reduce mobility, generate mismatch between housing units and tenants, create black markets, exacerbate discrimination in rental housing, encourage the conversion of rental to owner-occupied housing, and generally short-circuit the market mechanism for housing (Arnott, 1995). Some types of rent control systems may though give rise to more severe negative effects than others do. For instance, Lind (2001) identifies five different types of rent regulation systems (A-E). While two of these systems (A and B) only protect sitting tenants, the three other systems (C-E) also cover the rent in contracts with new tenants (see appendix A for further explanation of the various types of categories). Given this classification, it is very most likely that the most severe criticism of rent regulation system can be levelled against rent systems that belong to any of the last three categories.

As a specific example, consider the Swedish rent regulation system. According to Lind (2001), the current system of rent regulation in Sweden belongs the type E, i.e. a system that protects a sitting tenant against rents higher than the market rent, and that also aims at keeping rents in new contracts below the market level. Ellingsen and Englund (2003) point out that this system has caused rent levels to be far below clearing levels in most of Stockholm and central parts of other major cities in Sweden, and this in turn has caused negative effects like illegal key money, a flourishing market for second-hand contracts, rapid conversion of rental apartment buildings into housing cooperatives, tenants locked into sub-optimal housing arrangements etc.

In spite of the fact that different types of rent control policies create more or less severe drawbacks, it may still not be desirable to carry through a far-reaching reform that will result in total absence of specific regulations concerning rental contracts and rent protection mechanisms. One reason not to introduce a rental market that only relies on general contract law is that sitting tenants may have high transaction costs of moving, but also weak bargaining power. Therefore, in order to mitigate the negative effects of regulated rents, as well as to avoid undesirable effects that may occur if there exist no specific rules for the rental market at all besides general contract law, it is of interest to find other ways of protecting at least sitting tenants against major increases in market rents.
Furthermore, Ellingsen and Englund (2003) argue that equity and efficiency goals that can be obtained through traditional rent control can be obtained more efficiently either through voluntary contracting or through some other cheaper intervention. Indeed, it is of particular interest nowadays to discuss the implementation of “market solutions” based on individual and voluntary contracting when risk reducing devices on the market are both more developed and well known, compared to the time period when rent control policies were introduced (Lind 1999a). Therefore, it might be of interest to consider a regulatory reform that aims at finding some kind of market solution that may serve as a substitute for a regulatory system. 20

Lind (1999a) and Lind (1999b) propose the use of more sophisticated lease agreements and in particular some type of “rental option” contracts, where tenants pay directly some kind of an insurance premium to obtain a protection against high rent increases. Such a “market based” risk-mitigating instrument can indeed be an attractive alternative to traditional rent regulation policies. The proposed option policy may also increase the possibility to find acceptance for letting rents in vacant apartments be set so they reflect supply and demand.

There also exist other arguments in favour of market solution. For instance, with market solutions, adaptation to individual desires can be obtained in a better way. Furthermore, the political risk might be reduced, i.e. the risk that the protection given by rent regulation suddenly disappears due to a change in the political majority.

It is therefore of interest to study other methods than rent regulation that aims at protecting tenants against major rent increases, and consequently, the proposed insurance policy might be an interesting alternative to tenancy rent regulation policies. Moreover, the insurance policy might also increase the possibility to find acceptance for letting rents in vacant apartments to be set so they reflect supply and demand. The purpose of this paper is to discuss how the proposed rent insurance instrument might be designed.

4.1 The design of the rental insurance policy

The aim of the proposed rental insurance policy is to develop a more market based system that gives a protection similar to rent regulation of type B, i.e. to provide sitting tenants with protection against sharp increases in market rent, due to increases in demand.

A rent insurance policy could be offered by freestanding insurance companies as well as by landlords. In this paper, we suggest that the landlord shall be obliged to offer his tenants rent insurance. A motive for this is that the insurance policy can be regarded as a substitute for rent regulation., and if as - in Sweden - we start from a situation with a rent regulation, it can be seen as “trade” where rents are at least partly deregulated at the same time as the landlords are obliged to offer rent insurance. Furthermore, a regime in which landlords are obliged to offer tenants rental insurance contracts is probably easier to impose than forcing freestanding insurance companies to offer tenants rent insurances.

20 Another way for households to reduce rent risks is to enter ownership. But not all households have enough economic mean to enter ownership (for instance enough liquidity to meet down payment requirements, see Atterhög and Song 2003). Yet another way is to enter long-term lease agreements.
Thus the two starting points for this article are that rents on new leases shall be based on the prevailing market rent levels, and that landlords must offer his tenants rent insurance contracts. Tenants who do not purchase insurance contracts are supposed to pay the market rent after the next rent review. On the other hand, the reviewed rent will for insured tenants be set to the market rent or the strike rent, whichever is lower at the time of the next rent review.

4.1.1 Features of the insurance policy

The main instrument of the insurance policy is the rental option. It is a call option in the sense that a tenant who owns this option has the right, but not the obligation, to reside in the current apartment after the next rent review, paying a rent that is the lower of the market rent and the strike price (or strike rent). In other words, a tenant who owns this option will only exercise it if the market rent exceeds the strike price at the time of the rent review (the maturity date). On the other hand, the tenant will not exercise this option if the market rent ends up below the strike price, since he or she can pay the lower market rent for the following rental period. While a tenant who owns an option has a right to exercise it, the landlord is always obliged to fulfil his part of the option agreement as soon as a tenant chooses to exercise the option. These option-like features in the insurance policy imply that the tenant should pay the landlord an insurance (or option) premium (section 4.1.3 below discusses some pricing issues).

But the rental option does not alone automatically give tenant a long-term protection against strong increases in market rents, which indeed is the main object of the proposed insurance policy. The rental option contract only states the rent for the period after the next rent review will be set to the strike rent or the market rent, whichever is lower. But if rents are reviewed at short time intervals of one or two years, long-time protection will not be achieved. Of course, if rents are reviewed annually, then a tenant could buy a new option every year in order to “wheel forward” a protection. But this form of yearly renewals might not be desirable from both tenant’s and landlord’s points of view. For instance, landlords will suffer from large administrative costs, and probably also from difficulties with long-term budget and maintenance planning. In the same manner, tenants might find it difficult to decide every year whether to buy an option or not. Moreover, the option premium may vary from one year to another depending on for instance changing market conditions, thus being a risk parameter itself.

One possible solution could be to introduce rental options that cover several rent reviews, i.e. multiple rent review. But such options will probably cause other complications. For instance, valuing the rental income a multiple family house generates over a period, which includes several rent review dates, should be more complex (see Booth and Walsh 2001b). In the same manner, establishing a “fair” or “correct” insurance premium for individual contracts with multiple reviews ought also to be more complicated. Furthermore, it is probably easier to market the insurance policy by initially introducing only single review options. It might also be advantageous from a legal point of view to restrict the insurance policy to only concern single review contracts (again at least initially).

Therefore, long-term lease periods between rent reviews should be an attractive alternative. Such leases should make it possible for tenants to enjoy long-term protection against strong increases in market rents without running into a situation with complicated multiple rent review contracts, or a situation with frequent renewals of option contracts. Note that we do not mean that long-term lease periods are time limited in the sense that the “whole” rental
contract expires at the end of the lease period. Instead, what we mean with long-term lease periods is simply that the rent is more or less fixed for several years (e.g. five years) until the next rent review (see also footnote 21).

Typically, the rent in a long-term lease could either be fixed during the whole period (the term), be escalated yearly with some fixed amount, or follow some index until the date of the rent review. The initial market rent for each of these three alternatives will probably differ. For instance, the initial market rent is likely to be lower for the two last alternatives compared with the first alternative (where of course the initial rent equals the final rent). Furthermore, the market rent level for different terms should differ and thus, it should be possible to construct the term structure of rents in analogy with the term structure of interest rates (see Englund et al. (2004), and references given in that article for studies on term structures of existing commercial rental contracts). It is outside the scope of this paper to further discuss the term structure of rents, but we note that this should indeed be an interesting research area in the future (given that there will exist observable short-term and long-term lease rent levels based on demand and supply).

4.1.2 The insured period

Based on the discussion above, we see that the insurance policy proposed in this paper should be understood as combining long-term leases with a rental option, and that these two types of contracts together define the length of the insured period. With one rent review, the insured period simply equals to the sum of the lengths of the two long-term lease periods that occur before and after the rent review.

To clarify this, consider following example. A tenant signs a new rental contract today at market rent. The rental contract states that the rent will be reviewed five years from today. Until that day, the rent will be adjusted with respect to yearly changes in some index (e.g. the consumer price index). At the same time, he or she also buys a rental option with a maturity date that is equal to the date for the next rent review. Then, at the time of the rent review, the rent will either be set to the strike rent or the market rent, whichever is lower. The reviewed rent will after the review again be adjusted according to the changes in the underlying index for yet another five years. Thus the sitting tenant will enjoy a protection against strong rent increases for a period of ten years.

We have mentioned above that the proposed rental insurance policy presupposes that landlords shall be obliged to offer his tenants insurance against major rent increases. Furthermore, we have above established that the landlord shall be obliged to offer his tenants single rent review insurances, with rental options that matures on the date of the rent review. In addition to these compulsory elements of the insurance policy, we now also establish that the landlord must offer his tenants at least two different insurance period alternatives initially, say five and ten years. Of course, nothing prevents a landlord to offer longer or shorter insured periods, as long as he fulfils the minimum requirement.

One argument for giving tenants a right to buy insurance contracts with relatively long insured periods is that the market for rental apartments can be viewed as an alternative for those who aim at living in the same rental apartment for a long period of time, without being

21 With an indexed rent tied to a broad index like the CPI, the yearly changes in the indexed rent should be sufficiently foreseeable, since price stability is a comprehensive goal for Swedish central bank as well as for many other central banks in developed countries.
forced to move because of strong increases in market rents (Lind 1999b). Indeed, a survey among households living in Gävle (Sweden) shows that about one third of the households had lived five years or more in the same housing area, and that many households had stayed more than ten years in the same area (Magnusson & Berger 1996).

The case is similar to the market for housing loans. Some households prefer adjustable rate mortgage loans with floating interest rates while other households prefer fixed rate mortgage loans. The point is that tenants, in conformity with homeowners with mortgage loans, should have the possibility to choose the length of the insured period that fits him or her best.

4.1.3 The insurance premium and the strike rent

The option-like features of the insurance policy implies that an insured tenant only chooses to exercise the option if the market rent ends up above the strike rent at the date of the rent review. In this case, the payoff of the option equals an amount of market rent minus the strike rent. On the other hand, the tenant will naturally not exercise the option if the market rent ends up below the strike rent, since he or she can reside in the apartment paying the (lower) market rent. The payoff of the option will in this case amount to zero (but it can never be negative). Because the option gives an insured tenant the right to enjoy a future payoff that can never be negative for sure but positive with some positive probability, the expected value of the payoff will be positive as well. This implies that tenants should be willing to pay some amount for the insurance.

In theory, risk-averse tenants are willing to pay an insurance premium that equals to the expected payoff of the option plus a risk premium. It is therefore important that landlords offer insurances at a price that risk-averse tenants are willing to pay. Moreover, a major object of the proposed insurance policy is that tenants should know that there always would exist a possibility to buy insurance against strong rent increases at a reasonable price. Because of that, the legislator should limit the maximum premium that can be charged.

The choice of strike rent is besides the dynamics of the market rent, the element that should affect the size of the insurance premium most. The strike rent can be determined in several different ways. Following three different alternatives of determining the strike rent for commercial leases with embedded options can be found in the literature (see e.g. Buetow and Albert 1998; Booth and Walsh 2001a and 2001b; Clapham 2003):

1. Fixed strike rent (strike rent fixed at the time the option contract is written).
2. Indexed strike rent (strike rent fixed at the time of the rent review).
3. Strike rent as a function of the market rent (strike rent fixed at the time of the rent review).

While the first alternative implies that both the tenant and the landlord know the maximum initial rent for second rental period, the other two alternatives imply that the maximum initial rent for second rental period is unknown until the date of the rent review. The last alternative is probably the least interesting while the other two are of equal interest. In fact, the fixed strike rent and indexed strike rent alternatives can be perceived as being almost identical, if indexed strike rent is based on the CPI (which could be expected to grow with 2% yearly). The uncertainty about the future rent level can thus be very limited, even with an indexed strike rent. From a marketing point of view, it is probably better to only offer tenants one
strike price alternative. Subsequently, more alternatives could be introduced. In a forthcoming paper I will discuss how the insurance can be priced in more detail.

4.1.4 How to establish the market rent

When time has come to fix a new rent level for the period after the rent review, it is necessary to determine a comparable rent level for the specific apartment, whether the rent is insured or not. Typically, the market rent for the subject must be estimated based on some kind of rent comparison approach, which aims at determining the most probable rent for the subject.

The quality of an estimate of the most probable rent when using a rent comparison approach is highly dependent on the availability of relevant market information, i.e. access to rents and other important terms of rental contracts for comparable apartments is essential. Both Lind (Lind 2000) and Fastighetsägarna Stockholm (Stockholm Property Association) (Fastighetsägarna Stockholm 2002) have come up with a proposal to keep a public register of rental apartments to meet the needs of information. In brief, the suggestions recommend that updated information on rents, standard and other relevant facts shall be recorded regularly. All property owners shall be obliged to provide the register with information and both property owners and tenants should have access to the register. It is likely that the proposed register could be a determining factor when estimating the most probable rent for a specific apartment.

4.2 Conclusions

For many households living in rental apartments, rental expenses account for a substantial share of their disposable incomes. In particular, low income households with narrow economic margins might have small means to meet high increases in market rents. Furthermore, households that are forced to move to cheaper housing units because of their incapacity to meet strong increases in market rent levels, might face high transaction costs of moving. Moreover, most people are probably more or less risk-averse, and therefore strive for having command over their economic situation. The points above are examples of arguments for having some kind of protection against strong upward movements in market rents. As mentioned in the introduction above, traditional rent regulation systems that aim at giving this kind of protection cause different kinds of negative side effects. The rental insurance policy proposed in this paper might therefore be an attractive alternative to traditional rent regulation.

The purpose of the proposed rental insurance instrument is thus to protect tenants against unexpectedly strong rent increases due to sharp increases in the demand for rental apartments in some housing area. Given that households are in general risk averse, and therefore willing to pay a premium to obtain insurance cover, there should indeed exist a demand for a rental insurance instrument (assuming there is no traditional rent regulation). But there is a risk that a system with rental insurance instruments becomes inefficient, in the sense that there will be a poor match between those who take out the insurance and those that most need it, as is the case with the mortgage insurance system in United Kingdom (see section 2.1.2 above). In particular, low income tenants might have disincentives to take up a rental insurance if the insurance premium charged by the landlord will be too high. It may therefore be needed to enforce a rule that maximizes the size of the premium. Such a rule could e.g. say that the maximum insurance premium should not exceed 5 percent of the current rent a tenant pays, in order to avoid a situation similar to the UK mortgage insurance experience with inadequate
protection for high-risk persons. In a forthcoming paper, I will show that such a level might be reasonably also from the perspective of what is a "correct" price of the option.
5. Conclusions

The word “risk” derives from the early Italian risicare, which means “to dare”. In this sense, risk is a choice rather than a fate (Bernstein 1998). Accordingly, a household that chooses to become a home owner also deliberately chooses to involve in a more or less risky long-term financial commitment, since most people need a mortgage to be able to buy a home. The lender also chooses to take a risk when lending money to the home buyer; the risk that the borrower defaults which could result in loan losses in the foreclosure process. Indeed one of the most important risks associated with mortgage loans is that the home owner will default on his or her commitment in some way. Furthermore, a home owner also exposes him- or herself to expenditure risks (e.g. due to sudden maintenance or repair works) as well as capital risks in connection of a house sale.

Why then do people choose to expose themselves to such risks? One possible answer could for instance be ignorance of risks related to home ownership and mortgage commitment. Another explanation might also be that households are less risk-averse than one might imagine. But perhaps is the existence of insurance in its many varieties the most important factor that could explain home owners’ willingness to involve in risky home purchases. Indeed, most households should have a decent ability to identify and evaluate possible outcomes associated with home ownership, and ability to evaluate different insurances that can deal with the identified risks.

Thus insurances make it possible for households to manage risks related to home ownership and financial commitments. In the same manner, mortgage lenders engage in risk management by utilizing different insurance devices. The two types of mortgage insurance instruments discussed in this paper aims at mitigating the risk of mortgage default and loan losses resulting from a foreclosure process, while home equity insurance provide protection against capital losses. Furthermore, these insurance instruments might also be usable for expanding home ownership for low-income households.

In Sweden, real house prices have increased sharply since 1996. Many home buyers that have bought their homes the last years have therefore paid large amounts. Furthermore, the increase in house prices has been accompanied with a declining trend in lending rates during the same time period. The combination of high house prices and low mortgage rates has resulted in many home owners being highly leveraged. The high house prices have also made it even more difficult for households with low liquidity to meet lender-imposed down payment requirements. Moreover, if house prices start to decline of some reason, many households could end up with negative equity. Thus, from a Swedish perspective (as well as for many other countries who have experienced similar developments on their housing markets), mortgage and home equity insurances could be interesting instruments to mitigate different financial risks that are related to home ownership. In that case, the lessons that can be learned from the other housing markets with different insurance instruments for the housing market might be valuable.

It is though important to analyze the need and the design of different kind of mortgage and equity insurances in relationship to other already existing insurances and housing allowances as well. In particular, most Western countries have extensive government-administered social security schemes that provide for instance sickness and unemployment benefits. Furthermore, employers may provide extra income protection due to for instance sickness and parental
leave. Insurances are in these cases provided by private companies. But still, many individuals do only have access to state provided unemployment benefit, hence implying that there might still be a need for mortgage payment protection insurances. Moreover, the structural changes in the demography with an increasing share of retired people will likely make it more difficult for governments to provide good enough income protection in the future. Therefore, the relative importance of (new) private insurance instruments may increase in the future.

This paper also discusses rent risks related to tenancy. In particular, here we discuss a rental insurance policy as an alternative to traditional rent regulation, in which a landlord is supposed to be obliged to offer his tenants rental insurance. See further section 4.2 above, which concludes the discussion about the proposed rental insurance policy.

The purpose of this paper is to provide an overview and discussion of some risk mitigating devices for both home owners and tenants. Indeed, the point made here is that both home owners and tenants should have equal possibilities to protect themselves against some of the major (monetary) risks associated with ownership and tenancy respectively. Given this, it could for instance be motivated to impose a ceiling on increases in property tax payments due to sudden and large increases in market values. Therefore, the method used in California, which is based on the purchase value, could be an interesting alternative. In short, the tax base, which is based on the purchase value, is adjusted with the change in the rate of inflation, however not more than with 2 percent per year, as long as the same owner owns the house.

Finally, in line with what we just said, it is important that more general support systems, like housing allowances and economic support provided by social authorities, should be tenure neutral. But, as Atterhög et al. (2003) point out, special rules and regulations might create problems. For instance, they find that the Swedish system of housing allowances only count as housing costs parts of the housing expenditures home owners have, and therefore might reduce the housing allowance for owners considerably compared to renters.
References


Appendix A

Arnott (1995) distinguishes between first and second generation rent control. Lind (2001) argues that this distinction is too crude to be useful. Instead, Lind (2001) identifies five types of rent regulation (A-E). While the two first types (A-B) covers sitting tenants, the three other types (C-E) cover all tenants, both new tenants and sitting tenants. A very short summary of each of the five types of rent regulation is presented below. For a full discussion, see Lind (2001).

Type A is called “weak transaction cost-related rent regulation” and protects a sitting tenant against rents higher than the market rent.

Type B is called “strong transaction cost-related rent regulation” and protects a sitting tenant against certain types of increases in market rents.

Type C is called “monopoly-related rent regulation” and protects all tenants against rents higher than the market rent.

Type D is called “overshooting-related rent control” and aims at smoothing changes in rents.

Type E is called “segregation-related rent control” and aims at keeping the rents for all tenants below the market rent level in certain areas.