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Low-deposit housing co-operatives and their performance in the current housing market*

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Abstract

This paper illuminate risks and benefits related to low-deposit housing co-operatives. It departs on the increased use of a particular model of co-ownership: the low-deposit model, and discusses how this model perform in the current housing market in Norway. The low-deposit model has been frequently used, especially in the years 2005-2006 when house prices were raising and interest rates were low. In low-deposit co-operatives around 80 percent of the purchase price is financed through a joint debt. The model is seen as a way to promote homeownership among low income household. A hallmark of low-deposit co-operatives is the reduced risk of loss for the individual co-owner in case of payment problems, and the corresponding increased risk to the housing cooperative as an entity. When the mortgage interest rates started to rise in the years 2007-2008, media focused on payment defaults in exposed co-operatives and the risk of foreclosure.

However, an in-depth study of low-deposit housing co-operatives show that the payment problems were not more concentrated in the low-deposit housing segment than in other housing market segments. The study also shows that the sales prices of new low-deposit dwellings held the same level as other comparable housing. Also, the low-deposit dwellings obtained the same sales prices in the second hand market as other comparable housing projects.

This paper describes aspects of the low-deposit housing co-operatives which might influence on risks and benefits, both for the developers, the co-owners and the co-operative as an entity. It also discusses what type of developers that brings low-deposit co-operatives on the market and the political and financial inducements behind this model.

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Introduction

In promoting affordable housing for low income groups there has been a trend since the late 1970-ties to move away from supply side interventions, called "bricks and mortar" subsidies, to individual targeted demand side subsidies for home ownership. Examples of this demand side policy instruments were cheap loans, investment cash grants and housing allowances, also for home owners. The housing policy should work in deregulated housing markets where prices is market based. The idea of low deposit cooperative housing in Norway was a reaction on the insufficiency of these instruments for helping others than the most disadvantages groups on the housing market.

The Norwegian Federation of Co-operative Housing Associations (NBBL) have been advocating the low-deposit approach and urging affordable housing projects for many years The association itself has been responsible for five pilot projects (NOU 2002:2). The association wanted the government and municipalities to subsidise first-purchase homes, and to let the subsidy remain with the property by regulating the sales price. The Housing Commission (NOU 2002:2) also viewed low-deposit homes as a useful alternative for first-time buyers to rented municipal accommodation, but believe it would be difficult to organise a price regulation system which let the subsidies remain with the unit and benefit the intended demographic.[i] In practice, however, market principles have governed the construction of low-deposit cooperative units in recent years without the help of subsidies or price regulation.

Before 2005, stakeholders wanting to form a housing cooperative – apart from the Housing Associations – had to do so simultaneously. That is, they had to gather together physically to establish the cooperative. Current legislation came into being in 2005, effective from August 15. Now, in addition to Housing Associations any stakeholders can own all of the residential units in the cooperative. The new law had no constraints on who could found a cooperative or for how long the founders could own shares in it. The new law also provided an incentive for private developers to adopt the cooperative housing model.

The law was amended in a period of rapidly rising house prices, especially in the major cities and metropolitan areas. Getting a foot on the property ladder was considered especially difficult for young first-time buyers even though interest rates were low at the time. That the cooperative system expanded more or less across the board, the low-deposit cooperatives in particular, should therefore be seen against this backdrop.

When Bank of Norway in 2007 and 2008 raised interest rates, owners of low-deposit cooperative housing faced mounting difficulties paying housing expenses and selling their properties. The problems received wide media attention. Much of the media reporting on low-deposit homes focused on the marketing and information provided for potential buyers. One key question was whether buyers fully understood what the overall outlay would amount to or how housing expenses were likely to shape up going forward. There was an interest in the fact that if one member defaulted on the co-op's joint costs, the other members might have to take up the slack. The co-op could even go bankrupt.

The background to these issues was that housing cooperative units had been put on the market with high levels of jointly held loans and low deposits. Some of these jointly held loan schemes included grace periods or deferred repayment clauses. People that had bought a low-deposit home when interest rates were low would have faced rapidly rising costs on the jointly held loan, as well as the deposit loan.

In this paper we report some findings from a study on low deposit cooperatives. Were the new dwellings in cooperatives sold for a price higher than similar condominium flats, as a result of asymmetric information between buyer and seller in low deposit housing models? Did the residents in low deposit cooperatives achieve prices in the second hand market at the same level as prices on similar dwellings? Had the low deposit cooperative model some characteristics that led to higher default rates than in similar accommodation, when interest rates rose and house prices fell?

We start by describing certain features of cooperative housing and low-deposit homes in particular. Important aspects of the low-deposit housing co-operatives might influence on risks and benefits, both for the developers, the co-owners and the co-operative as an entity. From there we look at who puts these projects onto the market and examine the low-deposit model in light of central government and municipal housing policy. We also discuss what developers that brings low-deposit co-operatives on the market and the political and financial inducements behind this model. As the model has this notion of, and potentials for being, an affordable alternative for lower income household - we will contrast the model to the contemporary discussions of affordable housing in Britain. Then some results from our study is presented. The final part reviews statutory amendments proposed by the Ministry of Local Government and Regional Development to prevent new problems emerging

The cooperative housing model

Housing Associations are membership based organisations developing and managing dwelling for young households and others. The dwellings which they develop are organised as cooperatives. However, there is no housing grant linked to the supply of these dwellings, and the units are sold on the marked, with no restrictions related to the purchase price, neither the first nor the successive.

There are two main types of housing co-operative financing methods, limited equity and market rate. With limited equity, the co-op has rules regarding pricing of shares when sold. The idea behind limited equity is to maintain affordable housing. With market rate, however, the share price is allowed to rise on the open market and shareholders may sell at whatever price the market will bear when they want to move out. One acquires equity much the same as in other types of home ownership. Norway has adopted a system with market rate housing cooperative.

Normally approval process of prospective includes a close examination of the applicant's finances by the board of the cooperative. The reason being that all the other owners are on the hook for your failure to pay. If this happens, the corporation may be unable to shoulder the burden, and the property may be lost to foreclosure and all the shareholders' interests along with it. If one tenant defaults on his or her part of the mortgage, maintenance and tax payments, all of the shareholders have to pay for it. One defaulted shareholder can in principle bring the whole cooperative down. While you're responsible for paying your personal loan, as a shareholder you have no personal liability for the co-op's mortgage.

Contrary to market rate cooperatives in other countries Norway has adopted a system with free entry. The entry into the cooperative is determined by a bidding process, and the highest bid will secure entry. The lack of a formal process for evaluation of creditworthiness is perhaps the downside of the Norwegian model as we shall see. In comparison countries where the cooperative itself carry out the evaluation of financial viability of prospective purchasers, co-ops generally have, not surprisingly, lower default rates and low turnover of occupants.

Historically, close collaboration between municipal authorities and Housing Associations supplied much of the housing, with local authorities providing building lots at affordable prices. As housing prices were regulated, these homes were very attractive. Allocation was decided by membership seniority.

After the de-regulation of the cooperative housing market and the credit market, only minor differences were left to distinguish a condominium and a share (membership) in a housing cooperative home. Only cooperatives, however, are allowed to take out loans with security in the property either in connection with the founding of the cooperative or later when the units are due for upgrading. Individuals cannot own more than one share in a cooperative, and there are constraints on owners' freedom to sublet the unit.

There are today about 330,000 housing co-op homes in Norway. More than 250,000 of them are affiliated to a Housing Association, the rest belong to independent housing cooperatives. Co-op homes in Norway make up about 14 per cent of the housing stock, though the figure rises in proportion to centrality. In the four major cities, co-op units accounted for 30 per cent in 2001. About 9 per cent of all completed homes in the 1990s were units produced by the Housing Associations. That figure has grown to 12 per cent so far this decade. In addition, there are cooperative homes that were built by other developers than the Housing Associations themselves.

One important feature of the cooperative model is that a substantial share of the purchase sum is financed by a jointly held loan. The rest of the purchase sum, the actual deposit or "owner's capital" is up to the buyer to provide from savings or through a loan. Low "owner's capital" requirements used to be a key to easing access to credit and avoiding expensive top up financing (Kiøsterud 2005).[ii] In the white paper on *Housing Markets and Housing Policy* the Government says that first-time buyers are highly likely to face credit rationing insofar as their future financial status is so hard to predict.

The Housing Associations have long advocated building affordable homes for young households in the lower income brackets. They prefer to offer this group housing through cooperative membership, designed and marketed to appeal to the young (Annaniasen 1996, Holm 2008). Under certain conditions, a high joint loan would arguably come with a lower interest rate on a loan share corresponding to 80 per cent of the purchasing price, especially if it is provided by the State Housing Bank, than if the resident took out a loan at a private credit institution. Although the interest on the top up financing, in this case 20 per cent of the purchasing price, would be the same whether it is a residential unit in a co-owned property or cooperative, overall housing costs will be lower than if the unit was part of a co-ownership scheme. The loan repayment requirement could be reduced and more people would have the chance of owning their own homes.

Risk involved in low-deposit homes

The low-deposit model is also very much about risk – risk to the buyer and risk to the cooperative. We distinguish between individual and collective risk of defaulting on the cooperative's expenses. A cooperative with a preponderance of high-risk households does not necessarily face a high collective risk. Individual risk is that a household will be unable to meet its financial obligations. A collective risk is that other households in the same cooperative will default because of increasing costs due to one or more households having already defaulted.

Generally speaking, individual default occurs when a household's earnings and expenses are permanently "out of sync" either because of an unanticipated drop in income and/or unanticipated rise in expenses caused by an interest rate hike. Now the loan institution should of course have factored in a certain margin to allow for interest rate hikes when they assess the financial credit worthiness of the applicant. An ability to manage an interest rate hike of 3 percentage points has often been a guiding principle of private banks' credit assessment procedures.

It is often proclaimed in the media that one of the main causes of the problems affecting low-deposit cooperatives is the risk that households face of being landed with the consequences of defaulting neighbours. Several factors affect whether high individual risk translates into high collective risk.

The first concerns the cooperative unit's marketability. If the low-deposit units are located in an attractive area and easily sold, individual asset problems could be solved in the final instance by selling the unit without affecting the cooperative's wider financial standing. Marketability is therefore a key factor when deciding if an individual risk also represents a collective risk.

Another factor affecting risk is the demographic composition of the residents, and how far demography affects the cooperative's susceptibility to economic stress. Young households, often consisting of a single person, have less seniority in the labour market. Low-deposit cooperatives may therefore be more sensitive to economic cycles because of the preponderance of young households.

We would finally mention that the size of the cooperative will affect the likelihood of other households defaulting and in consequence the cooperative's economic sustainability. Major cooperatives will be in a position to spread individual risk and absorb losses caused by joint debt defaulters because they can disperse losses more widely.

The higher the joint debt, the higher is the likelihood that the market price will be lower than the joint debt. If the selling price for co-op homes lies below the joint debt, the homes will not be marketable. This applies to forced sales as well. A homeowner facing payment problems would in that case be able to terminate his right of tenancy and move out six months later. The cooperative would have to take over the unit, leaving the remaining residents with a higher joint debt bill per share, unless letting on a temporary basis makes up for the loss. But when terminating the right of residence the shareholder will have lost his deposit. While the procedure reduces the risk of loss to the individual member or shareholder, it increases the likelihood of loss to cooperative as collective. If enough shareholders terminate their right of residence, and the market environment makes selling virtually impossible, the remaining shareholders will be liable for the entire debt of the cooperative.

The cooperative could, of course, sell the unit if the market price were to exceed the joint debt at some point. In a climate in which many units in a cooperative are not sellable, many may feel induced to terminate their right of tenancy and bankruptcy might be the most sensible course of action for the cooperative. Before declaring bankruptcy, the loaner may try re-negotiating the terms and size of the joint debt. After that point, the loaner will assume ownership of the cooperative and either let the units at the going price or divide the property and sell the units to the tenants at a discount as provided for under the Property Unit Ownership Act.

Cooperatives can insure against loss from members defaulting on shared costs by establishing a guarantee scheme.[iii] NBBL provides a "joint cost default insurance scheme". Some cooperatives run their own guarantee schemes. Losses must be de facto before the scheme pays out. To be eligible for the scheme, the deposit must be at least 20 per cent for cooperatives affiliated with a Housing Association and 25 per cent for independent cooperatives. In addition, an overall assessment of the financing structure and price per m^2 is done. The costs to be included in the guarantee scheme are 0.35 per cent of the budgeted joint costs. In 2008 the guarantee fund covered 3,590 cooperatives of a total of 7,000.

Risks involved in the low deposit cooperative model can be strengthened with the imperfect or asymmetric information between buyer and seller in this model. The degree to which households are susceptible to falling income or rising costs depends then on whether the households were given adequate information when they bought the unit, including information on how the end of the re-payment free period would affect expenses or an interest rate hike joint costs. Information about products is essential to well-functioning markets, and government regulations will often be enacted to reduce information asymmetries between producer and customer (see i.a. Križna 1991). Schmidt (2008) has studied information included in home sales prospects and found significant asymmetries between homebuyers and developers. She has also reviewed the literature on the buying and selling of homes, finding that the estate agency industry scores relatively poorly on customer satisfaction scales (Bredeveien et al. 2005, Berg 2008, 2007).

Negotiating affordable housing

The municipalities play a key role in the supply of housing in Norway – both by virtue of their being the planning authority and the body that dispenses building permits. So if we want to understand why there are so many low-deposit cooperatives, municipal housing policy and the process of bringing new developments onto the market must be taken into account. According to certain studies, developers tailor their projects to meet the challenges placed in front of them by government and municipal policies. They take these steps mainly with an eye to getting the necessary permits (Nordahl 2006, 2008).

A review of housing policy in the five largest cities in Norway found considerable concern among politicians over the housing situation of the young demographic (Nordahl, Barlindhaug & Ruud 2007). High density building and construction within the building zone constitute the leitmotifs of new developments. New projects within the building zone target young buyers, and are therefore already stamped with political approval. Knowing this, it is easier to see why private developers headed so many of the low-deposit projects.

In Britain there is a large body of literature discussing the production of affordable housing with regard to the planning system. After Kate Barker launched her report on housing supply in Britain in 2004, practises of negotiating housing development has been high on the agenda within the local authorities and within the academic community: The number of units of affordable houses has been monitoring (Cambridge Centre for Housing and Planning Research 2005). It has been discussed whether optional planning charge or section 106 negotiations are most suited for successful promoting of affordable housing (Monk et al 2006). The negotiation process has been assessed in order to draw up the most successful starting points for the local authorities, in order to achieve the largest number of affordable units (Monk et al 2008). Also the principle behind the Barker proposals has been assessed by several authors, see for instance Oxley (2006).

Like affordable housing in Britain, the low-deposit housing cooperatives origins with the developer obtaining a planning permit after series of interaction with the local planning authority. In this process the developer forwards a proposal of a development either for a particular low-deposit cooperative or for a larger development where the low-deposit corporative is part of a larger development. These processes involve negotiations between the developer and the local planning authorities, and in these dialogues optimal land use and development conditions are negotiated. The first difference between the British model and the Norwegian is the way *affordable housing is put on the agenda* in these negotiations.

In Norway the type of conditions that the local authorities are to pursue in negotiations with developers are mainly restricted to technical infrastructure and parks (so called black and green infrastructure). Contributions in forms of schools are not allowed, due to a fear that the developers would face a too heavy burden and cease the development. A change in the Norwegian Planning and Building Act of 2006 banned social infrastructure as a part of the development conditions (Nordahl et al 2007). The new act from 2006 required the planning authorities to create an environment of certainty and proportionality for the negotiation process. Like in Britain, local authorities has to draw up a policy brief which states in what areas the planning authority will require development agreements on what themes and task that are likely to be on the negotiation agenda. Many local authorities are now developing the first generation of this "development gain policy", and so far affordable housing has not been up front. The combination of juridical limitations and self-imposed practises is therefore one important reason why affordable housing not (yet) is a part of development conditions which the developers are confronted with.

A second reason for the absence of affordable housing from the development negotiation is linked to the actors involved: in Norway there are no bodies like the British Registered Social Landlords. Even if the municipalities would have succeeded in negotiating land for affordable housing, they would have faced difficulties in finding an organisation that could organise and manage the financing and the distribution of these dwellings. Municipalities might of course take this task on themselves or they might put the land on the market and arrange a tender among developers.

It is no doubt that the local authorities' favours affordability within the housing stock, and increased affordability, especially for younger households, is frequent discussed at national as well as at local levels. In areas of high development pressure and high pries, this is particular evident.

Land prices are highest in central areas, and the ability of the young to pay is limited. One solution has been to design developments with many small units, a solution which gives the developers the highest return since the selling price per square meter of small units is higher than bigger. Politicians in Oslo and other populous municipalities are not happy about projects with a large preponderance of diminutive units. But if the developer combines the small unit with a system tailored to the young, small homes would be easier for the politicians to accept. By offering centrally situated housing projects with small units and a financing system which lowers the entry point, the developer will have provided an answer to the political challenges articulated by local governments in major cities in their policy documents (Nordahl, Barlindhaug & Ruud 2007). It cannot be disregarded that the developer also met less harsh conditions related to black and green infrastructure, or that the planning permit was be evaluated positively, when the proposal entail low-deposit cooperatives.

Method and data

Our study is based on a review of cooperative housing project prospectuses from the years 2004–08, and the results of a representative survey of 91 business managers of housing cooperatives with deposit shares less than 25 per cent. The registered projects also included housing cooperatives with either a longer repayment period than thirty years or period of grace of more than ten years. In some cooperatives the ratio between deposit and jointly held loan varies. Our analysis included cooperatives with at least one unit where the deposit share was below 20 per cent. Cooperatives with average deposit shares below 25 per cent – the "real" low-deposit co-ops – accounted for 40 per cent of the co-ops we in our study rather simplistically called the low-deposit co-ops. Apart from the loan repayment schedule, only minor differences separated the "real" low-deposit co-ops from the others.

NIBR's database over low-deposit co-op units put up for sale between 1 July 2006 and September 2008 was based on a register belonging to Eiendomsverdi AS. 183 prospectuses were registered in our database. We analysed the preponderance and characteristics of low-deposit homes in this period. NIBR was also given access to the data from the study performed by the Norwegian Federation of Co-operative Housing Associations (NBBL) for the period 2004-2006, se Arntsen et al. (2006).

We carried out a survey among business managers of a selected group of NBBL cooperatives and «real» low deposit cooperatives listed in NIBR's database. The survey examined among others the incidence of defaults in low-deposit co-ops. Of a net sample of 106 cooperatives we received responses from 91.

Data on 223 new cooperative housing units completed in 2005 were sourced from Barlindhaug & Ruud (2008). We used these data to compare the sales price of the new low-deposit units with comparable housing units, and to investigate the resident composition in low-deposit housing and other cooperative housing. Data from Statistics Norway (SSB) showed price movements on resale cooperative housing units and building costs of new units. Additional data for the comparison included sales achieved on new low-deposit housing with similarly priced co-op dwellings more widely.

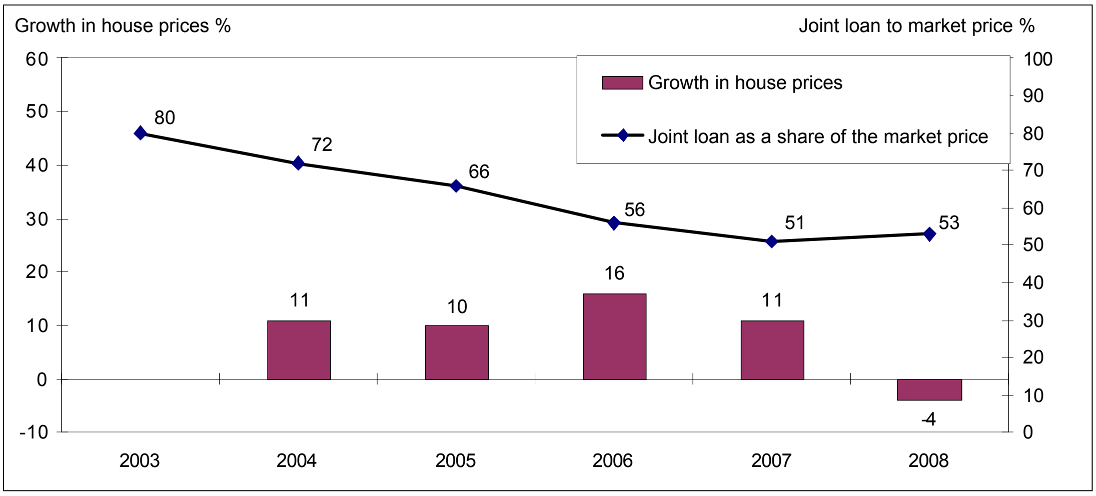
Sales data for existing cooperative dwellings for the years 2003 and 2008 were retrieved from www.finn.no by ECON Pöyry on behalf of the Norwegian Association of Estate Agents (EFF). It was possible to extract the cooperative units from the rest of the data.

Interviews were done with developers of four expensive projects. In these interviews we went through the projects' cost data. Developers were also interviewed on their views on construction and low-deposit housing in the future.

Findings in the study

In the lifetime of a cooperative housing association as whole, the period of low-deposit homes can be brief. The share of the joint debt falls as housing prices rise, or as the loan is gradually redeemed. Low deposits are often combined with a repayment free period on the joint loan. A unit bought in 2003 with a joint loan of 80 per cent of the selling price would have a deposit share of 53 per cent by 2008, even without repayments on the joint loan, if the price of unit mirrors the general movement in prices and the market value of the cooperative unit is taken as the reference point.

Figure 1. Relationship between price movements and joint loan ratio for a random new cooperative unit bought in 2003 with an 80 per cent joint loan attached



Source: House price index for Norway (SSB)

A low-deposit cooperative could, in a climate of rising prices, be normalised, bringing the joint debt shares in line with ordinary cooperative housing societies. If prices are trending downward, a normal cooperative housing society could transform itself into a low-deposit cooperative. For the sales value of the unit to fall below the joint loan in this example, the house price index would have to fall 47 per cent from the 2008 level. The chances of this happening are relatively small. If the unit was bought in 2006 and the joint debt accounted for 80 per cent of the price, that share in 2008 would have fallen to 75 per cent. For these units, a fall in house prices of 25 per cent from the 2008 level would bring the share of the joint debt above the overall price of the units.

It could appear as if interest in organising new cooperative projects on the basis of low-deposit units is waning. According to Arntsen et al. (2006), fewer than 20 per cent of all cooperative housing projects in the period 2004–06 were low-deposit projects. Based on figures retrieved from the same database, Eiendomsverdi AS, we conclude that 14 per cent of co-op projects sold between 2006 and 2008 were projects with an average deposit share of 20 per cent or less (Barlindhaug et al. 2009). The supply of low-deposit units appears therefore to be tailing off in relative terms, partly due to the bad press,[iv] but also because developers have burned their fingers on the model. Developers told that they have no intention of building any more low-deposit cooperative projects, and will seek to get a deposit share of at least 25–30 per cent. Interest in low-deposit projects has declined both among the Housing Associations and private developers.

Our review of the prospectuses showed that private developers accounted for 70 per cent of the projects put on the market in the period 2006-08. The Housing Associations were responsible for 20 per cent; the remaining 10 per cent were joint ventures between Housing Associations and private developers. The Housing Associations were responsible for half of the projects where deposit shares were less than 20 per cent. There is a tendency for the share of young households to increase with lower deposit shares.

The code of conduct is defined in relation to the Estate Agency Act in its 2007 version. Many of the projects included in our analysis were on sale before the amended law came into force on January 1, 2008. The business managers in our survey believe six in every ten cooperative unit sales observed the code of practice, though we found in our study of 183 sales prospectuses that only 14 per cent satisfied the good practice criteria according to prevailing law. Among other things there was a lack of information on financial terms attached to the purchase.

In some cases the name of the credit institution funding the joint debt was not given. After the cooperative has been legally created and funding is in place, the State Housing Bank, according to the business managers in our survey, financed the debt in 44 per cent of the projects. Among cooperatives with deposits set at less than 20 per cent, the Housing Bank funded the joint debt of six in ten cooperatives.

We found in our review of the prospectuses that only three of the registered cooperatives offered joint loans with fixed interest rates. In two in three registered projects, information on the type of interest, i.e. fixed or variable, was lacking, and most cooperatives with a deposit share below 25 per cent had a repayment free period of less than ten years and a loan maturity of between twenty and thirty years. Among cooperatives where deposit shares were over 25 per cent, but which are registered because they have some low-deposit units or special terms on their loan, 38 per cent have a maturity on the joint loan of fifty years.

Market prices and mortgage interest rates bottomed out in the first part of the period, and many buyers from around then have seen their housing expenses rising quite significantly. This is particularly the case in cooperatives where the debt is financed by private sector institutions. Homeowners who bought the unit at the end of the period had to pay more initially, but because they had already discounted the rise in interest rates, their housing expenses in 2008 were not much higher than anticipated.

One of the questions posed by Barlindhaug et al. (2009) was whether the low-deposit approach had been misused by private developers in a bid to sell units at a premium. Frequent allegations have been made in the media against the marketing of low-deposit homes for misleading the public both with regard to the total price and housing expenses after the repayment holiday. Critics have said that the joint cost estimates for the first year have been based on unusually low interest rates. A significantly higher sales price per unit could in this sense have been marketed compared to similar housing, and many buyers may have been lured buying into projects whose housing expenses they would soon exceed their payment capacity.

Some of the projects on the market quoted extremely high m^2 prices. A review of the four projects with the highest prices showed that they were centrally located projects where not only land prices were high but the risk of zoning as well.[v] Three of the projects required either re-zoning or new site layout plans and had to go through the planning permission processes all over again, which required a lot of time and had outcomes the contractor hadn't envisaged. Expected returns were normal, but with a high zoning risk and a financial crisis followed by a slowdown in the market for new homes, three of the projects ended up losing money.

In our study we also compare sales prices on low-deposit homes obtained from a user survey of residents in a representative sample of homes completed in 2005 (Barlindhaug & Ekne Ruud 2008). We have not been able to find evidence of low-deposit housing being sold at higher prices than similar housing.

Barlindhaug & Ekne Ruud (2008) found that 5 per cent of all new homes in 2005 were subject to reselling, that is, the first buyer sold the property on before it was officially completed the constructor. Of holders of the right of residence in the survey, 6 per cent had bought such a "resold" home. In a market with rising housing prices, the price was significantly higher than the originally listed price in the prospectus. In our study only the listing prices are used, but one should be aware of the high deposit some of the residents have paid and that these household will loose more than their neighbours in cases where the joint debt is higher than the market value and a bankruptcy is on the agenda.

Nor is there any evidence of low-deposit homes fetching higher prices than comparable dwellings in the secondary market. It was possible to identify the amount remaining on the joint debt but not whether the unit had once been a low-deposit home. The data include information on the joint debt, what the unit was sold for, type of dwelling, living space, construction year and municipality.[vi]

We decided to investigate whether the pricing of used cooperative dwellings was affected by the amount of the joint debt per m^2 of living space and ran two separate analyses on co-op dwellings sold in the years 2003 and 2008. If bad press had caused a drop in the price of these dwellings in the secondary market, the coefficient in front of the variable "joint debt per m^2" would be negative and more negative in 2008 than in 2003.

Table 1: Results of a hedonic regression analysis[vii] of sales prices in cooperatives, 2003 and 2008. Dependent variable: Total price per m^2 (in NOK 1000).[viii]

	Estimates 2003		Estimates 2008	
Intercept	46.5		40.7	
Living space logarithm (m^2)	-8.3	***	-5.3	***
Joint debt per m^2 (NOK 1,000)	0.3	***	0.2	***
Age of dwelling in years	-0.2	***	-0.2	***
Centrality categories				***
Oslo	13.1	***	15.4	***
Other major cities	7.4	**	11.1	***
Metropolitan areas	7.1	**	6.0	***
Other towns	2.9		2.7	**
Rest of the country (reference)[1)]				
	R^2=0.25		R^2=0.42	
	N=5104		N=6523	

** $p < 0.005$, *** $p < 0.001$

When the joint debt per m^2 rose, we found that the price per m^2 rose as well, both in 2003 and 2008 and after controlling for living space, age of dwelling and centrality. The coefficients in front of the joint debt variable are relatively similar in both years. We can read the positive coefficients in several ways. One is that higher joint debt shares tend to lower the risk to the buyer since the risk of loss to the cooperative is limited to the deposit. Buyers will therefore be willing to pay extra to enjoy the reduced risk of making a loss. But it could also mean that the demand for flats with high joint debts is large because the part which the buyer needs to finance himself (the deposit) is small. A low-deposit makes it easier for first-time buyers to get a foot on the property ladder. A third explanation could be that the buyer is willing to pay more for units with a high joint debt because the interest on the joint debt is lower than the loan the buyer could obtain in the credit market, something he is willing to pay more for. But people buying homes with high joint debts in the secondary market may not have understood the overall price – joint debt plus deposit – and therefore pay more than for a comparable dwelling.

In light of these analyses, we are unable to conclude that low-deposit homes fetch lower prices in the secondary market than comparable dwellings. One weakness attending on this analysis is that the price statistics only include the dwellings that were actually sold at the end of 2008, and that the enormous supply of homes on www.finn.no was unprecedented at the time. Many of the unsold dwellings may, in reality, have been low-deposit dwellings that proved hard to sell.

Our study found a skewed demographic profile in about one in three low-deposit cooperatives, while 40 per cent are demographically mixed on the age parameter. Another fining indicated that eight in ten low-deposit cooperatives were insured against losses related to joint costs. Cooperatives affiliated to a Housing Association were more likely to insured be than independent cooperatives.

Our survey of business managers of low-deposit cooperatives built in the years 2004–08 shows that 4 per cent of residents of these cooperatives have experienced payment problems and defaulted on joint costs. Prevalence of payment problems does not vary with construction year, but rises slightly in cooperatives with the lowest deposits.

Do more households face payment problems in the low-deposit cooperatives than in other cooperatives? We tried to illuminate this by reviewing a random selection of forced sale petitions filed with Drammen District Court in 2008 and found that 75 per cent of petitions were for units in cooperatives built before 1990. Two in ten cases were in cooperatives built in the years 2004-06. In short, our findings indicate that the increase in interest rates over the past few years has indeed created payment problems for some, but the problems are not concentrated to the low-deposit cooperatives. The problems would have been more serious if the interest rate had remained high and payments on the joint debt had begun on top of that.

Our study does not indicate that the low-deposit model is inherently responsible for these problems. But before we can detail the causes of payment problems, we ought to look more closely at the practice of giving loans to homebuyers and low-deposit homebuyers in particular.

The anticipated fall in the interest rate in 2009 and prognoses going forward mean that housing expenses for most low-deposit homeowners will fall, despite grace periods on the joint loan coming to an end. So housing expenses per se will not create future payment problems in low-deposit cooperatives or other housing schemes.

We have looked at the role of the State Housing Bank in financing low-deposit cooperatives. The Housing Bank financed many of the low-deposit cooperatives that were started early in the period 2005–08, when price levels were lower, but funded fewer and fewer towards the end of the period as prices grew and there was concern about the guarantee schemes. The cooperatives funded by the State Housing Bank are also characterised by having been constructed by private sector developers and also, to a slightly higher degree, sold by the developer rather than through an estate agency. They also stand out by having a smaller population of young residents and a relatively wider assortment of ages. We also found that cooperatives funded by the State Housing Bank were more likely to adhere to the estate agency code of practice. After playing an active role in the funding of low-deposit cooperatives, the State Housing Bank has begun to withdraw from this market segment. As at the end of 2008, the State Housing Bank requires deposit shares to be 20 per cent or more and cooperatives have to take out an insurance policy against loss caused by defaults on joint costs.

Discussion

It is when collective risk factors are factored in, not the least of them being selling problems, that the weaknesses of the low-deposit model tend to stand out. High joint debt increases the likelihood that young households or low- income households will buy into low-deposit cooperatives. Low-deposit dwellings constitute the lowest rung on the property ladder and this demographic will usually be less resistant to economic cycles and hence bear greater individual risk. These factors tell us that the sum of individual risk is greater in low-deposit cooperatives than other cooperatives. But a high number of residents in each cooperative, insurance scheme against rental loss and, not least, a high marketability factor, help reduce the individual risk.

A commission consisting of secretaries of state was set up by the Minister of Local Government and Regional Development with a mandate to examine the problems surrounding low-deposit housing reported in the media. The commission had Arntsen et al.'s (2006) work to go on, and reports compiled by the State Housing Bank on the Bank's involvement in low-deposit projects. A raft of measures was launched in June 2008. The plan focused on better information on the projects' total price, prognoses concerning the joint costs, improved guarantee schemes against losses from defaults on joint costs, better credit assessment of buyers, specification of a ceiling on joint loan shares, and a ban on ground lease contracts for land which is already built on.[ix] Our analysis was also included in the package of measures.

The Ministry of Local Government and Regional Development has pursued this work and is consulting with parties on several possible statutory changes to alleviate the problems affecting low-deposit housing. The most important of these proposed changes include a 75 per cent ceiling on the joint debt when cooperatives are established and a ban on sellers financing the deposit. All units in the same cooperative should share the joint loan equally. These measures, according to the ministry, would facilitate improved assessments of homebuyers' credit worthiness. A low-deposit share should help buyers obtain a deposit without having to undergo a private credit institution's assessment procedures. Under the Financial Contracts Act, no institution will be on hand to discharge the duty to dissuade buyers from assuming a share of the cooperative's joint debt.

A 75 per cent ceiling on the joint debt translates into a relatively high deposit share. In a climate of falling house prices, high deposits would increase the risk of individual loss, and consequently the ownership affiliation the cooperative. If the market is trending downwards, low-deposit shares would make it easier for residents to terminate their right of tenancy with six months' notice and abandon their joint debt obligations.

A reason given by the ministry in support of joint loan financing is that it is cheaper than if the shareholder were to finance the loan himself. As we see, it is not entirely obvious that the interest costs and costs associated with guarantee schemes would together be lower than the terms a household could obtain from a private credit institution.

According to data from a selection of district courts, the number of forced sale petitions on cooperative units rose by 35 per cent from 2007 to 2008, while real property petitions grew by 10 per cent. The number of forced sale petitions on cooperative units grew more rapidly over the past twelve months than petitions to sell owner-occupied housing. There may be several reasons for this, and we won't pursue the matter here apart from to mention one important point. Finance institutions are often willing to go the extra mile for individual loan customers in difficulty by temporarily freezing loan instalments. As far as the cooperatives' payment of the joint debt is concerned, the individual shareholder cannot re-negotiate the repayment schedule to suit himself. When payment problems arise, the cooperative's members would have an interest in seeing the business manager taking prompt action to file a forced sale petition, which might persuade the defaulter to rectify the situation.

Concerning consumer problems associated with low-deposit housing, the ministry proposed changes to the Housing Construction Act to ensure buyers are given information on the dwelling's total price. This would compel sellers acting without an estate agency to provide this information as well. The ministry also proposed using the Housing Cooperatives Act to ensure that the terms of the cooperative's joint debt are made clear to the buyer and that an annually updated estimate of what the joint costs are likely to be after the repayment holiday on the joint loan. Under the current Estate Agency Act, a seller who uses an estate agent is required to quote the likely joint costs following the repayment holiday.

A change in the Ground Lease Act would make it unlawful to enter into ground leases on built-up land. No private person can own more than one share in a housing cooperative. It has been possible for private persons and property development companies, nonetheless, to buy more shares on the prospectus with a view to selling them before the project is finished. The ministry is therefore proposing a change to the Housing Cooperatives Act to make advance purchases binding. To make it harder for speculators to terminate the right of residence, the ministry suggests lengthening the notice period from six to nine months. This would apply to current shareholders wanting to terminate their right of residence. The Ministry of Local Government has appointed a committee to prepare amendments to the law on the minimum requirements to voluntary guarantee schemes in cooperatives. The committee should deliver its report before July 1 2009.

Several of these proposed amendments appear to strengthen general consumer interests in the purchase of all types of cooperative dwellings, not just those accompanied by a high joint debt. The 75 per cent joint debt ceiling proposal would alone deal the death blow to the low-deposit model. What remains is the housing cooperative mode, with proposals to strengthen consumers' interests connected with the purchase of these dwellings. The low-deposit model which was established to help young buyers get onto the property market will vanish.

As we see it, demand side instruments as top up financing with the "start-up" loan and cash grants will move centre stage as the key policy instruments to promote homeownership, possibly together with a more inclusive housing benefit scheme.

Housing policy has focused on the disadvantaged, and the question is how far the state should go to help a larger proportion of each new generation to early home ownership. Many studies of homeownership conclude that most young people get to own their own home sooner or later, but that extending education and delaying family formation have delayed homeownership in the housing market.

Conclusion

In promoting affordable housing for low income groups there has been a trend since the late 1970-ties to move away from supply side interventions, called "bricks and mortar" subsidies, to individual targeted demand side subsidies for home ownership. The idea of low deposit cooperative housing in Norway was a reaction on the insufficiency of target demand side instruments for helping others than the most disadvantages groups on the housing market.

Low deposit cooperatives were first introduced as a model where the government and municipalities should subsidise first-purchase homes, and let the subsidy remain with the property by regulating the sales price. In practice, however, market principles have governed the construction of low-deposit units in recent years without the help of subsidies or price regulation.

We demonstrate that the low deposit cooperative model with high joint loans has some characteristics connected to individual and collective risk, which makes the model vulnerable for unexpected interest rate shocks and falling house prices. Potential buyers difficulties understanding the full implications when buying a low deposit home, and the following asymmetric information between seller and buyer has throw suspicion on the developers for abusing the situation to demand selling prices high above similar condominiums for sale. One also expected high default rates among the residents in these dwellings when interest rates on the joint loan increased and amortisation started after a period without repayment.

In our study we have not been able to find evidence of low-deposit housing being sold at higher prices than similar housing. Nor did low-deposit homes fetch higher prices than comparable dwellings in the secondary market. Among the residents covered in our survey 4 percent had made a default in 2008, but an example show that default is not concentrated to the low deposit homes, but also hit other households who had bought a new or used dwelling during the last years.

Many of the proposals from the Ministry of Local Government and Regional Development following our study and the public discussion of the model seem reasonable. A 75 per cent ceiling on the joint debt when cooperatives are established put the model to an end. Affordable owner occupation through supply side measures seems difficult to achieve when house prices formation are based on market principles. Should supply side measures be tried, either through cash grants, eventually combined with contributions from developers, negotiated in applications for planning permissions, one need to establish submarkets where prices on later transactions of the dwellings are regulated.

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[i] A majority of the Municipality Commission expressed a desire during the reading of the housing white paper to see a thousand low deposit units built annually with a 15 per cent subsidy and price regulation. Referring to this majority in its 2005 Soria Moria Statement, the Government noted its readiness to start building of a substantial quantity of low deposit units.

[ii] A key policy tool has been to offer reasonably priced top up funding to young and disadvantaged people in the housing market. These loans used to be called "owner's capital loans" (*egenkapitallån*) back in the 1970s, before changing to first home loans (*etableringslån*) and now, since 2003, start up loans (*startlån*).

[iii] What the Housing Cooperatives Act used to call rent is now termed joint costs.

[iv] *Dagens Næringsliv* ran a series of critical reports about on the low deposit approach, not least the piece entitled «State-financed debt bombs» (Statsfinansierte gjeldsbomber) on 30 March 2008, alleging developers had used the low deposit model to hike up the m^2 price, and the State Housing Bank had funded about half of the units. The upshot, according to *DN*, was that many young home-builders who so far had failed to establish themselves in the property marked now sat with over-priced co-op flats with debts likely to blow up in their faces. See too «Norway's subprime» (*Norges subprime*) *DN* 7 February 2008, «Beware more debt bombs!» (*Advarer mot gjeldsbombe*)in *VG* 17 April 2008, «Pocket books could be free» (*'Billigbøker' kan bli gratis*) *DN* 16 July 2008, «Co-op Housing Model Misused» (*Borettslagsmodellen har blitt misbrukt*) *DN* 20 February 2009.

[v] See Nordahl (2008) and Barlindhaug and Nordahl (2005) on the concept of zoning risk.

[vi] The data were thereafter filtered by construction year, dwelling type and size in m^2. We have all sold co-op flats built in and since 1989 up to 90 m^2.

[vii] Since dwellings vary considerably with regard to size, location, layout, these factors should be taken into account explicitly in estimates of property price levels. The prevailing method of estimating house prices is called hedonic regression. Prices are estimated by running regression analyses on a so-called hedonic price function. The function is called hedonic because the point is to isolate the effect of individual price-changing factors (size, dwelling type, location, date of sale). Regression analysis is a statistical method used to determine how one variable depends on, or is explained by other variables. Regression analyses help us to determine whether there are correlations between the dependent variable *price* per m^2 and the explanatory variables *construction year*, *size*, *location*, and *date of sale*. We used OLS to estimate the coefficients in the hedonic price function. A detail run-through of the hedonic method can be found in Kain & Quigley (1970).

[viii] The dependent variable total price per m^2 is equal to the sum of the joint debt per m^2 and deposit per m$^{2.}$ A higher joint debt per m^2 does not necessarily mean a higher total price, but may indicate lower deposit per m^2.

[ix] The latter proposal came about because some low deposit projects had entered into land lease contracts which made it difficult to compare the price of those dwellings with the price of similar dwellings on owned ground.