Housing Finance in Sweden

by Bengt Turner

ABSTRACT

Sweden historically has highly subsidized housing construction and rehabilitation. Subsidies were mainly channelled through an interest-subsidy system that reduced initial capital expenditures.

A boom in the housing market in the late 1980s turned into a bust in the early 1990s. The reason for the bust was a combination of factors: a lower inflation rate, a deep economic recession and reduced interest subsidies in combination with a tax reform.

The housing bust created a large fall in prices, increased vacancies, a low construction rate and a high default rate. The bank crisis was counteracted by a tighter credit market with more thorough screening of borrowers. A more refined approach to risk management has, however, yet to emerge.

INTRODUCTION

Sweden has a tradition of a well-developed housing policy, with a large share of subsidies channelled through a multitude of instruments. Interest subsidies have been combined with tax credits, housing allowances, investments allowances and various tax instruments to stimulate, in particular, new construction.

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Politically determined interest subsidies have been an integral part of the housing finance system. The result has been a regulated credit market with an integrated housing policy. The system is now gradually being phased out, much in the same way as other housing policy instruments are being dismantled and the amount of subsides are being decreased.

This article is structured as follows:

A first section provides an overview of the housing finance and housing policy systems throughout time. The discussion focuses on new or recent construction and rehabilitation, as this traditionally was the target for housing and finance policy. The credit market for new construction was created as a closed circuit coordinated with the finance (subsidy) system.

A second section deals with the older stock and the development of the market for existing housing. Most of the financing of the older stock has been made on market terms, independent of housing and finance policy measures, with the exception of major rehabilitation programs, which have been aligned with new construction. The impact of credit market deregulation, as well as the effects of changes in macroeconomic conditions are major factors influencing this market.

A third section summarizes the impact of deregulation on the housing market, as a consequence of the withdrawal of subsidies and changes in the macroeconomic environment. The boom and bust of the market is analyzed and the reaction of credit institutions is discussed.

HOUSING FINANCE FOR CONSTRUCTION AND IMPROVEMENTS

Basic Principles

Housing construction in Sweden used to be financed by specially designated housing loans which were connected to a government subsidy.[1]

The loans have extraordinarily long maturities in an international perspective, which is demonstrated in Table 1, below, with data from an international comparative research project.

Maturities in Sweden can be as long as 50 years as compared to 20–30 years in most other countries in the study. Finland, at the other extreme, which has a bank dominated mortgage market, has extremely short maturities of 7–10 years for ordinary buyers and slightly longer for first-time buyers. Maturities are also short in France. Except for these extremes, there are relatively small differences between countries.

The structure of the banking sector set in an international perspective is given in Table 2, below.

Sweden and Denmark are exceptional in their reliance on specialized mortgage lenders, supplemented by ordinary commercial bank lending.

Table 1. Mortgage Terms in 1996

Country	*Down Payment*	*Maturity*	*Interest Rate*
Sweden	5%	20–50 years	Fixed/variable
Denmark	5%	20–30 years	Fixed
Norway	30%	20–30 years	Fixed 1–3 years
Finland	30%	7–15 years	Variable
Iceland	25%	25 years	Fixed
Germany	20%	10–30 years	Fixed
Austria	20–40%	25 years	Variable, Bauspar - Fixed
France	10%	10–20 years	80% fixed; 20% variable
The Netherlands	25%	30 years	Fixed 5–12 years, as well as others
UK	5–25%	20–25 years	Variable, but fixed increasing
Ireland	10%	20–30 years	Variable, but fixed increasing
Austria	10–20%	20–25 years	Variable
New Zealand	10%	15–25 years	Variable

Source: Jakobsson, Turner & Whitehead (1996)

Table 2. Market Share of Mortgage Institutions (Proportion of Total Lending)

Country	*Mortgage Banks*	*Banks*	*State*	*Building Society/Other*
Sweden	85%	10%	0%	5%
Denmark	84%	11%	0%	5%
Norway	4%	60%	23%	13%
Finland	1.5%	80%	12.2%	6.3%
Iceland	0%	3%	77%	20%
Germany	12%	36%	21%	30%
Austria	0%	31.7%	41.1%	27.3% Build. Soc.
France	18%	10%	0%	72%
The Netherlands	22%	48%	0%	30%
UK*	0%	37%	0%	63%
Ireland	0%	67.2%	0.4%	32.4% Build. Soc.
Australia	0%	88%	0%	12%
New Zealand	0%	90%	0%	10%

*Lending to social housing is not included (part of municipal budget).

Source: Jakobsson, Turner & Whitehead (1996)

In the system that was in use up to 1992, the amount of loans was determined from a "loan basis" that usually corresponded to 99% of the production cost (for very large houses or houses with many amenities, the percentage was less). In the old system, these loans were split into a "bottom" loan and a "housing" loan. The bottom (or first) loan provided 70% of the loan basis, while the housing (or second) loan equalled the following percentages of loan basis:

- 30% for public (state or municipal) owner
- 29% for co-operative owner
- 25% for private owner (private landlords and owner occupation).

The bottom loans were provided by various private credit institutions, and the higher risk housing loans were issued by Statens Bostadsfinansierings-aktiebolag (SBAB). The remainder of the loan basis and any difference between the production cost and the loan basis was financed with a "top" (or third) loan or by an equity contribution by the borrower. The bottom and housing loans are fully assumable upon sale of the house.

Interest Subsidies[2]

A system of granting interest subsidies based on the principle of a guaranteed interest rate was introduced in 1975 and was in effect until 1993, when the subsidy system was fundamentally changed.

The system has constantly changed over time. A brief overview of the changes affecting the housing finance system up to 1993 is given below. The changes reflected both changes in the subsidy system and tax system.

For bottom and housing loans, the borrower paid a government-determined "guaranteed" interest rate each year on the initial loan amount, and the government paid the re-

mainder of the interest cost in the form of interest subsidies.

For new construction, the initial guaranteed interest rate in 1989 was 2.7% for rented and co-operative housing. In 1991 it was changed from 2.7% to 3.4%. In 1992 there was yet another increase in the guaranteed rate of interest, this time from 3.4% to 3.7%.

The initial guaranteed interest rate for owner-occupiers was 4.9% for most of the period up to 1993.

For renovations, the rates were 10% and 5.25%, respectively, in 1989. These rates were lowered in 1991 to the same rate as for new construction.

The guaranteed interest rate was increased each year by one-half percent for owner-occupiers and one-quarter percent for others until it reached the actual contract interest rate, at which time the interest subsidy became zero. The interest subsidies were lower for owner-occupiers than for the other owner categories because owner-occupiers received a second subsidy through the tax benefits in the form of tax relief on interest costs.

In 1993 the annual increase rise for rented and cooperative building society housing was increased to 0.375% to compensate for a planned capital tax change to 25%. The resultant rate of increase equalled the 0.5% rise for owner-occupied housing after a 25% capital tax deduction for interest expense. The changes only applied to rented and co-op dwellings. The escalation rate stayed at 0.5% in the owner-occupied sector.

However, the capital tax was never reduced below 30%, and therefore the annual rise for rented and cooperative housing was changed again, this time to 0.35% from January 1, 1994. The intention was to preserve neutrality between the different tenure forms.

In addition to the annual rise in the guaranteed rate of interest, there were also a number of increases in interest rates for the older part of the stock. These increases are documented in Jakobsson (1995).

The magnitude of the interest subsidies may be calculated as the discounted present value of the difference between the market interest rate and the subsidized rate. Assuming the market rate to be 12% and discounting at an after-tax rate of 6% (50% marginal tax rate) yields a subsidy value (net of tax deductions) for homeowners of 20.1% of approved building costs according to 1989 rules.[3]

Under this system, the state pays the difference between a guaranteed rate of interest and the market interest rate. In recent years the market rate has been defined as the interest rate SubA, which is a basket of interest rates paid by the mortgage institutes for loans with five-year maturity, plus a small percentage for administrative costs. The difference between this rate and the market rate has varied over the years, sometimes being positive, sometimes negative; but during recent years the market rate has been about 1% higher than the SubA.[4]

Presently, when the guaranteed interest rate reaches the market rate, the subsidy is no longer paid out, even if the market rate at a later date exceeds the guaranteed rate. But up until January 1, 1993, subsidies were granted at all times, even if the guaranteed rate of interest was lower than the market rate.

The SubA interest rate can be found below (Table 3) reported as yearly averages. It is striking how fast interest rates have decreased during the most recent years.

In the period March 7-13, 1997, it has dropped to 6.29%.

It is important to emphasize that social (public) housing in Sweden is provided by independent municipal housing companies, with the same, or even better, access to the credit market than other tenure or ownership forms. Sweden never had a tradition of public construction, funded by direct budget allocations from the state or municipality.

Table 3. Market Interest Rates in the Subsidy System[5]

Year	*SubA*
1986	11.11%
1987	12.07
1988	11.64
1989	11.66
1990	14.25
1991	11.95
1992	11.95
1993	9.01
1994	9.87
1995	10.00
1996	8.00

Source: National Board for Housing and Planning

The Rationale for the Swedish System

The policy-driven finance system in Sweden had a number of objectives. One was to promote affordability by lowering capital expenditures. More important was an ambition to solve the mortgage tilt problem. There is a long tradition in Sweden to handle inflation by decreasing initial capital expenditures, and keeping these expenditures constant or falling in real terms. In one period, 1968–1975, Sweden adopted a system resembling an index-linked system, where deficits in one period were to be covered in a later period when inflation had decreased the real value of the initial loans. Figure 1 shows capital expenditures—with and without state intervention—in real terms.

The system acted both as a general subsidy to new construction and as a way of handling the "tilt problem" of mortgage payments, i.e., the fact that standard schedules for amortization and interest payments imply disproportionately high real payments during the first years, which may give rise to liquidity constraints.

The implications of the system have varied over time, as the specific rules and inflation rates have changed. The normal outcome has been decreasing capital expenditures over time for new construction. The situation however started to change at the end of the 1990s as a result of decreasing inflation rates and persistent high nominal rates of interest. The tilt problem has been perceived as particularly important for the municipal housing companies, which have no equity apart from hidden values created by past capital gains on the existing stock [although these companies have been unwilling or unable to use these gains as a basis for second mortgages]. Because the stock of buildings owned by these companies is heavily concentrated in post-war vintages (particularly from the 1960s and 1970s), the companies would have faced severe liquidity problems in the 1970s and 1980s in the absence of interest subsidies, with the likely result of being forced to set rents temporarily below long-run costs.

Changes in the Finance System: the "Danell" Commission

The finance regulations described so far all apply to housing financed by loans granted up to 1992. In this year a new allowance and financing system for the housing market was introduced. The new rules applied to all new investments, while the old regulations remained for the existing stock.[6] In order to simplify the regulations and to avoid unnecessary capitalization of subsidies into building costs, the link between actual production costs and the subsidy was dropped. All mortgage institutions were also treated equally; no special preference was given to the State Mortgage Bank (SBAB).[7]

Rather than calculating subsidies on an actual-cost basis, a stylized system was introduced. Up to 35 square meters the acceptable production costs are SEK 13,000/m2. For a usable floor area between 35 m2 and 120 m2, the acceptable costs are SEK 6,000/m2. Floor area above 120 m2 is not acknowledged as a basis for subsidies. Unlike the earlier system, there will be no adjustment to inflation and increasing production costs. For rehabilitation the subsidy is still based on actual production costs. Subsidies are based on acceptable costs, calculated as 90% of the costs which exceed SEK 50,000/project. There is an upper limit, derived from comparable costs in new construction.

The subsidy for rented and cooperative housing was in 1993 determined as 57% of the acceptable costs for the first year after construction. This percentage is then reduced by four percentage points annually. For each following vintage, the initial level is reduced by five percentage points until it has reached the bottom level of 30%, which corresponds to the tax benefits given to homeowners through their tax deductions for interest costs. It is assumed that subsidies to rented and cooperative property will be phased out completely after some time.

For owner-occupied housing the subsidy in 1993 is 31.4% of the acceptable costs the first year after construction. The annual reduction is then 5.7 percentage points per annum until it is phased out completely. Each new vintage starts at a 7.1% lower level.

Changes have already been made in this system, as the decrease in subsidy for the new vintage of rented or cooperative houses was never carried out. For owner-occupied housing the first year allowance used to be 42 2/3%

Figure 1. Housing Finance in an Inflationary Environment

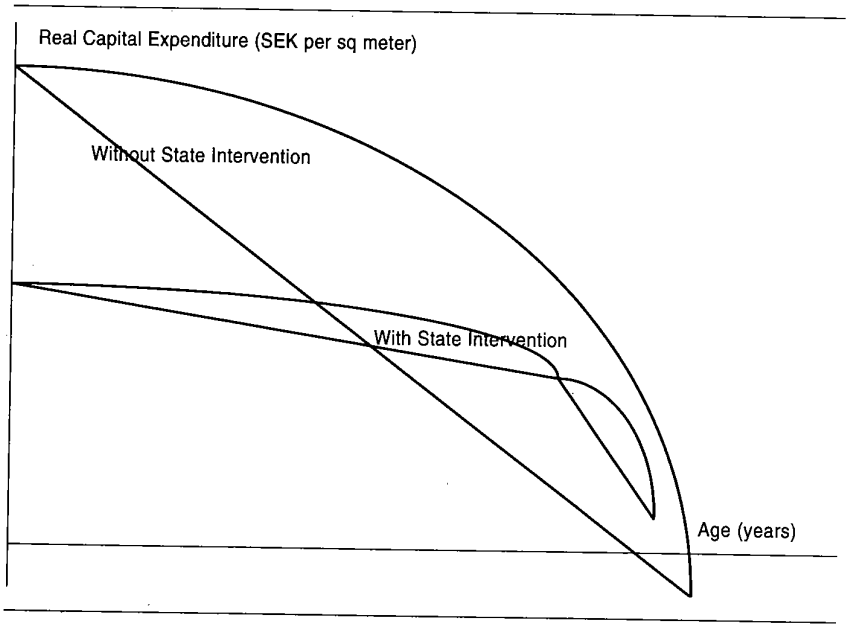


Table 4. Interest Subsidies for New Construction of Rented Housing and Housing Cooperatives, as a Share of Acceptable Interest Cost

	Vintages							
Production Year	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
Year of the Subsidy								
1	57%	52%	52%	47%	42%	37%	32%	30%
2	53	48	48	43	38	33	30	30
3	49	44	44	39	34	30	30	30
4	45	40	40	35	30	30	30	30
5	41	36	36	31	30	30	30	30
6	37	32	32	30	30	30	30	30
7	33	30	30	30	30	30	30	30
8	30	30	30	30	30	30	30	30

Table 5. Interest Subsidies for New Construction of Owner-Occupied Housing, as a Share of the Acceptable Interest Cost

	Vintages							
Production Year	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
Year of the Subsidy								
1	42.66%	36.00%	31.40%	24.30%	17.20%	10.10%	3%	0%
2	37.33	30.30	25.70	18.60	11.50	4.40	0	0
3	31.60	24.60	20	12.90	5.80	0	0	0
4	25.90	18.90	14.30	7.20	0.10	0	0	0
5	20.20	13.20	8.60	1.50	0	0	0	0
6	14.50	7.50	2.90	0	0	0	0	0
7	8.80	1.80	0	0	0	0	0	0
8	3.10	0	0	0	0	0	0	0

and an annual decrease of 5 1/3% and the vintage decrease was 6 2/3%. These changes are shown in Tables 4 and 5.[8]

More Finance Reforms

A recent Housing Commission has proposed a new subsidy system. It is proposed that the discounted value of future interest subsidies should be given as an up-front grant. The Commission suggested a 10% grant, based on acceptable production costs. Under an assumption of an inflation rate of 2%, a nominal interest rate of 7.5%, production costs of 10,000 SEK per square meter, and an assessment as a basis for property taxes, which follows inflation, capital expenditures will develop as projected in Figure 2 below.[9]

One striking feature of a system with up-front grants as compared to a vanishing interest subsidy is the development in real terms. In the present system with low inflation, decreasing interest subsides combined with an increasing property tax created a negative tilt over time. A system with grants has a more sensible pattern of expenditures in real terms over time thus creating room for rehabilitation costs.

The up-front grant system pays for the more sensible time pattern with a higher initial capital expenditure level. If the internal discount rate is higher for entrepreneurs than for society, this change will prove detrimental for incentives for new construction. On the other hand, a reason for the proposed change is a concern that repeated changes in the interest subsidy regime has created a distrust for future interest subsidies. The reduction in political risk may well outweigh the negative impact of a high initial expenditure level, even stimulating new construction provided the total subsidy level is kept constant.

Interest subsidies are however not kept constant. The combined effect of lower subsidies per unit, a smaller production volume

Figure 2. Capital Expenditures (in SEK per Square Meter) Over Time for a House Constructed in 1996. The Present System Compared to the Proposal by the Commission. 1996 Year Prices.

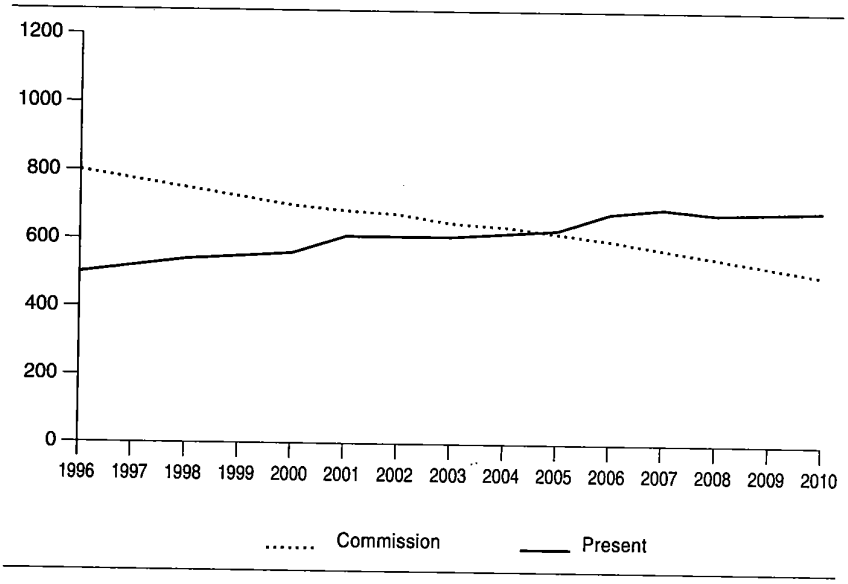
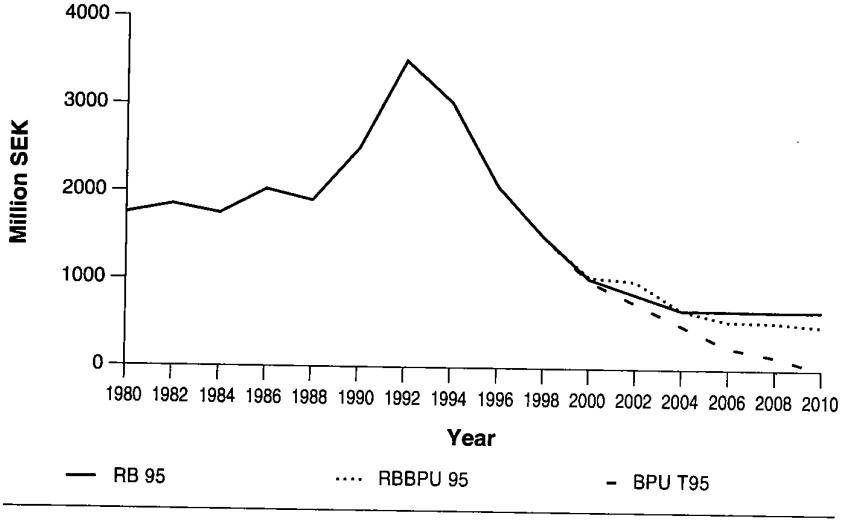


Figure 3. Interest Subsidies 1982 to 2010 in 1995 Prices.



Source: Bostadspolitiska utredningen

(see Figure 4) and lower interest rates have resulted in a steep reduction in subsidies (Figure 3). When interest subsidies peaked in 1992 they amounted to 2.2% of GDP. The dotted lines reflect the current proposal, with the upper thicker line including not only interest subsidies but also up-front grants to new construction and grants to socially deprived areas.

Since July 1992 housing loans are no longer provided by the state as a special financial circuit. They are now provided by the credit market. When this change was enacted, the state started to issue a credit guarantee and for this purpose a new authority was introduced, Statens Bostadskreditnämnd, BKN. The amount guaranteed is a maximum 30% of the acceptable production costs, for credit exceeding the first mortgage up to 100% of these costs. The guarantee is applicable for all types of ownership and is subject to a charge.

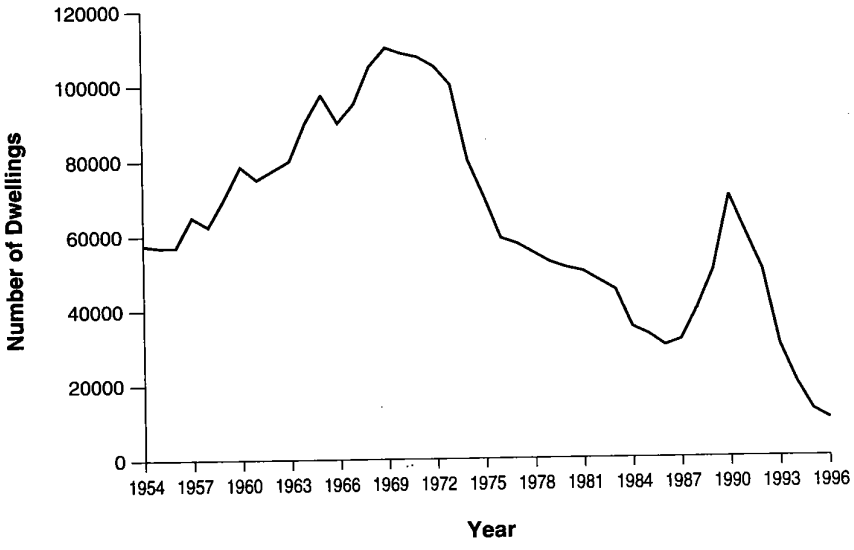
Before 1992 credit was guaranteed up to 100% for municipal housing companies, 99% of the amount guaranteed for co-operative building societies, and up to 95% for remaining owner categories. Since 1992, all tenure forms are treated equally.

The credit granted by the state for new and reconstruction of housing will, for a limited period of time, be extended from 30% to 40% of the approved production costs. This applies to construction initiated in the period 1993–1995. Grants of credit, according to the regulations from January 1, 1993, will be given to projects granted interest allowance according to the 1992 rules as well.

Impact on New Construction

Recession and the removal of interest subsidies had a detrimental effect on new construction, in spite of the fact that the nominal and real interest rates have decreased since 1991.

Figure 4. New Construction: Number of Dwellings, 1954 to 1996



Source: Bostadspolitiska utredningen

Figure 4 describes the evolution of new construction over time. The credit market deregulation in the late 1980s was accompanied by an increase in production, and the fall in construction thereafter coincided with an economic recession, withdrawal of subsidies and a tighter lending regime.[10]

THE CREDIT MARKET AND FINANCE IN THE HOUSING STOCK

Deregulation of the Credit Market[11]

The credit market was highly regulated during the early '80s, when the old interest subsidy system still was in place. Interest subsidies to new construction and rehabilitation were tied to loans, issued by specially designated mortgage institutes. These institutes could only issue mortgage loans if they were backed by matching long term state bonds with a below market interest rate, which were forced upon commercial banks and insurance companies.

The Swedish market for housing finance was deregulated in several steps.[12] The placement regulation was abolished in 1984, which notably increased the supply of loans, of which many were more risky than before. Interest-rate regulation was abolished at the same time, which increased the freedom for banks to set lending and borrowing interest rates, including the interest rate on mortgage loans.

In early 1985, mortgage institutions were given increased freedom to issue housing bonds. This gave easy access to relatively cheap funds to meet the increasing demand for new construction and an emerging need for refinancing.

Refinancing of old houses was done mostly through commercial banks. This lending was also limited by the placement regulations, as well as by loan ceilings. As a result, households found it difficult and expensive to consume out of capital gains from housing or to achieve a desired wealth portfolio balance. These restrictions were removed in November 1985 and both mortgage institutes and ordinary banks were permitted to lend money for "other" purposes, only using the house as collateral. This was generally regarded as the most decisive step. Finally, portfolio regulations on insurance companies were dropped in December 1986.[13]

As a result of the credit market deregulation, total lending from banks and other credit market institutions increased from a growth rate of 9% in 1985 up to 22% in 1986 and 17% in 1987. The stock of household debt increased from 54% of GDP in 1985 to 68% in 1988. This was in turn accompanied by a stock market boom. Household indebtedness was, however, already quite high before deregulation. According to Englund, Hendershott and Turner (1996), households in Sweden were more indebted than in many other countries even before deregulation started.

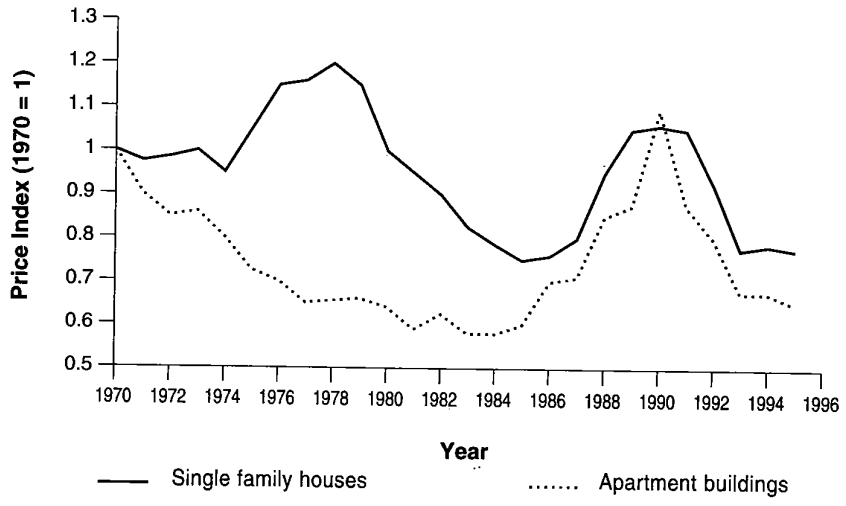
Deregulation increased loan-to-value ratios and even increased house prices after a long period of decrease in real terms (see below). Regulation increased lending, which supposedly had an impact on house prices. (See Muellbauer [1994], Koskela, Loikkanen and Virén [1992], Berg and Bergström [1995], and Agell and Berg [1995] for a discussion.)

It can be concluded that the credit market deregulation increased household indebtness and had a direct effect on consumption. House price increases lagged these changes. Thus it is likely that house price increases were not driving consumption, as was the case in the UK.

The Crisis in the Real Estate Market

Figure 5 shows the evolution of a real price index for owner-occupied one-family houses

Figure 5. Real Price Indices of Owner-occupied One-family Houses and Rental Apartment Buildings, 1970-1993



Source: Statistics Sweden, SmP. Figures for multi-family buildings before 1981 are based on the average (unweighted) ratio of transaction prices to assessed values (from Bostadsoch byggnadsstatistisk årsbok, 1992, Table 7.2). Nominal price indices were converted into real indices using consumer price index.

and rental apartment buildings for the period 1970 to 1993. It is obvious that the fall in real prices for owner-occupied houses from 1979 to 1985, and for an even longer period for apartment buildings, was broken by a rapid price increase in 1985. Prices increased by 35% and 75%, respectively, from 1985 up to 1990. After that they started to fall again, stabilizing in 1993. In 1995 the indices were approximately at a same real value as in 1985.

The proper explanation of the rise of house prices in the late 1980s is not a looser lending behavior, but rather a development in macroeconomics. Jaffee (1994) argues in his study of the boom and bust of the Swedish real estate market that the price boom in the second half of the 1980s was explained by (1) growth in real GDP, combined with a decreasing level of unemployment; (2) decreasing real interest rates; (3) a relatively high marginal tax rate for interest deductions; (4) expanded borrowing for real estate; and (5) continued high levels of housing subsidies. After 1990 all of these factors reversed,[14] and prices decreased in real terms. His conclusion is that the price boom and bust was not caused by a speculative bubble, even if expectations on future developments in macroeconomic variables did play an important role. Economic fundamentals offer a sufficient explanation.

Current Lending Praxis

The bust in the housing market has made banks and specialized mortgage lenders more cautious. From a situation in the 1980s when LTVs of 85% were common, a LTV on 60%–75% of assessed market value is now more common.[15] In addition, banks now make their own valuation of the property. In the "happy" 1980s it was quite common for banks to rely only on the formal assessed value of the property.

An old tradition that the loan stays with the house has also been broken. A transaction normally results in a thorough investigation of the borrower's personal economy, and it is by no means certain that the new owner will be able to maintain the old LTV ratio on the property, even if it is as low as 60%–75%.

These actions by the credit institutes have been necessary in order to restore their credit ratings, which tended to decrease when mortgage defaults increased as a result of the fall in market prices. The institutions are still suffering from low ratings, which has increased the interest paid on mortgage bonds. The present spread between mortgage and state bonds is in the vicinity of 0.6%. Before the bank crisis, it varied between 0.3% and 0.5%.

Large credit losses for established mortgage lenders in the early 1990s opened up a market for small specialized banks and even foreign banks. They managed to capture a small share of the market—less than 5%. They concentrated on "cherry-picking," i.e., only lending in stable regions and only accepting a low LTV, often below 60% of an assessed value.

Finally, traditional mortgage lenders have not yet become involved in more elaborate risk management. Interest rates are seldom differentiated by perceived credit risk. The only exception seems to be large loans to social housing projects, where a municipality secures the loans. Otherwise, risk management is made through a differentiated LTV, and by simply abandoning volatile or less attractive parts of Sweden.

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SFS, Svensk författningssamling, (Swedish legislation), different years.

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NOTES

[1] See Turner (1993) for an earlier analysis of the Swedish housing finance system.

[2] This section is based on an early draft by Jakobsson (1995. Data from Boverket Rapport 1994:1, Blad 1992:1158, and SFS, various issues.

[3] Basing the calculation on a lower market interest rate of 8% would reduce the subsidy value by two thirds; see further calculations by Jacobsson (1995) and Hendershott, Turner and Waller (1993).

[4] The National Board of Housing and Planning.

[5] Calculated by the Housing Board and based on average interest rate on a five-year housing bond issued by "Stadshypotek" (Caisse), i.e., borrowing costs for mortgage institutions. Data for 1995 and 1996 needs confirmation.

[6] According to the rules valid Feb. 23, 1993, the 1992 rules will only apply to projects initiated before Jan. 1, 1993. Though there could be a prolonging of the old rules if the application were turned in before Nov. 18, 1992, and the project was initiated before July 1, 1993.

[7] Housing finance as a special circuit was thus abolished—see Diamond and Lea (1992) for a discussion of the concept.

[8] SFS 1995:604.

[9] The graph is based on a simulation model, reported in Turner and Berger(1988).

[10] Jaffee (1994)

[11] The section is based on Englund, Hendershot and Turner (1996).

[12] See Englund (1990) for a brief overview of the deregulation process.

[13] Viotti and Wissén (1991) p. 214-215 for an overview.

[14] Interest subsidies to new owner-occupied houses decreased in combination with a lower marginal tax rate for interest deductions as a result of the tax reform in 1991. This reduction in subsidies became more proliferated as a result of the Danell Commission (SOU: Avreglerad bostadsmarknad, 1992) which enacted a phasing out plan in 1993 for interest subsidies to all sectors of the housing market. The subsidy system also changed in a direction of a larger sensitivity to interest rate changes. The former system has a guaranteed rate of interest that was insensitive to changes in market interest rates. In the present system are interest subsidies given as a share of total (eligible) interest expenditures.

[15] Bostadspolitiska utredningen,