THE OPERATION OF THE PRIVATE HOUSING MARKET AND THE HOUSE PRICE MECHANISM

This paper has been written by the Housing Finance Advisory Panel of The Building Societies Association. The Panel comprises -

John Hutton, Assistant General Manager (Marketing & Research), Bristol & West Building Society (Chairman).

Joe Bradley, General Manager, (Market Planning), Nationwide Building Society.

Michael Gibbs, Deputy Chief Executive, Gateway Building Society.

David Gilchrist, Economist, Halifax Building Society.

Tony Millington, Statistician, Bradford & Bingley Building Society.

George McKenzie, General Manager, Abbey National Building Society.

Jackie Riley (Mrs), Economic Analyst, Woolwich Equitable Building Society.

Mark Boleat, Deputy Secretary, The Building Societies Association (Secretary).

Paul Turnbull, Economist, The Building Societies Association (until July 1979).

Adrian Coles, Economist, The Building Societies Association.

C O N T E N T S

FOREWORD

Movements in house prices attracted considerable attention in the 1970's. During the two previous decades prices rose steadily, but fairly much in line with retail prices generally and with earnings. In the 1970's the situation was very different. Between 1971 and 1973 house prices increased at an unprecedented rate and well ahead of the increase in other prices and earnings. Between 1974 and 1977 the rate of increase was modest although inflation generally increased sharply. During 1978 house prices accelerated and the rapid rate of increase continued into 1979.

Various hypotheses have been put forward to explain these movements. Some have attributed house price increases to changes in the volume of building society lending while others have put greater emphasis on changes in the general economic situation.

Over the past few years researchers have been greatly helped by the substantial increase in the available data on the housing market and it has therefore become easier to test the alternative theories. The experience of 1978, when building society lending was artificially restricted in an attempt to damp down the increase in house prices, has also provided valuable evidence on the factors involved.

The Association's Housing Finance Advisory Panel has made use of the new information and the experience of 1978 and 1979 to prepare this Paper on the operation of the private housing market and the theory of house price determination.

Norman Griggs,
Secretary General,
The Building Societies Association.

March 1980

INTRODUCTION

The housing market is far from easy to analyse. Each house is unique, but one house may be a close substitute for another; the supply of houses to the market and the demand for those houses are primarily determined by the decisions of individual households; and the stock of houses is only marginally affected by the production of new dwellings.

Until recently statistics on the housing market were imperfect and did not enable the market to be analysed accurately. However, over the past five years there has been a major increase in the availability of statistics, especially on house prices and building society lending, and it has therefore become easier to test the various hypotheses on the operation of the housing market.

This paper draws on the experience, understanding and statistics accumulated over recent years. The paper analyses the characteristics of the owner-occupied housing market, it describes and explains the supply of and demand for houses and then analyses in detail the house price mechanism. The analysis is conducted in terms of national averages and generalities although it must be stressed at the outset that at any one time there are considerable regional and structural variations in trends in the housing market.

CHAPTER 1

CHARACTERISTICS OF THE OWNER-OCCUPIED HOUSING MARKET

1.1 House prices, like all other prices, are determined by the interaction of supply and demand. However, the operation of the laws of supply and demand in the owner-occupied housing market are complicated by a number of factors -

(a) Houses are indivisible and, for the most part, an increased standard of housing can best be obtained by moving house. In other words, it is not as easy to increase consumption of housing by 10 per cent. as it is to increase consumption of, say, meat by 10 per cent.

(b) Housing is an exceptionally durable good, usually with an expected life of at least 60 years and often longer, and changes in the level of new housebuilding have only a very marginal effect on the total housing stock. Thus, of the housing which is occupied, only about 1.5 per cent. of the total is likely to have been produced during the previous 12 months.

(c) Linked with (b) is the fact that new houses comprise only about 15 per cent. of the total of houses sold in any one year. Furthermore, houses do not depreciate as rapidly as other commodities and thus existing houses are very competitive with new houses. This is in contrast with, for example, the car market (which has certain similarities with the housing market in that there is a very active market in secondhand cars). Although new and existing cars do compete, they do so to a much lesser extent than new and existing houses.

(d) There is a fairly long period before an increase in the price of houses being sold can lead to an increase in supply as a result of higher builders' profits. Uncertainty as to future market conditions might prevent new projects being started even though, on information available at the time, the projects would be profitable.

(e) Land with planning permission is a pre-requisite for new houses and the supply of such land is not very responsive to changes in market conditions. Thus an increase in the demand for land with planning permission may lead to an increase in the price of such land rather than supply.

(f) Throughout most of the post-War period there has been an unsatisfied demand for owner-occupation. The signs are that this will continue even with a growing excess of dwellings over households. Opinion surveys have consistently shown that some 70 per cent. of all households would, ideally, like to be owner-occupiers but, at the current time, only 54 per cent. are. The inability to afford housing is one reason why there is an unsatisfied demand for owner-occupation and another is that building societies characteristically charge a mortgage rate below the market clearing level, with the result that there is generally an unsatisfied demand for mortgage loans at the going rate.

(g) Unlike other commodities, houses cannot (except for a limited amount of pre-fabrication) be built in one area and sold in another, nor can houses be moved once they have been built. Thus differing land and labour costs between regions will be reflected in housebuilding costs. Also, any change in the geographical structure of demand cannot be met by a change in supply and thus there will be a consequential change in relative prices. For example, rising costs of commuting may lead to a shift of demand to nearer the centre of cities and away from the more remote commuting areas. Because the supply of houses cannot adjust to such a changed structure of demand there may be a change in relative house prices.

(h) House-purchase is a major transaction involving considerable time, cost and anxiety. Factors such as expectations about the future are therefore important in determining when people decide to attempt to implement a long-term objective of house-purchase.

(i) Houses are not homogenous and there may be no exact substitute for any particular dwelling. This may lead to a "lumpiness" in the market; i.e. if potential traders-up cannot find suitable houses they may sit tight rather than seek substitutes.

(j) Some people consider housing as an investment as well as a consumer durable. This is particularly true in times of high inflation.

CHAPTER 2

THE SUPPLY OF AND DEMAND FOR OWNER-OCCUPIED HOUSING

2.1 An important component of the supply of houses for sale (and a major component of the net increase in supply) is new housing. In the long term, this can be taken to be the number of houses completed by builders. In the short term, the number of houses which can be completed is constrained by the number under construction at the beginning of the period. For example, at the present time, it seems that, given the number of houses under construction, and the gap between the time taken to decide to build a house and completion taking place, the building industry is unlikely to be able to complete more than 150,000 houses for sale during 1980, even if housebuilding becomes exceptionally profitable. However, in the short term the number of sales of new houses does not necessarily correspond with the number of houses completed. In a very active market, builders will be selling at an earlier stage in the construction process and it is not unknown for speculatively built houses to be sold even before the foundations have been put in. Conversely, in a stagnant market, houses may be completed, or virtually completed, and then left unsold for some considerable time. Also, construction may slow down or stop at an earlier stage of the construction process. The scope for this process to occur is indicated by the fact that, at the end of December 1978, there were 220,000 private houses under construction - roughly one and half times the prevailing annual level of completions. The number of houses under construction appears to have been increased in relation to completions - 12 months' supply used to be more normal.

2.2 That sales of new houses need not necessarily correspond with completions is evidenced by the fact that the relationship between the number of new houses completed and the number of building society loans approved on new houses has varied considerably.

Table 1 New Houses for Owner-Occupation

Year	Building Society Commitments on New Houses (UK) 000's	Completions of Private Houses (GB) 000's	Commitments as Percentage of Completions
1968	148	222	67
1969	135	182	74
1970	159	170	94
1971	192	192	100
1972	175	197	89
1973	127	187	68
1974	101	141	72
1975	124	151	82
1976	125	152	82
1977	125	140	89
1978	131	149	88
1979	111	133	83

Sources: A Compendium of Building Society Statistics, Table A11, BSA Bulletin and Economic Trends.

Note : The two variables are not strictly comparable but the effect of the discrepancies is very minor.

It will be seen that in the depressed years of 1968 and 1969 commitments represented a very low proportion of completions while in the exceptionally active years of 1970-1972, commitments represented a very high proportion of completions. In the quieter years of 1973 and 1974 commitments fell in relation to completions. This reflects not only houses being finished and not sold but, also, houses being completed which had been sold some time earlier. In 1977 and 1978 commitments were high in relation to completions indicating both that houses which had been completed in earlier years were being sold and, also, that builders were selling at an earlier stage in the construction process. Thus the number of new houses available for sale can vary much more than crude figures for the number of houses which can be completed in a given time period might suggest. Following a period of depression, many more new houses can be made available for sale than might at first sight seem to be the case and this helps to explain why a higher supply of houses was available to meet increased demand in 1976 and 1977. By contrast, in 1972, when the demand for owner-occupied housing increased above the already high levels of the previous two years, builders had already committed themselves to forward sales to such an extent that there was little room for an expansion in new houses available for sale. A similar position probably prevailed in 1979.

2.3 The behaviour of builders, especially in price-setting, is not consistent at any point in time, nor over a period of time. Thus whilst in some periods a price may be agreed at the time of reservation, at other periods prices may not be set until a small block of houses is ready for occupation. In the latter case a potential purchaser with a reservation has to decide whether to proceed in the light of the price at the time of completion. The tendency for builders of new houses to fix prices at the latest possible stage and to allow sales to go forward on a small number of houses

at a time is naturally most marked in a period of rapidly rising house prices. This price-setting behaviour makes it clear that builders of new houses are price-takers in relation to the much larger market for existing houses and that the final price agreed by a purchaser is not necessarily related to the land or production costs incurred by the builder. Indeed, the same consequences are equally seen in the reverse context at other times, with agreed prices failing to reflect cost increases.

2.4. A second component of houses available for sale is the number of houses transferred from the rented sector which is responsible for a significant part of the increase in the size of the owner-occupied housing stock. Table 2 illustrates this.

Table 2 The Owner-Occupied Housing Stock, Great Britain

Year	1 Net Increase in Stock	-2 Completions of New Houses	=3 Transfers from Rented Sector Less Losses	-4 Sales of Council and New Town Houses	=5 Sales of Private Rented Houses Less Losses	+6 Losses from Stock	=7 Sales of Private Rented Houses
	000's	000's	000's	000's	000's	000's	000's
1971	242	192	50	21	29	20	49
1972	292	197	95	62	33	19	52
1973	264	187	77	42	35	18	53
1974	186	141	45	5	40	17	57
1975	189	151	38	3	35	16	51
1976	195	152	43	6	37	15	50
1977	195	140	55	13	42	14	56
1978	230	149	81	31	50	13	63
1979 (est.)	220	133	87	43	44	12	56

Notes : 1. The source for Column 1 is Housing and Construction Statistics No.29 Table VIII.

2. The source for Column 2 is Housing and Construction Statistics, Table 16.

3. The source for Column 4 is Housing and Construction Statistics, Table 42. The figures apply to England and Wales only.

4. The figures for 1971 and 1976 in Column 6 are taken from the Housing Policy Technical Volume, Part I, Table III.18. The figures for other years are calculated by interpolation.

5. Similarly the figures for 1971 and 1976 in Column 7 are taken from the Housing Policy Technical Volume, Part 1, Table III.18. The remaining figures are taken to be equal to the figures in Column 5 plus those in Column 6. However, this is

not strictly correct because some private houses (an estimated 5,000 in 1971) are built for letting, some are purchased by local authorities (1,000 in 1971) and there is also a gain to the stock through conversions (an estimated 2,000 in 1971). However, the figures are probably accurate to within 10,000 a year.

6. 1979 figures are tentative BSA estimates.

2.5 For the most part sales of local authority houses do not affect the supply/demand balance within the housing market because a majority of tenants who buy would probably not, in the short term, become owner-occupiers if they could not buy their local authority houses. However, if, for some reason, a large number of local authority tenants wish, at any one time, to become owner-occupiers but are forced to buy an existing owner-occupied house because they are unable to buy their local authority home then there may be a significant increase in demand in relation to supply. Thus between 1969 and 1972 it is estimated that the number of local authority tenants buying owner-occupied houses with building society mortgages (only a small fraction would have purchased their existing homes - the majority of such sales being financed by local authority mortgages) increased from 29,000 to 72,000 thus representing a considerable increase in demand in relation to supply. By contrast, the 62,000 local authority and new town tenants who purchased their existing homes in 1972 had no significant effect on the supply/demand balance. The importance of local authority tenants seeking to become owner-occupiers when they do not buy their existing homes is illustrated in the Scottish Development Department study of the Dundee Sub-Region (Local Housing Needs and Strategies, HMSO, 1975). After observing that house prices increased rapidly between 1972 and the first half of 1973 the study stated -

"During 1973, approximately a fifth of all sales of owner-occupied property were to residents of public sector housing. It is interesting that the upsurge in demand and the related escalation of house prices occured within the sub-region at the same time as a considerable relaxation of shortages and to some extent a surplus of housing in the public sector, which became manifest in the form of some empty housing within Dundee City and reduced waiting periods generally."

In other words, the high number of tenants seeking to become owner-occupiers without houses also being transferred between sectors led to an excess of demand over supply in the owner-occupied sector (and hence to higher prices) and to an excess of supply over demand in the public sector. Current Government policy is to encourage sales of council houses to tenants and in due course this may lead to a somewhat lower demand for houses in the owner-occupied sector and on resale will expand the stock of houses available for purchase.

2.6 Sales from the private rented sector seem fairly stable and unresponsive to economic factors. This is not surprising. It has invariably

been more profitable for a landlord to sell a house suitable for owner-occupation with vacant possession than to continue letting but the landlord is constrained from selling because of the provisions of the Rent Acts. It seems that most formerly rented houses which are sold for owner-occupation are put on the market on the death of a tenant or when a tenant chooses to leave. Over the years, the number of houses transferred from the private rented to the owner-occupied sector has declined and can be expected to continue declining simply because the private rented sector itself is diminishing in size.

2.7 The third source of houses for sale are those put on the market by owner-occupiers moving. The number of owner-occupier to owner-occupier moves is very responsive to changes in market conditions and there are considerable fluctuations in this variable. In the long term, of course, owner-occupiers moving have no effect on the overall supply/demand balance because although they are seeking to purchase a house, they are also putting one on the market. However, there may be a structural change in the supply/demand balance if, for some reason, many owner-occupiers suddenly wish to purchase more expensive, or even cheaper, houses. Also, in the short term, it is quite possible that owner-occupiers moving may seek to purchase one house before selling their existing house. This is particularly likely to happen in a very active market where either people want to be certain that they have bought a house before they sell or, alternatively, they feel that by hanging on a little they might be able to secure a higher price for the house they are selling. Thus in the short term owner-occupiers moving may increase the demand for housing while not increasing the supply by the same extent. However, it should be stressed that this can only be a very short-term phenomenon and must be reversed within about six months.

2.8 The final source of houses for sale are those becoming available as a result of household dissolution, emigration and moves to other tenures. Houses freed for sale in this way increase the supply of available dwellings but with no corresponding increase in demand, and they are therefore, in terms of numbers, part of the stock available for purchasing by first-time buyers. The Housing Policy Technical Volume estimated that, in 1971, 140,000 houses were made available for sale through the dissolution of households. 108,000 of these were from the dissolution of elderly households and the remaining 32,000 were from households dissolved for other reasons, including divorce. In the same year, it is estimated that 27,000 houses were made available for sale as a result of emigration and 72,000 as a result of moves to other tenures. Over the years the number of houses made available through dissolution of households can be expected to increase as the number of owner-occupiers in the older age groups increases. Such houses are most likely to be better than average, i.e. up-market and thus facilitate up-trading by existing owner-occupiers. The number becoming available as a result of other reasons, such as divorce, is also likely to increase but in such cases there will be a corresponding increase in demand. And, indeed, if both parties in a divorce seek to own their own home there will be an increase in demand relative to supply. The Housing Policy Technical Volume estimated that in 1981, 135,000 houses would be made available as a result of the dissolution of elderly households and that this figure would increase to 145,000 by 1986. Again, the supply of houses from this source is not responsive to demand. The number of houses becoming available for sale as a result of moves to other tenures is expected to

decline modestly while the number becoming available through emigration is likely to remain fairly constant.

2.9 The preceding analysis has shown that, for the most part, the net supply of houses available for sale (i.e., ignoring owner-occupier to owner-occupier moves) is not greatly responsive to market conditions. There is probably most scope for a change in market conditions to lead to an increased net supply of houses for sale through new housebuilding. However, in the very short term (that is, up to six months), the net number of houses made available for sale as a result of any of the mechanisms mentioned above can vary quite substantially. If the market is seen to be very quiet, then houses that do become vacant may not be put on the market and some of those that are on the market may be withdrawn from sale. Conversely, in an exceptionally active market people may make houses available for sale earlier than would otherwise be the case but it must be stressed that any change in the number of houses available for sale as a result of vendors reacting to a change in market conditions cannot last for very long and any period in which a larger than normal net number of houses are made available for sale is likely to be followed, automatically, by a period of a smaller than normal number being put on the market.

2.10 Turning to the demand for owner-occupied housing, it is helpful initially to set out the three components of this demand -

(a) Shelter. It is accepted that housing is a basic human need in much the same way as clothing and food. Thus, in a period of an acute shortage of housing one would expect demand to be relatively unresponsive to price. However, in Britain the period of a shortage of housing has long since past and it is difficult to argue now that people are seeking to buy houses simply to have a roof over their heads and to satisfy their basic human needs.

(b) A consumer good. Given that households generally are well above what might be described as the "proverty line" they have a considerable amount of discretionary income. An increase in real income is likely to lead to increased expenditure across the board as people seek a higher standard of living. People demand housing for much the same reason as they demand cars, food and consumer durables. That is, they want to enjoy a higher standard of living because their real incomes are higher and they will choose how to allocate their higher real incomes between alternative consumer goods and services.

(c) Investment. It is frequently argued that house-purchase is the best investment that any individual can make. As an investment, owner-occupation does have one advantage in that owner-occupied houses are exempt from Capital Gains Tax. Also, payment of interest by an individual now generally only qualifies for tax relief if it is in respect of

the purchase or improvement of owner-occupied housing. However, in analysing the investment demand for housing it is necessary to compare housing with other forms of investment and not with other forms of housing. For example, low coupon gilt-edged stocks may provide an easier means of obtaining a tax-free capital gain than do owner-occupied houses. As an investment housing suffers from the disadvantage that it is costly to purchase and needs to be serviced. A house will only increase in value if it is properly maintained and regularly decorated and there seems little reason to believe that many people deliberately buy houses mainly for investment. Another relevant factor in this respect is the rating system which, effectively, is a tax on housing. However, while few houses are bought solely for the purpose of investment, the investment aspect does influence the amount of housing which people wish to buy and the timing of house-purchase decisions.

Having established the general principles governing the demand for housing and the way in which this demand is manifest it is necessary to look at the sources of demand in terms of numbers.

2.11 A majority of transactions in the owner-occupied housing market are now in respect of owner-occupiers moving. As has already been noted, in the medium term the supply/demand balance is not affected by owner-occupiers moving house although, in the short term, there may possibly be an increase in demand in relation to supply or vice versa. The overall tendency for existing owner-occupiers to trade-up when moving is generally matched by the supply of better housing freed by household dissolution.

2.12 What is far more important for the housing market is the number of potential first time-buyers as it is these alone who, in anything other than the very short term, are responsible for the numerical net increase in the demand for owner-occupied housing. Thus, if there is an increase of 100,000 in the number of owner-occupiers moving in any one year the demand/supply balance is not affected because 100,000 extra houses will be made available for sale. However, if for some reason the number of first-time buyers seeking houses increases by 100,000 then, unless there is a corresponding increase in the net supply of houses available for sale (as a result of household dissolution, moves to other tenures, emigration, new building and transfer of houses from the rented sector), there will be a substantial increase in demand in relation to supply and hence pressure on prices. In the long term, the number of first-time buyers must depend on demographic and economic trends and on the strength of demand for owner-occupation as aginst renting. Relevant demographic trends include -

(a) The growth in the number of divorces. Where divorce results in two independent households each seeking separate accommodation, extra demand for housing results. However, divorcees who remarry may subsequently release accommodation.

(b) Increasing standards of health care have led to a greater number of elderly households remaining as owner-occupiers.

(c) The general increase in living standards has contributed to the rise in the number of one person households many of whom seek to be owner-occupiers.

2.13 There are also cyclical demographic trends which can be easily predicted. In the late 1960's and early 1970's there was a bulge in the number of people in their 20's as a result of the post-War baby boom. This sudden increase in the number of potential first-time buyers probably had some effect on the overall supply/demand balance and thereby was a contributory factor to the rapid rise in house prices in the early 1970's. Following a slight dip in the birth rate immediately after the post-War years, there was then a steady increase until 1964 and this will be reflected in a steady, although not rapid, increase in the number of potential first-time buyers amongst younger households in the years up to 1990. In the 1990's there will be a significant fall in the number of people in their 20's and, other things being equal, this will lead to a fall in the number of potential first-time buyers.

2.14 The strength of the preference for owner-occupation depends partly on a subjective assessment as to the benefits of owner-occupation as against renting and partly on trends in real incomes. As real incomes have increased, so owner-occupation has come within the reach of more and more households and the number of young first-time buyers has been increasing significantly. Furthermore, life-time earnings patterns have changed with peak earnings generally being reached earlier (the rate for the job concept). As far as existing tenants are concerned, the decline in their absolute number means that there must be a decline in the number seeking to become first-time buyers. Increasingly, people remaining in the rented sector are there either because they are too old to move or because they will never be able to afford to buy. In a sense, this will bring a little more stability into the owner-occupied housing market because, at present, a rapid change in the relationship between local authority rents and initial mortgage repayments is capable of leading to a fairly substantial change in the supply/demand balance in both the owner-occupied and Council sectors - a point illustrated earlier by reference to the study of the Dundee sub-region. (paragraph 2.5).

2.15 More generally, in the short term there can be very substantial fluctuations in the number of potential first-time buyers for a variety of economic reasons. These are discussed in more detail subsequently in this paper (paragraphs 6.2-6.9) together with the effects on house prices but, at present, it is sufficient to say that many first-time purchasers are in the position of being able to defer or bring forward the purchase of their first home. Thus, if the trend number of first-time buyers is 400,000 per annum it is quite possible that, given the right circumstances, 600,000 people might wish to purchase in one year and only 200,000 in another.

CHAPTER 3

THE RELATIONSHIP BETWEEN HOUSE PRICES AND HOUSEBUILDING COSTS

3.1 In the short term housebuilders are price-takers. That is they can have virtually no influence over the selling price which they are able to achieve. Rather, prices are set in the secondhand market and builders must set prices which are in line with those for equivalent existing dwellings being offered for sale. However, in any market it is reasonable to expect a long-term relationship between prices and costs after allowance for normal profit. This is because if prices run ahead of costs then output will increase thus bringing prices back into an equilibrium position with costs. Conversely, if, for some reason, costs run ahead of prices then output will fall and the reduced supply in relation to demand will lead to an increase in prices back to an equilibrium level. (It is accepted that, in the short term, an increase in house prices may cause builders to bid up the costs of materials and labour but after a time supply will respond thus restoring an equilibrium position.) It is, therefore, reasonable to ask if there is a relationship between housebuilding costs and prices. The figures show that there is no such relationship in the short term and, in the long term, the relationship is also fairly weak. The reasons for this are not difficult to establish -

(a) In the short term prices can run well ahead of costs but that will not lead to an increase in output unless builders are satisfied that projects which look viable at prevailing levels of costs and prices will still be viable when those dwellings are completed. Equally, a builder may well wish to complete building an estate in order to cut losses, even though he would never have started it had prices and costs been in the prevailing relationship when the project was initiated. Thus, in the short term, the long gestation period in the housebuilding process makes it inevitable that prices and costs can diverge quite sharply. A complicating point is that there appears to be no commonly accepted costing mechanism/system or view of costs (and profits) amongst builders. Behaviour in response to price changes may be affected by this and is thus not entirely predictable. It might be noted that house-builders experienced an expensive stock-holding problem after the end of the boom in the early 1970's. The type and quantity of houses under construction did not return to an economic relationship with sales until 1977. Since then it appears that some builders have concentrated on obtaining an adequate profit on each house sold rather than attempting to maximise the volume of sales.

(b) Land is a finite resource and, in examining house prices, land and profit can be added together as a residual. In very simple terms, a builder will

look at a plot, decide that he could sell a house for, say, £30,000 on that plot and that he could build it for £20,000. He requires £4,000 profit and therefore is willing to pay £6,000 for the plot of land. If, for some reason, the price of the house jumps to £40,000 the builder would simply be prepared to pay £16,000 for the plot of land in order to make the same profit. In a normal market, one would expect the supply of land to increase as the price rose but the parts of the country in which there is a plentiful supply of land available for housing in which such a market can operate are few and far between. Also, land owners may be deterred from releasing land because of Development Land Tax. Thus, the shortage of land, however it may have come about, prevents the normal market forces operating and an increase in house prices may well lead to an increase in the price of building land rather than an increased supply.

(c) Planning permission is required for new housebuilding and this is another complicating factor. Land on which builders can build profitably, and which land owners are willing to sell, may not be available for construction because of planning permission and zoning. This is a key factor in determining house prices. An increase in house prices will make house-building more profitable and builders will normally respond by purchasing land and therefore bidding-up land prices such that more land is offered for sale. However, given the need for planning permission a bidding-up of land prices will not have the expected effect of attracting more land into the housing market and away from other markets. This factor reinforces the points made in the previous paragraph.

(d) Building regulations and NHBC requirements impose costs which may not necessarily be recoverable in the prices which potential purchasers are willing to pay, bearing in mind the plentiful supply of second-hand houses which have not been built to these new standards.

3.2 These factors mean that, at any one time, builders may be willing to supply a greater number of houses than the number actually being supplied but are prevented from doing so by the lack of building land at viable prices, planning constraints and the imposition of standards which purchasers are not prepared to pay for. Without these factors house prices would be determined by building costs in the medium term. These factors also mean that the prevailing level of house prices must be higher than would be the case given a free market in land. Thus, there is no automatic mechanism which ensures that the supply of new housing responds fully to changes in the profitability of housebuilding. This point was developed by Dr. Christine Whitehead in her study The UK Housing Market (Saxon House, 1974) -

> "Any increase in the availability of land for housebuilding should decrease land prices and increase the profitability to builders - and against a given demand structure therefore reduce house prices. The easiest way of obtaining this result would be to ease planning permission and to reduce the administrative, legal and other costs of obtaining such permission. The supply of land would then be increased and more importantly expectations that more land would continue to be available would be built up: the gains from land hoarding would therefore decline."

Since this was written the Community Land Act and Development Land Tax have been introduced. Both of these have had the effect of further restricting artificially the supply of land for housebuilding although later modifications have been made to reduce some of their impact.

CHAPTER 4

THE RELATIONSHIP BETWEEN HOUSE PRICES AND EARNINGS

4.1 Because of supply side contraints on new housebuilding and the fact that the underlying demand for owner-occupied houses has invariably exceeded the supply, it is reasonable to expect that, in the long term, there will have been a relationship between ability to pay for housing (i.e., in general terms, earnings) and house prices. Appendix 1 sets out the results of a multiple regression analysis of variables which may be linked to house prices. The appendix shows that, over the long term, the absolute level of house prices is closely related to the absolute level of average earnings. Over the period since 1956, the average house price has averaged 3.5 times average earnings. The house price/earnings ratio can be viewed as tending to oscillate around a stable level although it is possible that this level may also change in the longer term. Between 1956 and 1970 the ratio showed great stability but in the 1970's the oscillations were much greater. However, even the exceptional rise in the house price/earnings ratio during the 1971/73 house price boom was quickly reversed.

4.2 There are rational reasons why the usual pattern of the price of commodities and services falling in relation to average earnings does not apply to houses. The land factor, already discussed, is one reason why house prices might rise more rapidly than earnings. Other possible factors are -

(a) The quality of the housing stock has been increasing over time and thus changes in the average price of dwellings overstate changes in the price of dwellings of comparable quality. It should be noted that up-grading applies not only to new housing, with builders incorporating central heating and other improvements initially, but also to existing housing.

(b) Productivity in the housebuilding industry has been increasing less rapidly than in the economy generally, not necessarily because of inefficiency in the building industry but, rather, because of the scope for increased productivity is less than in other industries. Housebuilding does not lend itself to mechanisation in the way that other industries do and therefore the number of man hours needed to complete a house has declined less than the number of man hours needed to produce other goods and services. Therefore, it is reasonable to expect the cost of producing a house to have moved more in line with average earnings rather than in line with manufacturing costs generally. In this respect, housing is no different from other goods and services which need to be produced by labour intensive methods.

(c) Given a steady improvement in living standards, people have been more willing and able to spend a higher proportion of their incomes in a discretionary way. There has been a general tendency to spend a higher proportion of increased incomes on housing and, given the supply side constraints, this may have had some effect on prices.

It is important to remember that the figures for average house prices at any time purely represent a recording of the prices paid for those houses changing hands in a discrete period. The house price statistical series do not measure the price of a typical or representative house. Thus changes in the mix of houses changing hands or in the weight of transactions between areas will affect the average price - although not necessarily the price level of the average house. Indeed, it is quite possible for the average price to show an increase or decrease while the average house remains stable in price or its price moves in the opposite direction.

CHAPTER 5

SHORT-TERM FLUCTUATIONS IN THE RELATIONSHIP BETWEEN HOUSE PRICES AND EARNINGS

5.1 It has been argued that -

(a) supply side contraints prevent the establishment of a stable relationship between house prices and building costs, and

(b) in the long term, house prices are related to average earnings.

However, in the short term house prices and earnings have diverged from each other substantially at times. Table 3 shows the position.

Table 3 Increase in House Prices and Average Earnings

Year	Average House Prices Percentage Increase	Average Earnings Percentage Increase
1971	17.9	9.8
1972	37.6	12.1
1973	32.1	14.5
1974	1.6	18.2
1975	7.3	24.9
1976	7.3	15.2
1977	7.1	8.9
1978	17.1	13.4
1979	29.1	15.7

Sources : BSA Bulletin, Table 14 and Annex 1.

Note : House prices are at mortgage approval stage.

Increases in house prices in relation to earnings must reflect a rise in demand for owner-occupied housing in relation to supply. This rise in demand can result either from an increase in the price which all buyers are willing and able to pay (given that there are reasonable grounds for a relationship between house prices and earnings) or from an increase in the number of people willing and able to pay higher prices. At any one time many potential house-buyers are willing and able to pay higher prices than they actually do pay. What leads them to pay higher prices is competition from other home-buyers.

5.2 Taking the overall position first, it seems reasonable to suppose that if the underlying demand for owner-occupation is persistently higher than the demand which can be met then a change in real incomes might well induce potential home-buyers to be willing to spend a higher proportion of their earnings on housing and it might also make some potential home-

buyers more willing to seek to achieve their objectives. The best measure of real incomes is real personal disposable income (RPDI) which, basically, is equal to the sum of incomes in the economy, adjusted for the effects of inflation, and after deduction of tax. There is, in fact, a fairly good relationship in the short term between changes in house prices and changes in real personal disposable income. In particular, the unprecedented rise in house prices in relation to earnings between 1970 and 1972 was accompanied by a very sharp increase in RPDI and, equally, the sharp decline in house prices in relation to earnings in 1973 and 1974 was accompanied by a rapid decline in the rate of increase of RPDI. Similarly, the very substantial increase in the house price/earnings ratio in 1978 and 1979 was accompanied by a high rate of increase of RPDI.

5.3 The effect on the owner-occupied housing market of rising real personal incomes results from its impact on potential owners and existing owners alike. More potential first-time buyers are motivated to take the plunge and feel able to take this step. Similarly, the readiness of of existing owners to trade up is enhanced. In both cases the growth in demand probably flows from a feeling that extra discretionary purchasing power is available and can be employed. Thus increased demand leading to pressure on prices occurs at all levels in the market. However, the visible signs of these pressures in terms of price increases are unlikely to be seen at once at most levels. When a generalised increase in demand commences, there is likely to be some slack to be taken up in all areas and at all price levels. The greatest slack will be found at the lowest levels. The surge in demand from first-time buyers will most likely be satisfied for some time by increased transfers from the private rented sector coupled with reductions in stocks of completed and part-completed new houses and normal vacancies. As time goes on the supply for new buyers will be kept up by transfers from existing owners moving up market. These moves will, of course, mainly have been made possible by first-time buyers entering the market and increasing demand. As successive moves take place within the market in an upward direction, eventually some supply shortages will become apparent as imbalances of buyers and sellers occur. These are most likely to come to light first in the middle and upper reaches of the market and in areas with little existing slack where demand is already high. Better quality housing in the desirable suburbs of London and the South East would, on this analysis, be the first category to show signs of more rapid price movement.

5.4 This has, in fact, been the case in the past. Nevertheless, it would be erroneous to argue that, because price pressures first become obvious through trading up, moves by existing owners lie behind price increases. The situation must be viewed as a generalised upward movement of buyers, supported by an influx of first-time buyers in the lower reaches of the market. The price effects occur when a supply bottle-neck is reached. Price increases then spill back into surrounding market areas on either side in both geographic and price terms. Eventually, more and more supply shortages develop, progressively lower down the market, and the effects may eventually spread over the whole market.

5.5 A second factor which might change ability and willingness to pay for housing is the mortgage rate. The price which people pay for their housing depends both on the capital price paid and the rate of interest on that price. In other words, the price itself is less important than it is for most other commodities. Rationally, one would expect buyers to look at the monthly repayments rather than the purchase price although, in fact, buyers do not act entirely rationally, nor do they have any way of knowing what the repayments will be in the long term because of fluctuations in the mortgage rate. Nevertheless, it is not unreasonable to suppose that a substantial change in the mortgage rate may affect confidence and, in the short term (and this is what is crucial as far as the ability to afford repayments is concerned), affect the amount which people are willing and able to pay, and the number of people wishing to become owner-occupiers.

5.6 At the beginning of 1977 the mortgage rate stood at 12.25 per cent. but, by the beginning of 1978, it had fallen to 8.5 per cent.; this increased the amount which borrowers could borrow for a given monthly repayment by no less than one-third. Allowing for an average advance to first-time buyers of 80 per cent. this meant that a price 26 per cent. higher could be paid for the same monthly repayment. Some reaction to this could be expected. On the other hand, it can legitimately be argued that building societies always have a queue for mortgages at the going price and thus the mortgage rate is not a deterrent to the number of house-purchasers. Also, there is little evidence to suggest that a higher mortgage rate induces borrowers to seek a smaller mortgage. Multiple regression analysis cannot, in fact, find any direct connection between the mortgage rate and the rate of increase in house prices. That is not to say that such a connection does not exist; merely that it cannot be demonstrated on the basis of available statistics which are for periods when the mortgage rate was below a market clearing level. It appears likely that mortgage rate movements do have an effect on the volume of demand but since this has been permanently unsatisfied, the impact on the market has been reduced.

5.7 It has been argued that changes in RPDI and, possibly, also changes in the mortgage rate are likely to affect the amount that all house-buyers are willing and able to pay. More important is that such changes also influence the number of people who wish to become owner-occupiers in any given time period. There are three other factors which might influence the number of potential first-time buyers in a given period -

(a) Sudden demographic changes. Normally, there are no such changes but, in the early 1970's, there was a surge in the number of family formations following on from the post-War baby boom. Thus, there was an increase in the number of first-time buyers over and above a level which could normally be expected. Changes in net emigration might also have an effect on the supply/demand balance. In the early 1970's, net emigration from Britain did slow down significantly and, again, this increased the pressure of demand in relation to supply.

(b) Local authority rents. Over 10 per cent. of those buying for the first time come from the local authority rented sector and, within that sector, there are a vast number of potential owner-occupiers. (One opinion survey suggests that 25 per cent. of local authority tenants expect to be owner-occupiers within 10 years.) The extent to which people move from the local authority sector to the owner-occupation sector depends partly on tenants' views as to the likely mortgage payments compared with probable rent levels in the future. If tenants believe that rents are going to rise relative to mortgage repayments then a larger number can be expected to seek to become owner-occupiers. Conversely, if rents seem likely to remain low in relation to mortgage repayments, a smaller number will wish to become owner-occupiers.

(c) Government schemes. It is possible that Government schemes to assist first-time buyers might have the effect of concentrating demand into a short time period. If, for example, a future Government offered cash grants equal to 100 per cent. of the amount saved by a home-buyer over a one year period then, initially, the effect would be to reduce the number of first-time buyers and, after the year has elapsed, there would be a sharp increase. The Government Homeloan scheme is probably not sufficiently generous for this factor to become important.

5.8 With regard to local authority rents and demographic factors, it is worth quoting the Housing Policy Technical Volume (Part 1, page 172) -

> "Possible contributory influences (to the start of the house price boom in the early 1970's) are the large number of marriages in the late 1960's and perhaps some stimulus to buy rather than rent from local authorities that might have arisen from the Government's announced intentions about rents. The Housing Finance Act did not become law until 1972 but the Government's plans were made public, in some detail (including the 50p a week rent increases), in the White Paper "Fair Deal for Housing" in July 1971. The contribution of these influences cannot be measured numerically nor can the effect of any growth in preference for owner-occupation."

CHAPTER 6

THE EFFECT OF MORTGAGE LENDING ON HOUSE PRICES

6.1 Only a small fraction of first-time buyers are able to purchase without the need for loan assistance and the majority of people moving also require a loan. It is therefore obvious that the availability of loan finance has an important influence on the housing market. However the availability of loan finance cannot create demand - it can only translate demand which already exists into actual transactions. Building societies cannot pump money into the housing market as is sometimes claimed. They can only respond to the demand for mortgage finance, in the same way that other producers of goods and services can only respond to the demand.

6.2 At this stage it is important to analyse the various types of demand and the mechanisms by which they affect the housing market and, in particular, house prices. At the bottom of the scale of demand are aspirations. Market research surveys show that some 70 per cent. of people wish to be owner-occupiers and, amongst the younger age groups, the proportion is as high as 80 per cent. Many, if not most, of those who are not currently owner-occupiers but who aspire to owner-occupation, are not likely to seek to enter the market in the short term. However, a significant change in the market conditions can precipitate major changes in the number of people actively seeking to buy houses. For example, if house prices suddenly appear to be within their reach, whereas previously they were not, or if council rents rise substantially in relation to mortgage payments, many people who aspire to owner-occupation might quickly decide to become active in the market.

6.3 What is crucial is not aspirations but rather the number of people seeking to enter the housing market for the first time. It is a fact that very many potential borrowers, perhaps the majority, actively seek to purchase a dwelling without any specfic knowledge of loan availability. Indeed, as each proposition is different, a branch manager may require details of the dwelling before he is prepared to discuss the availability of finance. In these, as in other cases, the mortgage application normally follows a decision to purchase and agreement on the price to be paid. Further, a survey by the Consumers Association (Mortgages, Money Which?, December 1977) showed that one fifth of those surveyed obtained a mortgage through estate agents, solicitors, accountants or bank managers and 15 per cent. obtained mortgages through a mortgage or insurance broker.

6.4 It follows from the above that the number of people seeking houses is only very loosely affected by the availability of mortgages. The availability of mortgages greatly influences the number who actually succeed in buying but it will only have an effect on the number seeking to buy through psychological factors; that is, if it is believed that it is impossible to obtain a mortgage people might cease looking for a house. Equally, if it is generally believed that mortgages are readily available people might start looking for a house. However, it is significant that the reports of "mortgage famines" over the past two years do not seem to have reduced potential demand.

6.5 There are various degrees of seeking. In particular, many existing owners may have a wish to move and some factor may suddenly turn this wish into a more definite demand. That factor is unlikely to be the availability of a mortgage. Rather, it would be personal circumstances or, perhaps, a particularly attractive property becoming available.

6.6 The role of the professions in this process is significant. For example, some estate agents are able to offer mortgage loans to people purchasing houses from their clients by virtue of being investment agents for building societies. Thus, if a house is initially on the market for £30,000 and the estate agent is able to guarantee a mortgage to any purchaser subject to status then the people seeking to purchase that house need not have an assurance of a mortgage. If there is only one potential purchaser the house will be sold for the reserve price or not sold at all. If, on the other hand, there are, say, 10 potential purchasers, none of whom has his own mortgage arrangements, then the house will be sold to the person able and willing to pay the highest price and to a large extent that person will be the one who can draw on the largest personal resources of capital and income or who is best able to supplement these by additional borrowing.

6.7 Paragraph 2.15 of this paper pointed out that if the trend number of first-time buyers is 400,000 per annum then it is possible, given the right combination of circumstances (e.g. rising real incomes, a low mortgage rate, rising council rents) that 600,000 potential first-time purchasers might wish to purchase in one year. As in 1978, some of these would be seeking to bring forward purchases that could normally be expected to take place in future years while others will be seeking to purchase when normally they might have purchased in previous years. There could thus be 50 per cent. more potential purchasers than houses available and even though only 400,000 succeed in buying it is the existence of 200,000 other potential purchasers which drives prices up. It is those most willing and able to pay the higher prices who succeed in buying and who succeed in obtaining mortgages. They do not, for the most part, succeed in buying because of the prior promise of a building society mortgage.

6.8 Thus building society lending or, more correctly, mortgage lending in total, may play a major role in influencing the number of transactions but not those seeking to buy; it influences effective demand (i.e. the number of potential purchasers) only marginally but actual transactions (i.e. successful purchasers) more significantly. It will be noted that price levels are determined by competition amongst potential purchasers and that, generally speaking, only those who are within sight of success go on to seek mortgage funds.

6.9 However it is accepted that the volume of transactions is itself a relevant variable in determining the supply/demand balance in the housing market. When the number of transactions is below trend there will be an accumulation of unsold houses, both secondhand and new. A surge of lending would immediately affect the number of transactions but gradually the stock of houses available for sale would run down as more and more first-time buyers become owner-occupiers. After a time the "overhang" will disappear

although, of course, there will be a continuing net supply of houses available for owner-occupation as a result of the factors mentioned in paragraphs 2.1-2.8. However if demand continues to run at a high level then the additional demand above trend can no longer be accommodated by the stock available for sale and thus prices will rise such that demand and supply are bought into balance.

6.10 Comparing trends in lending and house prices since 1956 shows that there is no simply link between the two variables. The following table shows the position for more recent years.

Table 4 Approvals and House Prices

Year	Increase in Volume of Approvals %	Increase in Number of Approvals %	Increase in House Prices %
1970	38	23	11
1971	38	21	18
1972	26	1	38
1973	-14	-30	32
1974	- 4	- 8	2
1975	70	45	7
1976	15	3	7
1977	24	12	7
1978	12	- 1	17
1979	2	-10	29

Notes : 1. The figures for volume are in respect of all loans. However the percentages reflect accurately changes in approvals for house-purchase until 1978 when peripheral lending increased rapidly. When allowance is made for this, approvals for house-purchase probably increased by well under 10 per cent. between 1977 and 1978.

2. The house price figures are at the mortgage approval stage. (See Annex 1)

It will be seen that in 1970 there was a substantial increase in the volume of building society lending but only a modest increase in house prices. Lending continued rapidly until 1972 and, over this period, house prices accelerated. However, in 1973 there was a very substantial reduction in the volume of approvals yet house prices continued to rise at a very high rate. Following the depressed year of 1974, the volume of approvals rose by an unprecedented 70 per cent. in 1975 while house prices rose by only 7 per cent. After excluding peripheral lending, approvals for house-purchase increased in volume terms by under 10 per cent. during 1978 - lower than the rates of increase in the previous two years - but house prices rose by 17 per cent. In 1979 the volume of approvals was much the same as in 1978, the number fell by 10 per cent. and the average house price increased by 29 per cent.

CHAPTER 7

HOUSE PRICE MOVEMENTS IN THE 1970's

7.1 The theory outlined in the preceding chapters can be applied to examine the trend of house prices in the 1970's. The starting point was the situation in 1970 when house prices were at their lowest relationship to average earnings since 1963 and had declined substantially in relation to earnings over the previous two years. Some correction of house prices to earnings was therefore inevitable. In 1970 RPDI, which had increased by an annual average of 1.5 per cent. in the preceding three years, rose by 3.8 per cent. and this served to increase the demand for house-purchase although, given a plentiful supply of houses for sale, house prices rose by only 11 per cent. Lending continued to increase in 1971 and this was accompanied by an increase in RPDI of 1.9 per cent., still high by the standards of the previous few years.

7.2 Some additional stimulus to house-purchase was probably given by the announcement that Council rents were likely to increase, thus causing a fair number of local authority tenants to seek to become owner-occupiers. By the end of 1971 the stock of houses available for sale had probably been run-down quite substantially yet the market received a further stimulus early in 1972 when the mortgage rate was reduced to 8 per cent. The very strong demand continued and began to have a major effect on prices during 1972. Throughout this period, demand was probably also fuelled by the increase in the number of households as a consequence of the post-War baby boom. An even more significant factor was the unprecedented increase in RPDI during 1972 and 1973. In 1972 RPDI increased by 7.8 per cent. and in 1973 by 6.4 per cent. - the two highest figures on record at that time.

7.3 With living standards rising rapidly, the mortgage rate seen as being low, the threat of local authority rents rising and a plentiful supply of credit, the very strong demand exhausted the potential for an increased supply of houses and prices rose substantially, Fever took hold in the market and house prices, for a short time, gained a momentum of their own. A parallel can clearly be drawn, in psychological terms, with behaviour during a Stock Exchange bull market as ir moves to a peak. The price movements themselves encouraged potential buyers to bring forward purchase decisions and to rationalise that houses had increasing value as an investment good. The difference between the Stock Market and the housing market lies, however, in the nature of the commodity purchased and the options open to the owner. A house is not solely, or even primarily, an investment good. Once owned, it becomes a place to live in and represents consumption rather than a financial return. Thus, the bear market reaction found on the Stock Exchange after a bull market is hardly displayed at all. A ratchet effect is present as investors take the option of allowing their investment to revert to being a consumption good and use their purchase instead of dealing in it.

7.4 Building society lending peaked in the second quarter of 1972 and then fell, albeit erratically, throughout the second half of 1972 and the whole of 1973. However, house prices continued rising at a very rapid rate until the middle of 1973, notwithstanding the reduction in building society lending.

7.5 Conditions in the housing market changed drastically in 1974. The mortgage rate had been increased from 8.5 per cent. to 11 per cent. during 1973 and RPDI rose only 1.3 per cent. in 1974 compared with 6.4 per cent. in the previous year. House prices were virtually stagnant during 1974. In 1975 Table 4 shows there was a very significant pick-up in building society lending with the volume of advances increasing by an unprecedented 68 per cent. However, the net supply of houses increased to meet the additional demand and house prices increased by only 7 per cent. and could still be considered to be above the long-term equilibrium level in relation to earnings. In 1976 and 1977 building society lending was maintained at a high and stable level and house prices continued to increase by 7 per cent. per annum.

7.6 At the end of 1977 there were signs of growing pressure in the market and during 1978 and 1979 house prices rose rapidly. The stage was set for such an increase at the end of 1977; the house price/earnings ratio had reached a low point (3.34 in 1977) and the high level of lending in 1976 and 1977 had diminished the stock of houses available for sale. Confidence may also have been boosted by successive reductions in mortgage rates, the BSA recommended rate having fallen from 12.25 per cent. at the beginning of 1977 to 8.50 per cent. in January 1978. However, the major factor leading to the increase in demand and hence to the acceleration of prices was probably the switch from a decline in RPDI to a rapid increase. In the third quarter of 1977 RPDI was 4.0 per cent. lower than a year earlier but in the fourth quarter there was a year-on-year increase of 3.1 per cent. The growth of RPDI accelerated during 1978, the year-on-year increase reaching 9.5 per cent. in the third quarter, for only the second time in 25 years (the previous time being 1972/3). The rate of increase remained at a high level in 1979. The acceleration of house prices became apparent in the first quarter of 1978, the rate of increase peaked in the middle of 1978 but continued at a high level throughout 1979. The house price/earnings ratio rose steadily during 1978 and 1979 and probably reached a peak of 4.00 in the third quarter of 1979. Table 5 shows these trends.

Table 5 RPDI, House Prices and the House Price/Earnings Ratio, 1977-79

Quarter	RPDI - Percentage Change on Year Earlier	Percentage Change in House Prices on Year Earlier	House Price/ Earnings Ratio
1977 Q.1	-2.4	7.1	3.28
Q.2	-3.1	5.5	3.32
Q.3	-4.0	5.6	3.38
Q.4	3.1	8.1	3.32
1978 Q.1	3.5	10.5	3.30
Q.2	8.0	14.5	3.34
Q.3	9.5	21.6	3.57
Q.4	6.9	25.8	3.64
1979 Q.1	8.1	27.8	3.69
Q.2	5.9	30.5	3.79
Q.3	3.1	28.7	4.00
Q.4	7.2	27.8	3.94

Sources: Appendix 1; Economic Trends, April 1980; BSA Bulletin, January 1980.

7.7 With effect from April 1978 building societies, at the request of the Government, implemented a sharp cut-back of lending. The remainder of this chapter examines the market reaction to this attempt to influence the course of house prices.

7.8 Table 6 shows figures for lending and house prices in 1978 and 1979.

Table 6 Building Society Lending and House Prices, 1978 & 1979

Month		Net New Commitments	Amount Committed for House-Purchase £m	Average Percentage Commitment	Increase in House Prices Month on Month %
1978	January	71,000	683	68.1	0.8
	February	75,000	731	68.6	-0.3
	March	75,000	727	67.8	3.7
	April	64,000	620	67.0	1.3
	May	66,000	617	65.7	2.4
	June	63,000	579	63.9	3.3
	July	63,000	608	62.9	3.5
	August	62,000	603	61.9	3.0
	September	63,000	634	60.9	2.1
	October	65,000	660	60.6	0.9
	November	61,000	650	60.4	2.1
	December	54,000	599	60.6	1.5
1979	January	59,000	650	60.8	0.6
	Febuary	58,000	643	60.9	1.3
	March	65,000	688	60.3	2.3
	April	58,000	652	58.8	3.1
	May	63,000	725	57.8	3.6
	June	60,000	706	56.9	2.8
	July	63,000	727	56.7	3.3
	August	58,000	698	55.3	1.8
	September	56,000	660	54.6	1.2
	October	63,000	757	54.2	2.2
	November	56,000	657	53.7	1.1
	December	46,000	563	54.1	0.4

Sources : BSA Bulletin and DoE.

Notes : 1. The figures in the second column exclude money committed other than for house-purchase.

2. The figures in this table are at the mortgage approval stage, i.e. when selling prices are finally agreed.

It will be seen that there was a sharp reduction in building society commitments in April 1978 and thereafter the volume of lending, and to a lesser extent the number of loans, were relatively stable. Notwithstanding the cut-back of lending, prices continued to increase at a rapid rate throughout 1978 and well into 1979.

7.9 One significant feature of Table 6 is the decline in the average percentage advance during 1978 and 1979. There seems little doubt that, as building society branch managers had their allocations cut, many responded by reducing the amount which they were prepared to lend to individual applicants, but it is equally clear that applicants found the necessary money from other sources. In many cases, this will have been

from their own savings and other contributors may have been employers and parents and other relatives drawing on savings. The average percentage advance fell from 67.8 per cent. in March 1979 to as low as 53.7 per cent. in November 1979. Had the March 1978 figure been held, then building societies in November 1979, by committing £650 million, would have made only 45,000 loans rather than the 56,000 that they actually made. Certainly, part of the decline in the average percentage advance can be explained by a higher proportion of loans going to people moving and by such people having a greater proportion of equity available to put into the purchase of their new home. However, first-time buyers also found an increasing proportion of the selling price themselves. The average percentage advance to first-time buyers fell from 81.6 per cent. in the second quarter of 1978 to 73.3 per cent. in the fourth quarter of 1979. The average loan as a multiple of income fell from 1.85 to 1.78 over the same period.

7.10 A second significant development was increased lending by other institutions. Advances for house-purchase by insurance companies increased from £36 million in the the first quarter of the year to £82 million in the third quarter. Over the same period, topping-up loans increased from £12 million to £50 million. Similarly, bank lending for house-purchase increased substantially as Table 7 shows.

Table 7 Increase in Bank Advances for House-Purchase Outstanding

Quarter Ended		£m
1977	May	10
	August	76
	November	30
1978	February	20
	May	45
	August	108
	November	71
1979	February	45
	May	68
	August	244
	November	220

Source: Bank of England Quarterly Bulletin.

It will be seen that the net advances by the banks between March and November 1978 were £222 million, about double the figure for the same period of the previous year(£116 million). There was a further substantial increase in lending in 1979.

7.11 The number of houses bought without loans from the major institutions is also variable and a very significant factor in demand - especially in certain price ranges and areas. The Housing Policy Technical Volume projections for 1981 imply that 25 per cent. of house purchases by owner-occupiers would be financed by "other" sources. These figures could well prove to be on the low side but even taken at face value mean that only 75 per cent. of house purchases are financed by building societies and therefore the extent to which building society lending influences the market must be limited. Also, there may well be scope for the number of loans financed by "other" sources to increase, especially in times of a shortage of loan finance.

CHAPTER 8

CONCLUSIONS

(a) The housing market has unique characteristics largely because of the very durable nature of houses.

(b) The net supply of houses available for sale depends on new housebuilding, transfers from the rented sector and houses made available for sale through household dissolution, emigration and moves to other tenures. In the short term, there is some scope for supply to react to changes in market conditions, although this scope is limited.

(c) The number of first-time buyers actively seeking to buy is crucial because of the substantial influence which they have on the supply/demand balance. The number of potential first-time buyers can change quite rapidly as a result of economic conditions generally, especially changes in RPDI (real personal disposable income). However, the ability of supply to respond to such changes in demand is limited.

(d) In the normal course of events, a long-term relationship between house prices and house-building costs could be expected but such a relationship is prevented from occurring in the housing market, primarily because of constraints on the supply of land.

(e) There are strong theoretical and empirical grounds supporting a causal relationship between earnings and house prices. In the short term house price increases and rates of increase of RPDI are linked at statistically significant levels, with the number of first-time buyers also important.

(f) Building society mortgage lending primarily has an effect on the number of transactions in the housing market rather than on the price at which those transactions take place.

(g) The house price explosion of the early 1970's seems to have been initiated by the rapid increase in RPDI which combined with the rise in the number of household formations, the threat of an increase in local authority rents and a period of sustained high pressure of demand. House prices were pushed to an unsustainably high level in relation to incomes but the house price/earnings ratio fairly quickly fell to a more normal level.

(h) Similarily, the rapid rise in house prices in 1978 and 1979 seems to have originated in the rapid transition from falling RPDI in 1977 to a very substantial increase in 1978/79. However the house price/earnings ratio did not rise nearly as high as it had in 1973, largely because there were no other special factors pushing prices up as had been the case in the earlier period.

(i) The reduction in building society lending during 1978 largely resulted in a lower number of transactions financed by building societies and a lower average percentage advance. Prices continued to rise rapidly partly because the supply of houses coming on to the market fell and partly because purchasers were able to pay higher prices through drawing on their own savings or by borrowing from relatives or institutions other than building societies. The rapid rise in prices continued in 1979 notwithstanding a depressed level of building society lending.

(j) It appears clear from the evidence that it is changes in economic variables such as RPDI which primarily influence the rate of change in house prices.

APPENDIX 1

HOUSE PRICES - STATISTICAL ANALYSIS

House Prices and Earnings

A.1 This appendix analyses statistically the relationship between house prices and earnings in both the long and the short term. Table 1 illustrates the long-term relationship between house prices and earnings for the period 1956-79 and Graph 1 shows the house price/earnings ratio. The figures should be interpreted with caution because the quality of the data, especially prior to 1966, is far from perfect.

A.2 However, the graph demonstrates a fairly smooth relationship between house prices and earnings apart from the exceptional years between 1972 and 1975. If these years (and 1979) are excluded the ratio has varied between 2.9 and 3.5.

GRAPH 1

The House Price/Earnings Ratio

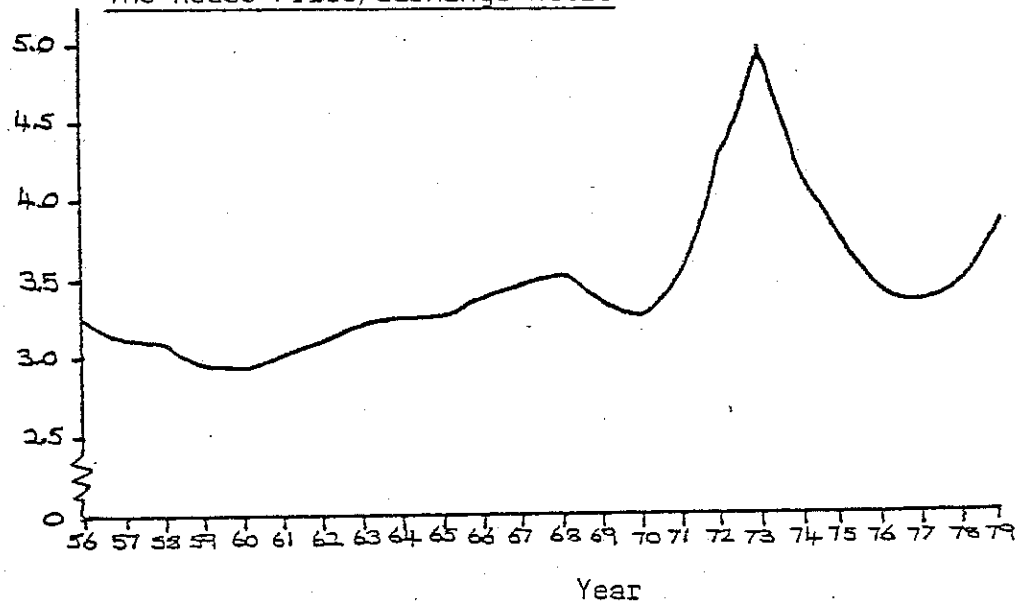


Table 1

The Relationship Between House Prices and Earnings 1956 - 79

Period	Average New House Price £	Average Price of all Houses £	Average Earnings £	House Price/ Earnings Ratio
1956	2,280	2,234	697	3.21
1957	2,330	2,283	731	3.12
1958	2,390	2,342	756	3.10
1959	2,410	2,362	793	2.98
1960	2,530	2,479	849	2.92
1961	2,770	2,715	896	3.03
1962	2,950	2,891	922	3.14
1963	3,160	3,097	966	3.21
1964	3,460	3,391	1,040	3.26
1965	3,820	3,744	1,114	3.36
1966	4,100	4,037	1,187	3.40
1967	4,340	4,267	1,230	3.47
1968	4,640	4,651	1,326	3.51
1969	4,880	4,849	1,430	3.39
1970	5,180	5,190	1,595	3.25
1971	5,970	6,130	1,752	3.50
1972	7,850	8,420	1,964	4.29
1973	10,690	11,123	2,249	4.95
1974	11,340	11,299	2,659	4.25
1975	12,406	12,119	3,320	3.65
1976	13,442	12,999	3,825	3.40
1977	14,768	13,922	4,167	3.34
1978	17,685	16,297	4,727	3.45
1979	22,728	21,047	5,467	3.85
1979 Q.1	20,613	18,804	5,105	3.68
Q.2	22,118	20,433	5,386	3.79
Q.3	23,650	22,069	5,523	4.00
Q.4	25,037	23,066	5,854	3.94

Notes: 1. From 1975 the average house price figures are taken from the BS4 return at the approval stage. Between 1966 and 1974 the figures are equal to new house prices at the approval stage multiplied by the ratio (in the following quarter) of completion stage figures for all house prices to new house price figures from the sample survey results. Prior to 1966 the figures are equal to 0.98 of the actual figures for new house prices at the mortgage approval stage. The series for all prices is therefore far from perfect but it is the best available and is adequate for developing a relationship with average earnings.

2. As there are no officially published figures for average annual earnings, it is necessary to construct a series. The method of construction is as follows -

(a) From 1970 onwards the New Earnings Survey figures, refering to weekly earnings in April of each year for those employees whose pay was not affected by absence, are used. (The annual rate of pay in April is calculated by multiplying by 52.) Quarterly figures are then calculated by application of the index of average earnings (old series, production industries and some services, seasonally adjusted) to the April base

(b) From 1963 to 1970 a backwards projection is made by application of the index of average earnings to the first New Earnings Survey, which refers to April 1970.

(c) Prior to 1963 the series is constructed by reference to the percentage increase in the twice yearly (April and October) survey of average weekly earnings of manual workers in manufacturing industry, with the figures derived from (b) above for April 1963 used as a base

A.3 It appears that there is cyclical pattern in the house price/earnings ratio.

Examination of the peaks and troughs reveals -

Year	Trough	Peak	
1956		3.21	(starting point)
1960	2.92		
1968		3.51	
1970	3.25		
1973		4.95	(exceptional)
1977	3.34		

A.4 Each of the three troughs is higher than the last, but this should not necessarily be taken as a long-term upward trend. Nevertheless the fact remains that there is no evidence that house prices, unlike the prices of other goods and services, decline relative to earnings.

Multiple Regression Analysis

A.5 It should be stressed at the outset that this section does not attempt to formulate a model of the housing market in the econometric sense, but rather by means of statistical examination of the data to shed light on the theories already put forward and search for other factors which can be demonstrated as having a relationship with house prices. It is recognised that the data series may be subject to appreciable error and this may restrict the applicability of highly sophisticated approaches. This analysis is therefore considered as explanatory and indicative of the overriding influences in what is a very complex market.

A.6 Whilst over the longer term there is a relationship between house prices and incomes, in the short term changes in house prices can diverge substantially from changes in incomes. Multiple regression analysis has been undertaken to test for other measurable variables which were thought to have a significant relationship with house prices.

A.7 The value of any statistical analysis is dependent on the quality of the data series utilised. Ignoring the quality of the explanatory variables themselves, the house price series itself may also be subject to several "errors". For example, the prices of houses mortgaged with societies will be dependent on the relative importance of building society lending compared with other sources of finance. Thus, when local authority lending is at a high level, building society lending will tend to move more up-market. More generally, in the short term, house prices can be affected by individuals' attitudes towards house-purchase, and expectations of price changes can influence behaviour substantially.

A.8 Multiple regression analysis was used to analyse data from the second quarter of 1968. The split between lending to first-time buyers and that to previous owner-occupiers has been available only since the second quarter of 1968 and because it was thought that this split might be important the major part of the analysis concentrated on the period since this date.

A.9 As hypothesised, the income factor (in the form of RPDI - percentage change on corresponding quarter of previous year) proved to have the closest relationship with house prices. At the second stage the total number of advances proved statistically significant in explaining the remaining variation, but restricting this to first-time buyers produced a better fit. The third and fourth variables to enter were seasonal dummies representing a faster rate of increase in house prices in the second quarter and a slowing down in the fourth quarter. This is consistent with the known seasonal behaviour of house prices.

A.10 The final equation (which covers the period from the second quarter of 1968 to the fourth quarter of 1979) was (t statistics in brackets below co-efficients) -

Percentage change in house prices over previous quarter

$$= \underset{(5.1)}{0.488} \times \text{RPDI (\% change over corresponding quarter in previous year)}$$

$$+ \underset{(4.5)}{0.110} \times \text{advances (000's) to first-time buyers}$$

$$+ \underset{(2.6)}{2.20}\ D2 - \underset{(-2.7)}{2.32}\ D4 \text{ (seasonal dummies)}$$

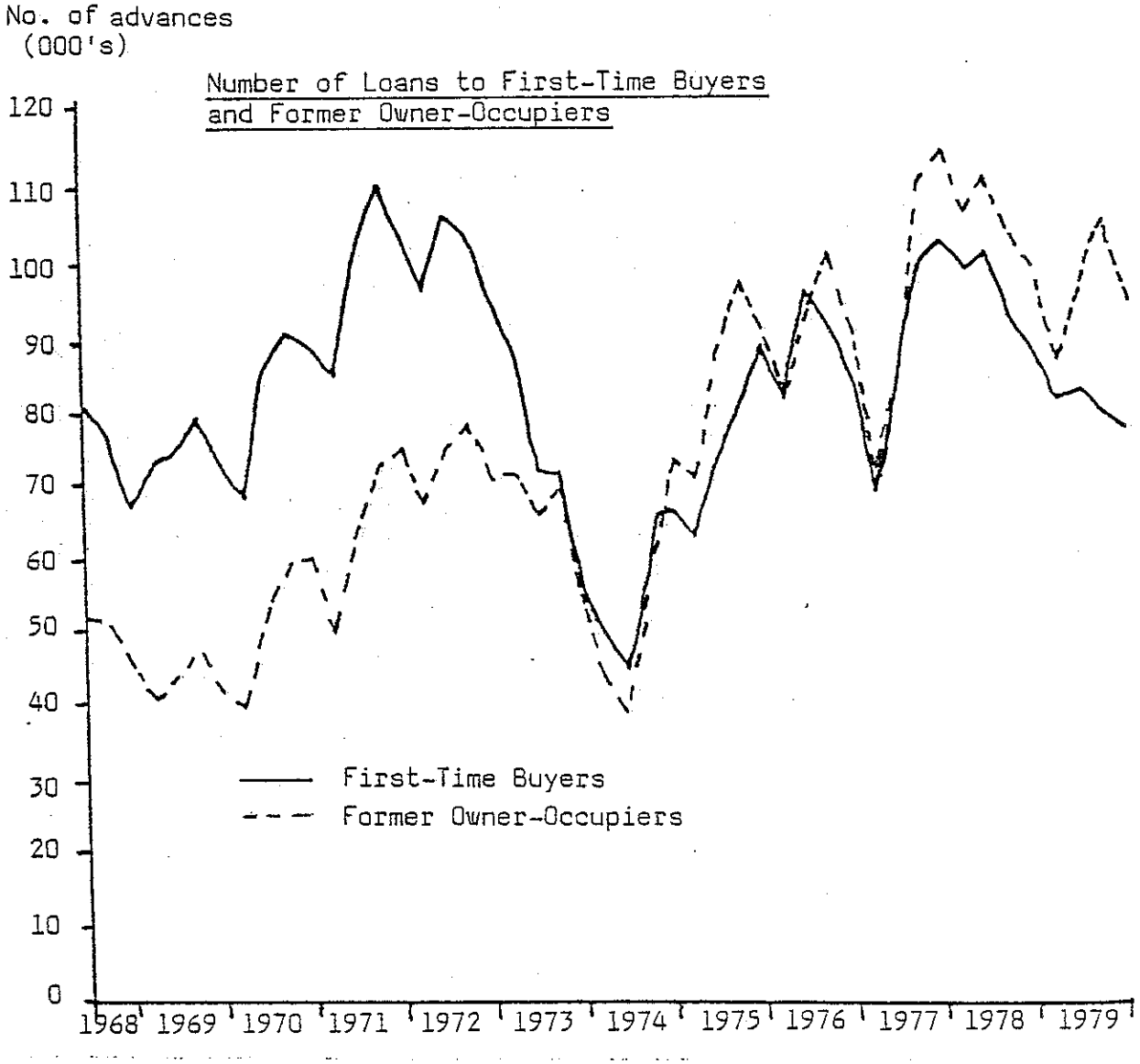
$$- \underset{(-3.4)}{6.80}$$

R^2 = 0.66
S.E.E. = 2.39
DW = 1.82

The above equation suggests that two key variables, RPDI and the number of first-time buyers, together with seasonal factors accommodate two thirds of the variation seen in house price changes.

A.11 Graph 2 plot the number of advances to first-time buyers and previous owner-occupiers each quarter. The graph shows that the two advances' variables do differ. In general terms, the number of advances to previous owner-occupiers has, apart from the dip in 1973/74, shown an upward trend. However, the number of loans to first-time buyers, whilst 20 - 30,000 higher than the number to previous owner-occupiers in the late 1960's and early 1970's has, more recently, been about the same level or lower.

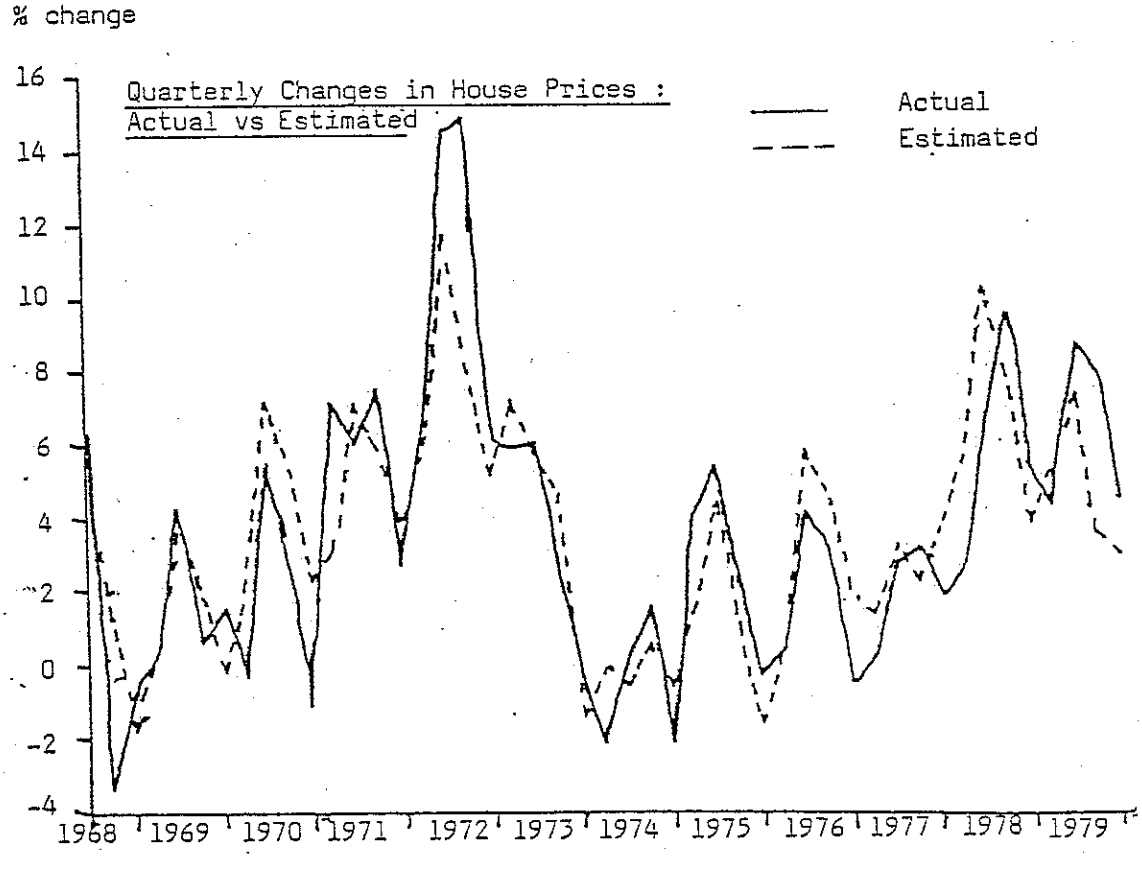
GRAPH 2



A.12 Graph 3 shows the actual and estimated quarterly percentage changes in house prices. It can be seen that the fit is quite close with no long runs of either over or under-prediction. The largest error is in the third quarter of 1972 when prices rose by nearly 15 per cent. for the second

successive quarter whilst the equation predicted a deceleration. It can be reasonably argued that at this time prices gathered their own momentum and this simple relationship, like others, fail to reflect this. However, the peak in 1978 is evident although the calculated series shows the maximum acceleration occurring one quarter before it actually happended.

GRAPH 3



A.13 An attempt was also made to relate house prices to other factors over a longer period (from 1956 to 1979). The best equation had an R^2 of 0.48 viz -

Percentage change in house prices = 0.361 x RPDI (% change over corresponding quarter in previous year)
(4.6)

+ 0.0401 x total no. of advances (000's)
(6.1)

+ 1.63 x D2
(2.6)

+ -1.32 x D4
(-2.3)

(Seasonal dummies)

- 3.8
(-4.1)

R^2 = 0.48

S.E.E. = 2.35

DW = 1.69

A.14 Although far less well specified, the same two variables emerge, with total number of advances substituted for the number of first-time buyers.

A.15 Among the other variables analysed were the amount advanced, the mortgage rate and the number of housing completions. These variables were not found to have a significant statistical relationship with house prices.

Conclusions

A.16 Statistical analysis reveals that prices and incomes are quite closely related over the long term, the nature of the relationship seeming to exhibit a cyclic pattern although the quality of the data precludes more rigorous analysis.

A.17 Changes in RPDI and in the number of building society loans to first-time buyers are the major variables related to changes in house prices in the short term.

A.18 While the statistical analysis cannot prove causality it does support the conclusion in the main part of the paper that it is the rate of increase of incomes and especially the rate of change in real incomes which determines changes in house prices. For the rate of increase in house prices to be affected by building society action the analysis suggests that only a drastic change in advances to first-time buyers would have any effect. Adjusting the rate of interest on mortgages remains a possible means of affecting house price movements. No firm conclusion can be reached on this as the statistical data is not available to base any assessment of the volume of unsatisfied demand.

A.19 It would therefore appear the societies' activities have little impact on house prices. As the events of 1978 have illustrated, marginal limitations on societies' lending appear to have little effect on the rate of house price increase. Rather, the effects were a decline in the percentage advance (indicative of purchasers being able to utilise other sources of finance) and a decline in the number of advances (of a size insufficient to have any substantial short-term effect on house prices).

ANNEX

The data used in the multiple regression analysis for the period from 1968 Q.2 are set out below.

Period		Advances to First-Time Purchasers 000's	RPDI (Percentage change on Same Quarter of Previous Year)	House Prices (Percentage Change on Previous Quarter)
1968	Q.2	81	1.21	7.35
	Q.3	76	-0.48	-3.32
	Q.4	67	0.44	-0.02
1969	Q.1	72	-1.33	0.24
	Q.2	74	1.19	4.33
	Q.3	79	0.80	0.57
	Q.4	72	2.53	1.61
1970	Q.1	68	1.26	-0.38
	Q.2	85	4.82	5.48
	Q.3	91	5.62	2.31
	Q.4	88	3.68	-1.35
1971	Q.1	84	1.76	7.23
	Q.2	102	0.93	5.93
	Q.3	111	1.44	7.50
	Q.4	102	3.61	2.68
1972	Q.1	96	5.52	6.99
	Q.2	106	9.85	14.54
	Q.3	103	7.21	14.94
	Q.4	94	8.35	6.17
1973	Q.1	87	9.52	5.98
	Q.2	72	5.13	5.98
	Q.3	71	8.02	2.56
	Q.4	56	3.41	-0.45
1974	Q.1	50	2.76	-2.18
	Q.2	45	-1.77	0.21
	Q.3	61	1.54	1.53
	Q.4	67	2.81	-2.21
1975	Q.1	63	3.60	4.00
	Q.2	73	1.96	5.44
	Q.3	80	-2.41	2.36
	Q.4	89	-4.63	-0.29
1976	Q.1	81	-2.60	0.53
	Q.2	96	-0.31	4.21
	Q.3	91	3.22	3.04
	Q.4	84	0.11	-0.52
1977	Q.1	69	-2.44	0.24
	Q.2	84	-3.08	2.70
	Q.3	100	-3.97	3.15
	Q.4	103	3.07	1.78
1978	Q.1	99	3.46	2.49
	Q.2	101	8.00	6.42
	Q.3	93	9.50	9.53
	Q.4	88	6.85	5.26
1979	Q.1	83	8.09	4.18
	Q.2	83	5.91	8.67
	Q.3	81	3.09	8.00
	Q.4	78	7.15	4.52

Sources

1. Advances to First-Time Purchasers : five per cent. sample survey of building society mortgage completions.

2. Real Personal Disposable Income : Economic Trends.

3. Average House Prices : average price of all houses at the mortgage approval stage. (Since 1975 Q.1, actual figures are available, based upon a return covering 90 per cent. of all building society mortgage advances. Prior to 1975 Q.1, the figures are estimated by taking the average new house price at approval stage, then deriving an estimate for all houses, based upon the ratio between new and all house prices at the completion stage for the equivalent period.)

A.20 An example is given below of the method of calculating the estimated house price change from the above variables. The equation derived is -

Estimated house price change = 0.110 x no. of advances to first-time buyers

+ 0.488 x RPDI

+ 2.20 D2 - 2.32 D4 (seasonal dummies)

- 6.80

A.21 For Q.3 1972, the estimated/predicted house price change is calculated as follows:-

(0.110 x 103)	11.33
+ (0.488 x 7.21)	3.52
-	6.80
=	8.05

i.e., predicted house price change in Q.3 1972 is 8.05 per cent.

A.22 The following table shows actual house price increases in 1977, 1978 and 1979 together with the estimated figures using the equation in paragraph A.10.

	Actual %	Estimated %
1977	7.1	3.3
1978	17.1	20.4
1979	29.1	23.3

APPENDIX 2

A SURVEY OF THE LITERATURE ON HOUSE PRICE DETERMINATION

B.1 The volume of academic research on house price determination has increased markedly over recent years. This appendix summarises the results of various research excercises. The summary is not intended to be comprehensive but, nevertheless, gives a fair indication of the results of academic studies in this area.

"House Prices - What Determines Them and Can They Be Controlled", Dr. Christine Whitehead, CES Review, May 1978

B.2 This article itself includes a survey of other literature on the subject. The author sets out the two alternative views on why house prices took off in the early 1970s -

(a) Credit availability. One view is that, at any one time, there is a significant excess demand for housing which is depressed by limitations on the volume of building society mortgage credit. House prices will increase therefore if, for some reason, building societies suddenly expand credit availability, even if there is no change in the real factors determining demand. It follows that reduced credit availability can reduce the rate of rise in house prices and even reverse it. The experience of the early 1970s, when a high volume of building society mortgage lending accompanied the unprecedented rise in house prices, is cited as evidence for this theory.

(b) The real cost theory. The other view is that effective demand is not supressed but, rather, is met by other financial institutions when building society funds are inadequate. However, as these sources are more expensive, demand is choked off. Thus, it is the price of credit and other real factors, such as increases in income, which determine both housing demand and house prices. The following real factors can be cited as contributing to the increase in demand in the early 1970s -

(i) an expansion in household formation as a result of the post-War baby boom;

(ii) the very rapid increase in real incomes in 1972 and 1973;

(iii) the reduction in the building society mortgage rate;

(iv) the structural increase in demand for owner-occupation resulting from fears about the effects of the 1974 Housing Finance Act on council rents, and

(v) a further increase in real demand due to a more favourable view of the value of housing as an investment as expectations of further house price increases became stronger.

B.3 Dr. Whitehead notes that attempts to separate these hypotheses by means of econometric tests have not been conclusive. In the United States the conventional wisdom is that credit availability is the main determinant of house prices but some academic research does not support this view. In Britain, Dr. Whitehead's earlier study ("The UK Housing Market - An Econometric Model", Saxon House, 1974) argued that relative prices and the cost of credit were more important than the availability of credit in determining demand for new houses.

B.4 Dr. Whitehead concludes that "the sluggish advance of house prices between 1974 and 1977 can be explained ..... by reference both to real economic variables and to limited availability of building society credit". Writing at the beginning of 1978, Dr. Whitehead noted that incomes were rising and credit costs falling and therefore with the real demand hypothesis, one would expect a significant increase in demand which would have a big effect on house prices. Dr. Whitehead notes that building societies and Government had decided to reduce building society lending, thus implying that they believed in the availability of credit hypothesis.

Summarising the results of academic research, Dr. Whitehead comments -

> "Limited as all these tests are, however, they do point to the lack of wisdom of relying wholly on rationing building society credit (especially by means of a reduction in the rate of interest), in order to control house prices in a period of strong real demand."

B.5 Dr. Whitehead goes on to consider how house prices might best be controlled -

> "If real demand is strong, there must be a fear that control of building society mortgages would be inadequate - that finance would be made available to meet the demand in one way or another, because it would be worthwhile to suppliers of alternative finance.
>
> At the present time, most suppliers of finance are looking for a market. Banks, insurance companies and others might be happy to provide mortgage money at relatively reasonable rates. This could be used, above all, to "top-up" building society mortgages, if societies with a smaller supply of funds decide to ration their lending by increasing the size of deposit required, rather than by reducing the number of loans.
>
> But complete control via building society credit availability - especially through a reduction of their interest rates - depends on being able to keep the housing finance market closed. There is little reason to believe that this is possible. Instead, such controls increase the real cost of obtaining finance, and so help reduce demand, but at a slower pace than predicted on the availability hypothesis."

"The Property Boom - The Effect of Building Society Behaviour on House Prices", Dr. David Mayes, Martin Robertson, 1979

B.6 Dr. Mayes' book is the most detailed econometric study of house price determination in Britain. Dr. Mayes found that three variables had a noticeable impact on house prices -

(a) A change in building society advances by one per cent. in 1970 had the immediate effect of changing new house prices in the same direction by 0.11 per cent. But, in the longer term, this rises to 0.58 per cent. Expressing this in money terms, Dr. Mayes argues that if building societies had lent a further £100 million in the first quarter of 1970, this would have increased house prices by nearly £200 immediately and by nearly £1,000 in the long run. On this point, Dr. Mayes concludes that - "The effect of mortgage lending on house prices is thus substantial but not as large as sometimes suggested."

(b) Dr. Mayes also found that house prices were very responsive to changes in the mortgage rate. Although, in terms of 1970 values, a change in the mortgage rate of one per cent. only had an impact of 0.4 per cent. on the level of house prices everything held constant, using his entire model, the effect of the change was 0.65 per cent. and even more substantial in the long term.

(c) A one per cent. rise in real incomes is held to result in a 0.62 per cent. rise in house prices immediately at 1970 levels, with a steady diminution in effect thereafter as the stimulus worked its way through the system.

B.7 In his conclusion, Dr. Mayes comments -

"The effects of building society behaviour on house prices can now be summarized in a straightforward fashion. On the whole building societies did not respond to the events of the 1970s in an unusual fashion or act in a new way which led to a dramatic rise in prices. There is some limited evidence that the market was slightly out of equilibrium in 1969-70 as building societies had above average liquidity ratios and house prices were relatively depressed compared with incomes and other prices. During 1971 and 1972 building society interest rates moved in favour of depositors and a substantial inflow of funds followed, although if anything rather a smaller inflow than might have been expected. This inflow passed through to mortgage lending in the normal way, although lending was rather more increased than might have been expected. The increase in lending reflects both an increase in demand for as well as supply of mortgages. This lead to an increase in the price of new houses as starts and completions did not pick up as much as might have been expected. In any case new building does not respond quickly to changes in price. As a result the increased demand for housing was not met by a sufficient increase in quantity but by an increase in price. To quite an extent the rise in house prices was self-perpetuating during 1972.

In 1973 the picture changed with building society interest rates becoming less attractive by the end of the year, and the inflow of funds slowing up. At the same time building societies began to lend a little less than might be expected. Interest rates in general soared in 1974 as did the general rate of inflation in prices, but building society interest rates were held down by the end of the year below their expected levels. The first quarter of 1974 saw the three-day week as a result of the miners' strike which reduced incomes and hence there was extremely heavy pressure to reverse the inflation in house prices, which duly occurred in the second quarter of the year, although to a smaller extent than would have been expected. What this experience shows is that house prices are not stable in the face of cumulative pressures. Several factors combined conveniently to give the system a sufficient push. The sensitivity is not surprising because only small changes in the demand for the stock of housing are impossible to meet through new construction in the short run. A 10 per cent. increase for example could only be met by a consistently high level of building for more than a decade. The building societies were certainly a contributory factor in the initial push to inflation with rapidly expanding lending for house purchase. Their actions were not, however, unusual in the context of previous experience. Much of the funds came from contemporaneous inflow aided by very competitive interest rates although some came from a running down of high liquidity levels. Their actions also contributed to the ending of the boom, with the curtailment of lending and the setting of high interest rates. But these actions again could be largely expected from previous behaviour with societies following the general pattern of interest rates. Although lending was perhaps restrained harder than necessary in 1973 it enabled the maintenance of lending at a higher level than would otherwise have been possible in 1974, when pressure on interest rates, not least from the government, kept down the flow of funds.

Fortunately a further test of these hypotheses can be obtained from subsequent movements in the market in 1975-77. Building society lending again expanded rapidly but this time was not faced by a substantial rise in prices. Chapter 7 examines three issues stemming from this experience. Why have house prices not started rising rapidly again? What measures could have been taken to avoid the rise in 1971-73? What measures can be taken to avoid future rises?"

B.8 Dr. Mayes goes on to consider the control of house prices and states -

"The building society movement is thus not well placed to try to prevent further fluctuations in house prices if there is no change in the degree of fluctuations in the economy as a whole. This might imply that the onus for alleviating pressures on house prices lies with the government. This is true in the sense that the government influences the major economic aggregates of incomes and prices, and has not made a striking success of doing so over the past few years. It does not, however, necessarily imply that the government should intervene to control house prices and building society lending generally. It seems fairly clear that government intervention to influence building society interest rates is not necessarily beneficial. If pressure is used to hold rates down below economic levels this merely sharpens the downturn in lending, makes it difficult for people to move house and exaggerates the reaction to rectify the situation when the pressure has been removed in order to restore liquidity. The use of loans at favourable rates of interest is, however, stabilising as it reduces the pressure on the outflow while it is outstanding and holds back lending while it is being repaid. It does, however, mean that the government are explicity subsidising home ownership."

"The Owner-Occupied Housing Market Since 1970", Graham Ashmore, University of Birmingham, Centre for Urban and Regional Studies, Research Memorandum No.41, April 1975

B. 9 The conclusions of Mr. Ashomore's study were as follows -

"The extremely rapid house price inflation of 1971-73 was caused by an exceptional coincidence of factors which were conducive to rising prices. The potential demand for owner-occupied housing was high in 1971 as the 'baby boom' of 1947 had turned into the 'marriage boom' of the late sixties. Credit restraints in the late sixties had delayed the realisation of this demand and had depressed the building industry so that fewer houses had been completed in 1969 and 1970. Land had been offloaded, so both land held by developers and housing stock were at a low level. Demand was further increased by government policies designed to this end. In addition to these factors incomes had risen at a faster rate than house prices from 1968 to the third quarter of 1971 and thus in real terms housing had become cheaper.

Only a plentiful supply of credit was needed to spark the inflation and this became available in 1971 as interest rates were forced down as part of the government's expansion plans. Building societies left their rates high thus ensuring a large inflow of deposits with which to supply credit to purchasers. Prices rose so quickly that speculators moved into the market and this reinforced the upward price rise. The Government elected on a policy of non-intervention in the free market and desiring to expand

the economy out of the stop-go doldrums that had plagued it for so long were reluctant to dampen the boom that price rises were creating for the building industry and destroy the beneficial consequences this would have for the rest of the economy.

The inflation was reinforced by changes on the supply side as the building industry was so fragmented it could reap no benefits from economies of scale when demand rose. In fact the supply of houses was becoming much more expensive as the prices of raw materials and labour rose quickly and as less efficient builders were attracted into the industry. Phenomenal rises were recorded in the price of land as developers bid against each other for the limited supply in housing pressure areas and speculators moved into the market. Nevertheless the number of housing starts rose rapidly in the period as developers hoped to reap the benefits of higher prices.

The true boom period was over by the end of 1972 but commitments made by the building societies, people's expectations and the rising cost of supply kept prices rising in 1973. As credit for house purchase became tighter and tighter the inflation ended and the market slumped in 1974. Houses started in 1973 and completed in 1974 were difficult to sell and the building of new houses was drastically reduced.

With the aid of government loans and a healthier flow of funds into the building societies in the second half of 1974, the first signs of a recovery in the market were visible."

The Effects of Estate Agents on the General Level of House Prices (Appendix to Price Commission Report, "Charges, Costs and Margins of Estate Agents"), Cmnd. 7647, HMSO, August 1979.

8.10 The Price Commission report on estate agents included an examination of the effects of estate agents on the general level of house prices. The Commission commissioned research on this subject, details of which are published in the appendix to the main report. The appendix is reproduced below.

"The main method used was to examine the structure of an existing econometric model which had been built by Professor D Hendry of the LSE to explain the movement of second-hand house prices between 1961 and 1977. Figure 1 shows that actual values of the ratio of house prices to personal disposable income (at current prices) were closely followed by the values that came from the model throughout the period, so that the model accounts reasonably well for movements in house prices both through the period up to 1971 when the ratio was comparatively stable and through the fluctuations which followed.

The model describes how prices tend towards equilibrium at which supply and demand are in balance. The factors which determine this equilibrium price are measures of real personal disposable income, interest rates and mortgage lending (together with the rate of increase in each case),

and the net increase in available houses for owner-occupation. None of these is under the direct control of estate agents, so it is not necessary to suppose that estate agents influence second-hand house prices in the longer run. Of course, since estate agents were operating throughout the period, this does not prove that they had no effect on any of the long-term coefficients in the model (in fact it is meaningless to talk about their effect without specifying what system we would compare it with in their absence). However, the equilibrium is such as we would expect of an efficient market except in one respect: there is strong evidence of mortgage rationing ie . that purchasers would be prepared to borrow more at current interest rates if building societies would allow them to. But this can hardly be blamed on estate agents.

The possibility remains, however, that estate agents may create some distortion in the movements of house prices in the short term. The research suggests that the reverse is likely to be the case. The way in which the market adjusts to this equilibrium in the model includes an unusual rapid short-term adjustment-the cube of the price increase in the previous period. This could be interpreted as the effect of buyers and sellers acting speculatively-eg . buying or holding off from selling because prices are rising rather than because they are too low. The speculative activity represented by this term may (but need not necessarily) be partly the result of the advice given by estate agents to their clients. Nevertheless, even if this were the case it does not suggest that the boom and slump of the early 1970s were purely speculative, for the cubic term was small throughout the period. The major changes producing the price increase in 1972-74 were in real personal income, while the reduction in mortgage lending was the main factor in holding prices back subsequently. It was the equilibrium price level which moved and such speculation as there was would seem to have simply helped the market move more quickly to its new equilibrium. However, with such sharp movements it is easy to see how it could have seemed as if the agents were causing prices to move by their advice to both buyers and sellers when they were only making the market work efficiently.

Similar results apply to new house prices since it has been shown that in the short term builders are 'price takers' so that their selling prices are related (through the cost of land) to second-hand house prices-falling a little behind in booms and moving ahead in slumps."

"Housing and Mortgage Markets", Dr. George Hadjimatheou, Saxon House, 1976

B.11 Dr. Hadjimatheou's book is an updated and revised version of his Ph.D thesis submitted to London University in 1975. Dr. Hadjimatheou describes the movements in house prices in the early 1970s as follows -

> "The exceptional rise in house prices in the period 1971-73 can be attributed to a combination of demand boost and changes in relevant factors such as the total personal disposable income, the flow of funds into building societies and the cost and availability of mortgage funds to house purchasers. In 1970-73 personal disposable income measured at 1970 prices rose by an annual rate of 5.5 per cent., compared with an average of 3.1 per cent. for the period 1955-74, and the number of building societies' mortgage advances was up by 17.4 per cent. in 1970, 21 per cent. in 1971 and 4.3 per cent. in 1972. Moreover, the 8 per cent. mortgage rate of interest prevailing during this period was just keeping pace with the rate of inflation. Other factors which contributed to a high demand were increased council rents, a rapid increase in the rate of household formation, and an historic low point in the house price/earnings cycle. In addition to the above factors, expectations, generated by the initial rises in the rates of change of both inflation and house prices, had probably added momentum to the inflationary process of house prices. On the supply side, the number of private completions of new dwellings in the years 1969-72, expressed as a percentage of the record 226.1 thousand completions in 1968, were 82.2, 77.1, 87 and 88.7 per cent. respectively. It seems that as a result of the exceptionally high demand and relatively low supply the prices have shot up. But although inflation kept on rising in 1974 and 1975, the rise in house prices came to an end by the beginning of 1974. By then the conditions affecting house prices had become unfavourable for further rises. Real personal disposable income in 1974 rose by a mere 1.1 per cent., in comparison to 6.2 per cent. in 1973, the number of building societies' advances which had started falling in 1973, had declined by a further 21 per cent. in 1974 and the mortgage rate of interest was raised to 11 per cent. by the end of 1973."

"The Inflation of House Prices", U.A. Grebler and Frank G. Mittelbach, Lexington Books, 1979

B.12 House prices increased at a very rapid rate in the United States between 1975 and 1977. The experience in the USA is therefore different from that in Britain, Australia and Canada when the house price boom occured in the early 1970s. Grebler and Mittelbach's study is the most detailed American analysis of the increase in house prices. Much of the study is based on the experience in California, where the house price boom originated. The authors analysed the effect of the short run excess demand over available supply as the cause of house price increases. They note that excess demand first manifests itself in the decline of unsold homes held by builders and in falling vacancies in the housing stock. Drastic changes in this type occured before and during the initial phase of price escalation in California but they were less pronounced in the Country as a whole and this helps to explain why California led the house price inflation. It is concluded that conventional variables, such as demographic changes, provide an insufficient explanation of the house price surge between 1975 and 1977. It is therefore argued that there is a strong presumption that inflationary expectations played a significant role in house price escalation. The increase in inflation generally has made house purchase a more attractive investment.

B.13 The authors develop and test a national model of house prices and price changes from 1968 to 1977. In brief, their conclusion is -

> "The findings affirm that prices and their movements have been significantly associated with demand factors. Permanent income and the increase in the general price level are prominent variables explaining home prices and their rates of change. In addition, the model identifies the specfic influence of seasonal factors on prices of single-family dwellings. Direct measures of inflationary expectations, which are difficult to quantify, have low explanatory power, but recent rates of home price change have a strong influence on current rates of change. Also the combined price of new and existing homes is directly related to the CPI (Consumer Price Index) minus its shelter component, lagged by one quarter. These findings suggest that substantial and broadly sustained price increases were generating expectations of further house price escalation. On the supply side, the relative ease of mortgage credit had an effect on house prices in one version of the model. The stock of occupied homes, on the other hand, was not significantly related to prices or price changes. This result may reflect the short run inelasticity of supply or technical difficulties in quantifying the stock variable."

B.14 In more detail, the econometric model developed by Grebler and Mittelbach led them to the following conclusions -

> "Lacking further evidence, the explanatory housing model provides at best tentative conclusions that need further study before they can be fully accepted or rejected. The results generally suggest that levels and changes in

house prices between 1968 and mid-1977 were significantly related to permanent income, the general price level, seasonal factors, and distributed lags of past house prices. Adjusting house prices to the general price level indicated that relative ease of mortgage credit, that is, the real difference between the mortgage and other credit instruments, contributed significantly to the rate at which the gap between indexes of house and consumer prices was narrowing or expanding. Moreover, the vacancy variable was also marginally significant in explaining the rate of change in this gap. Direct measures of consumer expectations on the general price level have low explanatory power in all the versions of the model. But the strong influence of recent rates of home price changes on current rates suggest that substantial and broadly sustained price increases began to raise expectations of prospective house buyers. The notion that home purchase is a profitable investment gained strength in the process and expressed itself in great expansion of demand during the period under study. In the absence of any strong moderating effect of supply in the short run, factors on the demand side, including rise in price expectations, were the prime forces in moving house prices sharply forward during most of the 1970s."

Some Evidence on the Recent Boom in Land and Housing Prices, David T. Scheffman, in "Urban Housing Markets", Edited by Larry Bourne and John Hitchcock, University of Toronto Press, 1978

B.15 Mr. Scheffman's study is basically of the Canadian housing market but what is interesting in the British context is that he compares the experience of Canada with that of Australia, the United States and Great Britain. There was a house price boom in Canada between 1972 and the end of 1976. Between the end of 1971 and the end of 1976 new house prices increased by between 80.7 per cent. (in Toronto) and 145.8 per cent. (in Edmonton) while, over the same period, the consumer price index increased by 48.9 per cent. Mr. Scheffman identified the following factors as affecting the Canadian housing market during the 1970s -

(a) An increase in the population of the usual home-owning age group resulting from the post-World War Two baby boom.

(b) An unusually high rate of increase of real disposable income.

(c) A high rate of inflation.

(d) Very poor performance of most financial markets.

(e) High nominal but low real mortgage rates.

(f) Subsidised rental and home ownership programmes, rent control and the introduction of capital gains taxation with owner-occupied housing being exempted.

B.16 Mr. Scheffman concludes that the real estate boom of the 1970s was a national phenomenon indicating that the primary factors causing the boom were common to virtually all parts of the Country. Each of the factors listed would be expected to increase the demand for housing but the supply of housing also increased and, therefore, it is argued that supply side restrictions did not cause the boom, although they may have had an effect on the magnitude of the boom.

B.17 In his study of the United States, Mr. Scheffman notes that the house price boom in that Country was less dramatic than in Canada, notwithstanding similar inflation and general demographic trends. However, it is noted that there are some institutional differences between the United State and Canada. For example in the United States mortgage interest is tax deductible whereas in Canada it was not at that time. Also, the mortgage market in the US is much more local or regional than is the case in Canada and there were many restrictions on interest rates also. Mr. Scheffman concludes that the effect on these and other restrictions were to make the mortgage market tighter in the US than in Canada. One important factor was that real personal disposable income grew much more slowly in the United States in the early 1970s than it did in Canada. Mr. Scheffman notes that the house price boom did start in the United States in 1975. In conclusion, he argues that there were three major factors explaining the slower growth of house prices in the US than in Canada during the early 1970s -

(a) A significantly smaller growth of real income in the US (real per capital disposable income grew at an annual average rate of 1.9 per cent. over the period 1969-74 in the US and at an annual average rate of 4.2 per cent. in Canada over the same period).

(b) Institution of wage and price controls in the US for the first time in the post-War period in August 1971 probably had a marked dampening effect on consumers' inflationary expectations, at least in the short run.

(c) A relatively tight mortgage rate in the US.

B.18 Mr. Scheffman attributes the increase in house prices in the mid-1970s in the USA to four factors -

(a) The weakening of the effect of wage and price controls on inflationary expectations and the eventual removal of controls.

(b) A strengthening of demographic pressures resulting from the Vietnam war demobilisation.

(c) The apparent start of recovery from the severe recession.

(d) Institutional changes in the mortgage market which reduced restrictions and made funds more widely available.

B.19 Mr. Scheffman notes that the British mortgage market during the 1970s was characterised by a much lower mortgage rate than in Canada but a smaller decrease in the apparent availability of mortgage funds. Real incomes in Britain grew at a similar rate to that in Canada over the period 1969-74. Comparing Canada and Britain, Mr. Scheffman states : "Because of the difference in demographic trends, a comparision of the UK and Canadian data provides striking confirmation of the importance of inflation and the growth of real incomes in generating the real estate boom."

B.20 Mr. Scheffman was able to collect only fragmentary data on house prices in Australia but, nevertheless, concluded that, during the early 1970s, real house prices increased at a faster rate in Australia than in Canada.

B.21 The conclusion of Mr. Scheffman's comparison of the Canadian house price boom with that in other countries is as follows.-

"In summary, the rate of increase in real house prices was evidently highest in Australia, followed by Canada and Great Britain, with the U.S. having the lowest rate of increase. If it is assumed, as I believe, that supply-side factors had little effect on the boom, the variation in the magnitude of real house price changes between countries is primarily due to the variation in demand-side factors.

Great Britain experienced a smaller growth rate in real income, and weaker demographic trends than did Canada or Australia. It also experienced the highest rate of inflation and lowest real mortgage rates of the four countries. Of the major causal factors behind the boom, Canada and the U.S. differed markedly only with respect to the growth rate of real income. The U.S. was evidently also the only country of the three not to experience a "dramatic" increase in real prices in any one year.

What can be concluded from a comparison of the four countries? That the U.S. experienced a smaller boom is explainable, perhaps, by the slower growth in real income. What must be explained, however, is the evident absence of dramatic short-run changes in house prices in the U.S., the absence of the apparent "speculative bubble" phenomenon experienced in the other three countries. At least two hypotheses seem plausible:

1. The higher growth of real income experienced by the other three countries was vital in allowing inflationary expectations to drive the demand for housing. The argument here is that inflationary expectations must be backed by anticipated "affordability"; i.e., consumers must anticipate that the initially high ratio of mortgage payments to disposable income will fall fairly fast.

2. The imposition of wage and price controls in the U.S. in 1971 (for the first time in the post-war period) deflated inflationary expectations.

Presumably both hyptheses have some validity. The current house price boom in the U.S. gives us additional information with which to assess them. If, as it would seem, the U.S. is now experiencing a house price boom similar to those experienced by the other three countries in the early 1970s (characterized by short-run dramatic increases in real house prices), this is occuring in the absence of the high rates of growth of real per capita income experienced by those three countries in the early 1970s-real personal disposable income in the U.S. grew 2.5 per cent. during 1976. Therefore, it would appear that the institution of wage and price controls in the U.S. may have had a major dampening effect on the boom.

Irrespective of the importance of institutional factors in the U.S., a comparison of Canada with Australia and Great Britain indicates that institutional factors specific to Canada, such as the enactment of capital gains taxation and changes in mortgage market conditions, probably did not have a major impact on the magnitude of the Canadian boom. This is not to say, however, that these institutional factors will not have an important long-run impact on the housing market.

Comparative Data - Canada, U.S., U.K., Australia, 1969-74

	Average Rate of Inflation 1970-74 %	Average Rate of Growth of Real Per Capita PDI 1969-74 %	Average Percentage Change in Real House Prices 1971-75 %
Canada	6.5	4.2	3.8[a] 7.8[b]
U.S.	5.9	1.9	4.4[c]
U.K.	10.4	3.6	6.2[d] 6.5[e]
Australia	8.9	5.1	N.A.

a Average costs of new NHA-financed houses

b Average MLS transaction

c Median new house prices, all regions

d Average price of new houses mortgaged with Building Societies

e Average price of all dwellings mortgaged with Building Societies"

"The Post-War Canadian Housing and Residential Mortgage Markets and the Role of Government", Laurence Smith, University of Toronto Press, 1974

B.22 Professor Smith developed a comprehensive econometric model of the housing and mortgage markets in Canada. Following are his conclusions on house prices -

> "The housing price regression indicates that housing prices vary directly with permanent real disposable income per family and the price of alternative goods and services, and inversely with the per family size of the existing housing stock. Unfortunately our cost of credit and credit rationing variables failed to perform as anticipated and were omitted. The credit rationing variable had the wrong sign and the cost of credit variable was insignificant. One explanation for these failures is the fact that credit variables have a stronger influence on the quality of housing demanded than on the unit or stock demand; and that those stock demand influences that exist fall primarily on the allocation of housing demand between owner and rental units rather than on the total demand for housing. A second explanation arises from the capitalisation of existing mortgage credit. Traditionally rising interest rates are expected to reduce housing demand and hence housing prices by increasing monthly carrying costs, and this is likely if the mortgage cost associated with a home purchase is responsive to current market conditions. However, in many cases the mortgage associated with a home was arranged in the past at the rate prevailing at that time, so that an increase in current rates improves the previously arranged financing with the result that this low interest mortgage is capitalised in the form of higher house prices."

It should be pointed out that in Canda, as in many other countries, houses are sold with the mortgage attached. In Canada loans are advertised over 25 years periods but, normally, are given for five year terms at fixed rates of interest. At the end of each five year term the loan can be renewed at the then prevailing rate of interest. It follows that a house being sold after one year of a five year loan, with a rate of interest, say, four percentage points below the then prevailing market rate, should have a higher capital cost. This analysis is not, of course, relevant to Britain.

B.23 Professor Smith commented on his results later in his study -

> "The price and rent regressions are quite consistent with the theory developed earlier. Housing prices and rents vary directly with permanent real disposable income, the price of competing housing, and the price of alternative goods and services; and inversely with the respective stocks of housing. Housing prices seem to vary inversely with the cost of mortgage credit and rents seem to vary directly with this cost, which is consistent with the notion that rising financing costs shift demand from owner to rented housing ..... Although the mortgage rate variable performs as anticipated it does not appear to play a leading role in price and rent determination. On the other hand, it must be remembered that our price, rent and mortgage cost variables are all inexact representations of true market conditions and consequently the likelihood of a strong correlation is diminished."