



COUNCIL of MORTGAGE
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Residential stamp duty: Time for a change



CML | Research

Residential stamp duty: Time for a change

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Executive Summary

Increasing yields from stamp duty

- The aim of this research is to identify areas where the current system of stamp duty tax is giving rise to inefficiencies or distortions in the housing market and suggest alternatives to counter these problems.
- Revenues from stamp duty on residential property have risen enormously in recent years. In 2001/2002, the tax yield reached £2.76 billion compared with £830 million only four years earlier. Revenues will rise further in 2002/2003.
- Yields have risen not because of an increase in volumes of transactions, but because of the boom in house prices. Rapid increases in house prices and the current "slab" structure has drawn purchasers into higher stamp duty bands which increases the tax yield.
- This research shows that 1% rise in house prices leads to a 1.6% rise in tax yield.

Stamp duty and distortions in housing market: why change the current system

- All taxes create distortions in markets to some degree. However, this research argues that the current system of stamp duty violates many of the principles of optimal taxation and contributes to inefficient housing markets.
- The current 'slab system' of stamp duty causes inefficiencies. This structure means buyers pay duty on the full price of the property when each threshold is reached. So properties sold for more than £250,000 currently pay 3% duty on the full price, rather than on the marginal amount over £250,000.
- The fact that these thresholds are not indexed is also inequitable because as house prices rise they are dragged into the tax bands which they otherwise might not be. Stamp duty is unusual in this respect to other taxes - most of which are indexed. Although higher rates of levy were re-introduced in 1997, the nil threshold has remained unchanged at £60,000 since 1993.
- The current slab structure also distorts relative house prices because of the jump in stamp duty rates at each threshold which creates bunching of prices and sales around the thresholds.
- In turn price bunching generates inefficiency losses through tax avoidance measures such as sellers artificially boosting the value of fixtures and fittings in their properties.

First-time buyers and southerners face biggest distortions

- This research indicates that the distribution effects of stamp duty, both across regions and household types, are more important than the aggregate, national effects.
- First-time buyers are affected much more heavily by stamp duty than existing home-owners. This is mainly because as first-time buyers approach their credit limits this group will have much more difficulty in covering stamp duty than movers who can more easily increase their borrowing. This is particularly true in a booming market where first-time buyers are already constrained.
- The fact that the stamp duty nil thresholds has not been reviewed since 1993 also affects first-time buyers more because they tend to buy cheaper properties and might expect to be exempt to a higher level than £60,000.
- Stamp duty falls very heavily on the south. Approximately 75% of revenue arises here, although the south is responsible for less than half of transactions.
- Examining this spatial pattern also illustrates inconsistencies in the property tax system. stamp duty, council tax and planning do not work together in the same direction. Whereas stamp duty falls mainly on the south, council tax is higher (as a percentage of property values) in the north.

What alternatives are there to the current system?

- The report examines a number of alternatives to the current system. Suggestions concentrate on various forms of graduated taxes. These remove the slab structure of the current system and charge higher rates of duty only on the proportion of the property value above the threshold.
- Indexation of thresholds is also recommended. The nil threshold was last updated in 1993, if this threshold had been indexed in line with house price growth it would now be around £130,000. This should not be an alternative to reform but rather is a natural extension to the graduated system to ensure that fiscal drag is minimised. We argue that such proposals are feasible and remove some of the objections to the current system.
- It is more important here to suggest the change to the system rather than to propose specific rates that should be adopted. Those provided here are more for illustrative purposes.
- The report demonstrates that the simplest graduated system, which preserves revenue neutrality (in 2001/2), would impose a 5% marginal tax rate above a threshold of £115,000. This would need to be indexed in subsequent years to minimise fiscal drag. The system has the added advantage that large numbers of transactions at the bottom end

of the price distribution would be taken out of the tax net. These are disproportionately concentrated on first-time purchasers and low priced areas.

- A variant on this proposal (more closely related to the current structure) suggests a lower rate of 2% between £60,000 and £210,000 and a rate of 5% at higher values.
- All of the proposed changes address inefficiencies in the current system, create a more transparent system and smooth Government revenues over the economic cycle. This should help Governments in their budgeting and relieve the disproportionate burden on certain households.

Chapter 1

Introduction

In this report, we are concerned with the impact of the current system of residential stamp duty. Not only does stamp duty have an effect on the housing market, but it also discriminates between both different parts of the country and different household types. Because of the inefficiencies and inequalities of stamp duty the report also explores alternatives to the current system. We demonstrate that even modest reforms can generate significant improvements.

Stamp duty on residential property is back in the news. While other Government revenues have been hit by the weaker than expected performance of the domestic economy, stamp duty revenue remains buoyant. Duty in 2001/2 reached £2.76 billion, compared with £830 million only four years earlier. Moreover, yield is likely to be even higher in 2002/3. The increase arose not because of a rise in the volume of transactions, but primarily from the boom in house prices. Over that time, according to the Nationwide index, house prices rose by 50% nationally and by 75% in London. But, as we shall show, because of the tax's structure, the yield from stamp duty rises more than proportionately to an increase in prices. Specifically, at times of rapidly increasing prices, property transactions are dragged into higher tax bands. Therefore, a buoyant housing market not only supports the economy directly through a "wealth effect" on consumers' expenditure¹, but also indirectly by providing support to Government revenues. Stamp duty, therefore, has benefits to the Government, but this only occurs by imposing an additional burden on moving households. In Ireland, stamp duty has recently been used as a part of a package of policy measures in an attempt to control the rate of house price inflation. As stamp duty is one of the few remaining tax instruments operating directly on the housing market it is not hard to see why it has been used in this way. It is sometimes suggested that stamp duty should play a similar role in Britain, however based on the Irish experience its effectiveness as such a policy tool is far from clear.

The purpose of our report is to consider the economic rationale lying behind stamp duty. We have three broad main aims:

- to consider how stamp duty measures up to general principles of optimal taxation,
- to consider and quantify, where possible, the effects of stamp duty on the housing market and wider economy,

- to discuss meaningful revenue-neutral alternatives to the current regime.

In addressing these aims, four key issues arise with respect to the current structure of stamp duty, these are:

- The impact on Government revenues
- Effects on the efficient working of housing markets
- Distributional differences between first-time buyers and existing owner-occupiers
- Distributional effects on housing markets between the north and south of the country.

As noted above, revenue from residential stamp duty has risen sharply recently. Revenue depends on the volume of property transactions, the rates of duty and the level of house prices. We show that the third of these factors has, in practice, been the most important factor in explaining the recent rapid increase in stamp duty. Unlike many income tax allowances, stamp duty thresholds are not indexed either by the general rate of inflation or by the rate of house price inflation. As a result as house prices rise proportionally more households are drawn into higher tax bands.

Efficiency has a number of aspects. For example, the current "slab" structure of the duty distorts relative house prices, leading to efficiency losses as market prices fail to reflect underlying preferences. We also consider the incidence of the tax – do buyers really pay the tax or is it shifted onto sellers or even landowners? Additional issues include the effects of stamp duty on the housing user cost of capital (economists' preferred measure of owner-occupier housing costs), the volatility of property transactions and house prices and, also, the mobility of labour.

Distributional effects take two main forms – spatial (particularly between the north and south of the country) - and between household types (notably first-time buyers and existing owner-occupiers).

Although stamp duty has been in operation for approximately 300 years, its current structure violates some of the principles of optimal taxation – characteristics that are widely accepted as being desirable for any tax. Therefore, we consider alternatives to the current system, which require relatively modest changes and involve indexation of current thresholds and a change to a graduated system. A variety of options are presented. In addition, we consider briefly in an appendix a change towards a more neutral system. More precisely, we discuss the impact of abolishing stamp duty on residential property, to be replaced by a compensating increase in council tax.

The main part of our report begins, in Chapter 2, by providing a factual background, setting out the historical changes in rates, the yield of the tax and its regional distribution. We then consider the relevant revenue implications and conduct some initial empirical work on the determinants of the tax yield. Chapter 3 takes a brief look at the general principles of optimal taxation – which form a basic set of criteria against which to assess the current and alternative regimes. Chapter 4 considers the efficiency aspects of stamp duty. Chapter 5 then discusses the distribution between first-time buyers and owner-occupiers and Chapter 6 regional issues. In Chapter 7, alternatives to the current system are considered, before drawing conclusions in Chapter 8.

Chapter 2

Background data and revenue implications

In this section, we present some of the basic indicators that we need later, notably data on yields, stamp duty rates, and the regional distribution of the yield. Furthermore, we consider empirical evidence on the main factors that generate the highly cyclical changes in stamp duty yield over time.

Stamp duty on land and buildings has been with us for more than three hundred years and legislation was last consolidated in 1891². The duty constitutes a charge on documents that transfer property with most of the yield arising from land conveyances and share transfers. On the payment of the duty, documents are still physically impressed. However the Inland Revenue has recognised that taxes on paper documents are not suited to modern society and e-business, since the scope for evasion/avoidance becomes too great. Consequently, the Inland Revenue has set out a consultative document³ for reform of the system with a view to legislation in the 2003 Finance Bill. However, the consultative document does not consider the economic rationale for the duty, nor does it consider proposals for reform of the tax itself. This is the purpose of this report. Although stamp duty applies to commercial property as well, our concern is only with residential property.

The importance of stamp duty has gradually crept up on us over time. As Table 1 shows, the overall yield of stamp duty was £641 million at the start of the eighties. In the financial year 2001/02, the yield was more than £7 billion, but the yield fluctuates from year to year. Stamp duty last year contributed approximately 5% of overall Inland Revenue receipts. Although this report is about housing, Table 1 shows that by no means all the yield of stamp duty comes from this source with yields from commercial properties and shares also significant. The proportions vary with only about a quarter coming from residential transactions in 2000/1, but nearly 40% in 2001/2. This demonstrates a general feature of stamp duty on dwellings – its volatility. For example, revenues were more than £1 billion in 1988/9 at the peak of a housing boom, but fell to less than £300 million at the bottom of the subsequent slump in 1992/3⁴. Revenues have subsequently risen sharply again in recent years to reach £2.76 billion in financial year 2001/2. The yield depends on three factors, the level of property transactions, the level of house prices and stamp duty rates. All of these have changed considerably in recent years. Below we conduct some simple empirical work on the responsiveness of yield to each of these three factors.

Table 1: Yield from stamp duty (UK)

Financial Year	Overall stamp duty yield (£ m)	Stamp duty on Residential Property (£m)
1980/81	641	n.a.
1981/82	797	n.a.
1982/83	873	n.a.
1983/84	1,138	n.a.
1984/85	911	n.a.
1985/86	1,226	400
1986/87	1,860	570
1987/88	2,440	820
1988/89	2,255	1,065
1989/90	2,117	820
1990/91	1,703	770
1991/92	1,697	630
1992/93	1,265	280
1993/94	1,737	465
1994/95	1,798	520
1995/96	2,018	465
1996/97	2,467	675
1997/98	3,455	830
1998/99	4,623	1,065
1999/00	6,898	1,825
2000/01	8,165	2,145
2001/02	7,104	2,760

Source: Inland Revenue Statistics

Notes: n.a. = not available

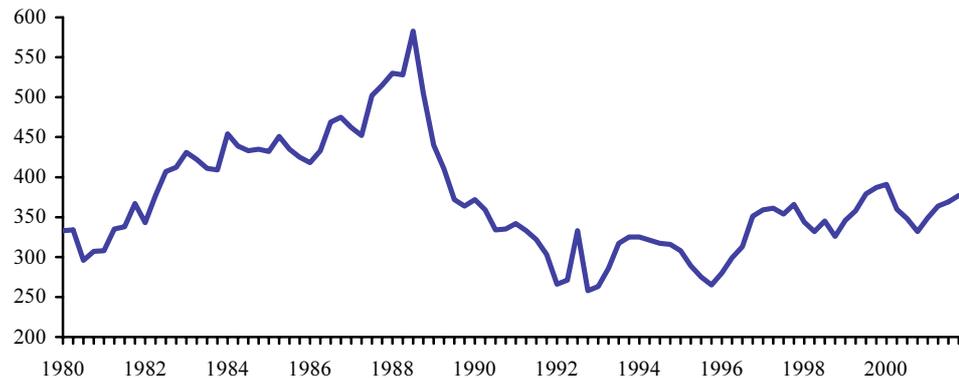
Stamp duty yield: Transactions and house prices

Chart 1 shows the level of transactions in England and Wales. The most noticeable feature was the collapse in transactions in the early nineties. Transactions have never fully recovered⁵ and there is a consequent cost in terms of foregone revenue to the Exchequer. We return to the role of prices below since they are particularly important.

But Table 2 sets out the changes to the stamp duty rates from the mid eighties. Changes have become much more frequent in recent years with properties over a value of £500,000 currently charged at a rate of 4%. In 1996/97, such properties would only have attracted a charge of one

per cent. The regional disparities in house prices inevitably mean that most of the revenue from stamp duty occurs from property sales in the south of England.

Chart 1: Housing transactions, England & Wales (000s)



Source: Economic Trends

Table 2: Stamp duty rates on residential property (%)

Year	0 %	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%
1985/86	<£30		>£30						
1986/87									
1987/88									
1988/89									
1989/90									
1990/91									
1991/92*									
1992/93*									
1993/94	<£60		>£60						
1994/95									
1995/96									
1996/97									
1997/98+	<£60	£60-£250	£250-£500		>£500				
1998/99	<£60	£60-£250			£250-£500		>£500		
1999/00	<£60	£60-£250				£250-£500		>£500	
2000/01	<£60	£60-£250					£250-£500		>£500

Source: Inland Revenue

Notes: * Between 20th December 1991 and 19th August 1992, rates were 0% up to £250,000 and 1% above. + from 8th July 1997.

Table 3 shows that, in 2001/2002, approximately 75% of the revenue collected in England and Wales was raised from the south of the country. By contrast, less than half of transactions took place in those areas. A particularly controversial feature of stamp duty, and one to which we pay considerable attention later in the report concerns its "slab" nature. Properties sold for more than £500,000 pay four per cent on the whole price, not just the proportion in excess of £500,000. This is clearly an encouragement to bunching of sales around the thresholds and avoidance measures, such as artificially boosting the value of fixtures and fittings.

Table 3: Regional distribution of stamp duty, England & Wales (£million)

Region	2000/1	2001/2
North East	25	30
North West	110	140
Yorks & Humberside	65	70
E Midlands	70	80
W Midlands	100	125
East	205	280
Greater London	715	840
South East	480	665
South West	180	250
Wales	30	40

Source: Inland Revenue

Given that the yield from stamp duty is heavily weighted towards the south, this shows that house price levels are a particularly important determinant. Table 4 shows the regional distribution of house prices; towards the end of 2002, prices in London were 60% higher than the national average and 2.8 times the level in the north. Prices in the south east were 37% higher than the national average (2.4 times the north).

Table 4: Regional house prices (£)

Year	North	London	South East	UK
2001	70,538	181,733	151,940	113,988
2002 Q3	78,941	221,889	185,608	135,589

Source: ODPM

Furthermore, we can estimate the responsiveness (elasticity in the jargon) of stamp duty yield with respect to the level of house prices and other control variables, such as the level of

transactions and changes in the stamp duty rates. Estimated on a pooled data set over the regions between 1986/87 and 2000/01 (150 observations), we found the following⁶.

- A one per cent increase in the volume of property transactions leads to a 1% increase in the tax yield. In other words, there is a proportionate one-to-one effect.
- A one per cent increase in house prices leads to a 1.6% increase in the tax yield.

The proportionate increase between the volume of transactions and stamp duty yield is unsurprising. But a price elasticity of 1.6 stresses the importance of price variations for the yield. At times of rapidly increasing prices, properties cross the tax thresholds so that revenues rise more than proportionately. This effect is particularly important because so much of the yield comes from London and the south east, where the higher rates bite most. In this light the volatility of the yield over the cycle is unsurprising. By contrast, under a simple proportional tax, the elasticity would be one and the volatility of stamp duty revenues would be correspondingly reduced. The Exchequer has benefited from the strong increase in house prices in recent years, coupled with the rise in duty rates. This becomes even more evident when alternatives to the current system are discussed in Chapter 7. But, in conclusion, the message to be remembered from this chapter is that house price variations are very important in explaining variations in revenue over time under the current system. However, compared to direct changes in the rates, the implicit tax rise is not transparent. This might be offset by an annual uprating of the thresholds in line with the rate of house price inflation⁷.

Chapter 3

The principles of optimal taxation

The first aim of this report is to consider how stamp duty measures up in the light of the principles of optimal taxation. Economists generally use the principles of optimal taxation as a benchmark for judging a tax system and as a consequence it is used here to examine the current system of stamp duty. Optimal taxation is a term used to describe the design of tax systems to minimize the tax burden while achieving a socially desirable redistribution of income. There are five accepted properties of a "good" tax system;

- economic efficiency, ie, the tax system should not interfere with the efficient allocation of resources;
- administrative simplicity, ie, the tax system ought to be easy and relatively inexpensive to administer;
- flexibility, ie, the tax system ought to be able to respond easily (in some cases automatically) to changed economic circumstances;
- political responsibility, ie, the tax system should be designed so that individuals can ascertain what they are paying, and evaluate how accurately the system reflects their preferences;
- fairness, ie, the tax system ought to be fair in its relative treatment of different individuals.

In general, Governments seek to spread the burden of taxation as thinly as possible so as to cause the least distortion to the economy. A feature of the last decade or so has been the attempt to widen the base by imposing taxes on things which had not previously been taxed, eg, insurance premiums, airport departures. This principle is modified if there is an argument that taxes on some items should be higher because of the costs imposed, in one way or another, by their consumption or use, in economic jargon because of negative externalities. Examples are tobacco, alcohol, and petrol. On the other hand, taxes may be lower or absent on other goods and services, either for reasons of equity, eg, food, children's clothing, or because their use or consumption is thought to benefit the economy, that is because of positive externalities, eg, education.

In attempting to judge the adequacy of the current system and proposed alternatives, therefore, these general principles need to be kept in mind. However, we suggest that the current system

violates some of the principles. We discuss, briefly, each in turn.

Efficiency

Economic efficiency implies a tax system should not interfere with the efficient allocation of resources. One of the disadvantages of stamp duty with regards to economic efficiency is that it provides an incentive to reduce household and labour mobility in order to avoid the tax, which in turn can affect the supply-side of the economy. This is, of course, partially offset by exemptions for small transfers. However, beyond the limit, stamp duty tax may lead to thin markets, ie, to a reduction in transactions and the mobility of labour.

Another potential inefficiency introduced in the economy by the "slab" nature of stamp duty, is that transaction prices are likely to be bunched at the thresholds. In this case, the effect of stamp duty is to distort relative house prices, which implies that markets do not operate efficiently. The result is that there are efficiency losses to the economy as a whole.

Administrative simplicity and flexibility

Administrative simplicity implies that taxes ought to be easy and relatively inexpensive to administer, while flexibility implies that the tax system ought to be able to respond easily to changed economic circumstances. Taxing the transfer of wealth in general, and stamp duty in particular, is administratively easier because assets only need to be valued infrequently. However, in general, stamp duty faces a problem of avoidance.

As we have seen, the stamp duty on a property priced £250,000 is at a rate of one per cent, whilst if the property is priced at just above £250,000 the rate is three per cent, increasing the cost to the buyer by £5,000. Clearly pressure is put on both buyers and sellers to keep the price below £250,000.

For particularly high value properties, one tax avoidance measure is to put the property in the ownership of a company in the first place so that the shares in the company could be sold, not the property. The existence of such tax avoidance measures, coupled with pressure from investors, led to a sharp reduction in the rate of tax in the US.

Furthermore, if transfer taxes are too high, and/or tax evasion is endemic, the price at which a property is actually sold may become difficult to ascertain. This does not appear to be true of the UK, but in some parts of the world it affects the operation of the market. The buyer has an incentive to declare a lower price, in order to reduce the transfer tax payable, and the seller has an incentive to declare a lower price in order to reduce the capital gains tax (CGT) payable. In some

Mediterranean countries, such as Italy, Greece, and Spain, the tax authorities do not accept the price, which the buyer and seller might put forward. The notary tells the parties to the transaction the price which will be registered for tax purposes. To avoid argument this will inevitably be below the actual price, but how much less is difficult to predict. Consequently, comparing stamp duty rates across Europe is not straightforward since the taxes may be applied to different price bases.

Finally, stamp duty saving has come more under the spotlight in recent years in Europe. Accordingly, a major issue in the structuring of real estate property investment and indeed the creation of real estate property funds in Europe includes the possibility of saving on stamp duty.

Fairness and political responsibility

As indicated above, political responsibility implies that the tax system should be designed so that individuals can ascertain what they are paying, and evaluate how accurately the system reflects their preferences. These attributes call for a transparent system that is not too complex for the average voter to understand. At first sight, although these qualities may appear to be reflected in the current structure of stamp duty, closer inspection reveals problems.

First, the importance of house price changes to the determination of liabilities, under a non-indexed system, means that the system is not fully transparent. Fiscal drag – where households are pulled into higher tax bands – occurs. Explicit tax rate changes are not as important in practice as the hidden effects of house price inflation.

Second, and we discuss the argument in more detail later, the system is not fair between different types of households – notably first-time buyers and existing owner-occupiers – nor spatially (particularly between the north and south of the country).

Finally, it may be argued that the attitude of British Governments towards housing has not always been "responsible". Policy has been mixed, indeed confused, to the extent that sometimes tax and other policies may run counter to each other. The most obvious example is the differing degrees of progression of stamp duty and the council tax. The rate of stamp duty is lower on lower values, whilst the council tax is so structured as to be at a higher rate on lower value properties, reaching a maximum absolute amount, and therefore with a zero marginal rate, for higher value properties where the rate of stamp duty is highest.

Summary

In this Chapter, we have examined the general principles of optimal taxation, because they provide a set of criteria against which the current, and proposed alternatives, may be judged. We highlighted a number of potential problems with the current structure:

- Stamp duty may reduce efficiency in the economy both by distorting relative house prices and by influencing the mobility of labour.
- There are incentives for tax avoidance.
- Due to fiscal drag, stamp duty is not transparent.
- The duty has distributional effects between locations and household types.
- The duty acts in contradiction to some other property taxes.

The next Chapter goes onto look at how, in practice, these issues impact the housing market.

Chapter 4

Stamp duty and housing market efficiency

As seen in Chapter 3, the effects of stamp duty on the efficient operation of housing markets may, in principle, be widespread. This Chapter identifies and explores a number of issues that are particularly important in terms of their impact on the housing market:

- The distortion of relative house prices caused by the "bunching" of house prices around the tax thresholds
- Effects on the volatility of property transactions and house prices
- Influences on the housing user cost of capital (cost of home-ownership)
- The effects of stamp duty on household mobility

Below we discuss each of these issues. In addition, we raise the question of the incidence of the tax – who actually bears the burden of stamp duty? Most analysis of the effects of stamp duty is predicated on the view that the purchaser of the property pays the tax. However, this is not necessarily true.

Stamp duty and the bunching of transaction prices

One outcome of the "slab" nature of stamp duty is that transaction prices are likely to be bunched at the thresholds. In this case, the effect of stamp duty is to distort relative house prices, which implies that markets do not operate efficiently and there are efficiency losses to the economy as a whole.

Land Registry data

Evidence on this issue is presented using data from two sources; first Land Registry data on the volume of transactions and their associated prices. This source has the advantage that coverage is complete. It has, however, the disadvantage that the available price bands are not as fine as we should like. This means that it is not always possible to delineate behaviour around the thresholds precisely – although the effects of bunching are still evident. Consequently, the results are enhanced by further data taken from the CML/ODPM 5% Sample Survey of Mortgage Lenders. Although thresholds are identified more easily, of course, the sample sizes are smaller. In each case data are taken for the financial year 2001/2002. From Table 2, it can be seen that the stamp duty rates did not change in that year, so the previous year's changes will have had some chance to settle down.

From Table 3, approximately two-thirds of revenue in 2001/2002 was raised from London, the south-east and the Eastern GOR regions and, therefore, concentrating on these areas alone captures the key elements. We shall have more to say about the spatial distribution of stamp duty in later sections. Furthermore, fewer properties in the northern areas would attract Stamp Duty at the higher rates and so bunching becomes slightly less of an issue (although, of course, still important at the lower thresholds).

The distribution of property transactions by price band, number of transactions in London and south east England is given in Table 5.

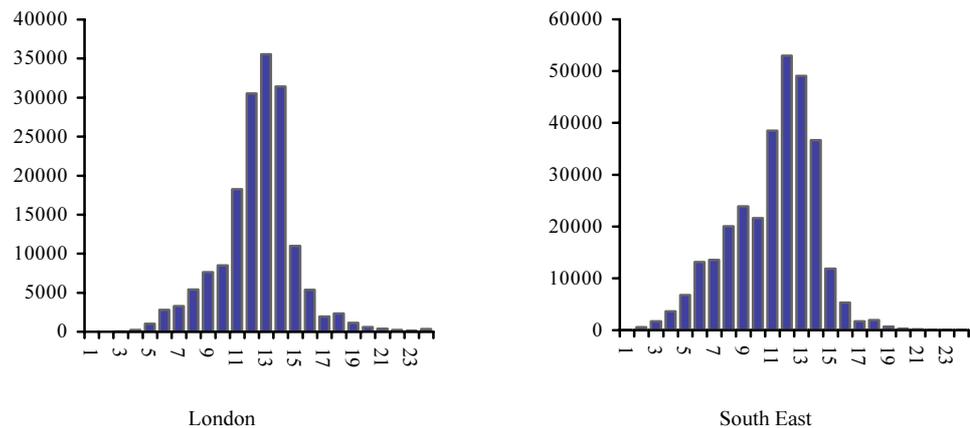
Table 5: Distribution of transactions by price band, 2001/2002

£000s	London	South East
<£10K	0	76
10-20	0	581
20-30	23	1,709
30-40	241	3,628
40-50	1,018	6,770
50-60	2,822	13,123
60-70	3,263	13,547
70-80	5,414	20,033
80-90	7,642	23,922
90-100	8,500	21,600
100-120	18,256	38,488
120-150	30,531	53,012
150-200	35,568	49,070
200-300	31,428	36,670
300-400	10,986	11,852
400-500	5,390	5,339
500-600	1,954	1,704
600-800	2,346	1,937
800-1,000	1,115	682
1,000-1,250	569	294
1,250-1,500	392	164
1,500-1,750	227	69
1,750-2,000	137	47
>£2 million	341	86

Source: Land Registry

For London, the modal (most popular) number of transactions lies in the price range £150,000-£200,000 and in the range £120,000-£150,000 for the rest of the south east. Hence, from Table 2, the modal priced property would attract a stamp duty rate of one per cent. But the distributions are fairly wide as shown in Chart 2.

Chart 2: The distribution of transactions



Source: Land Registry
 Notes: numbers 1-24 represent the price bands shown in Table 5

Our particular areas of interest are the properties that lie around the thresholds, ie, £60,000, £250,000 and £500,000. Although we would prefer finer levels of price disaggregation, bunching around these points is evident from the table. In the case of London, the number of transactions in the range £50,000-£60,000 is approximately double that in the previous price range. Similarly, the increase in the number of transactions in the £70,000-£80,000 price range is large compared to the £60,000-£70,000 range. But, by contrast, transactions in the £60,000-£70,000 – where the first threshold bites – showed little increase over the previous price range. The same pattern is revealed for the south east.

Any pattern is more difficult to spot, however, at the next threshold, since the £250,000 threshold lies in the middle of a price range. Consequently, we would not expect to observe any "dip". This turns out to be the case for both London and the south-east. At the final threshold, the numbers of transactions are, of course, considerably smaller and the price bands wide. Nevertheless, bunching is evident in both locations; in the south-east, transactions fall sharply in the £500,000-£600,000 range, but rise again in the next band (although the band is wider) and this is also the case in London.

Survey of Mortgage Lenders data

Table 6 turns to the CML survey data, looking at a narrower range of transactions, but in more detail at those lying around the thresholds. The table, therefore, takes narrower price bands, but is, consequently, more likely to be subject to sampling errors. Hence, we look at the UK as a whole rather than just London and the south east.

Table 6: Distribution of transactions by price band, UK, 2001/2002

	Number of transactions
52,001-53,000	397
53,001-54,000	372
54,001-55,000	752
55,001-56,000	376
56,001-57,000	415
57,001-58,000	514
58,001-59,000	414
59,001-60,000	1265
60,001-61,000	107
61,001-62,000	304
62,001-63,000	396
63,001-64,000	350
64,001-65,000	849
65,001-66,000	338
66,001-67,000	402
67,001-68,000	566
68,001-69,000	371
240,001-245,000	206
245,001-250,000	707
250,001-255,000	54
255,001-260,000	117

Source: Survey of Mortgage Lenders, CML.

In this case, the bunching stands out much more clearly. Looking, first, at the £60,000 threshold, we see 1,265 transactions in the range £59,001-£60,000 (in fact 705 transactions were exactly at £60,000 and 1,113 between £59,950 and £60,000), whereas only 107 took place in the next price range.

Similarly at the £250,000 threshold, 707 transactions occurred in the range £245,001-£250,000

(451 at exactly £250,000) compared with a mere 54 between £250,001 and £255,000. Finally, at the upper threshold, 130 transactions took place in the £490,001-£500,000 range (87 at exactly £500,000) with only 15 in the next price class.

All of these figures support the view that the current structure of stamp duty heavily distorts the price distribution of transactions. These distortions reflect avoidance measures. Furthermore, by distorting relative prices, the tax leads to inefficiencies in the operation of housing markets. Alternatives that do not suffer from the same problems are considered in Chapter 7.

The volatility of property transactions and house prices

Volatility – What does economic theory say?

The literature on housing market volatility is now voluminous, but certain distinctive themes can be detected that, in this country, date back to the first house price boom of the early seventies. Although the arguments have become refined over the years, three explanations for housing market volatility emerge, none of which is mutually exclusive⁸.

- Housing supply constraints
- Volatility in household incomes
- Credit markets and monetary policy

The first two of these themes are only peripheral to our concerns. But almost all empirical work in the UK shows that the responsiveness of house prices to changes in incomes is very strong⁹. Given the volatility in incomes in the last thirty years, it is scarcely surprising that house prices have also been volatile. But the reason that the elasticity is so large is because of the housing supply constraints faced in this country. Any increase in housing demand, caused by higher incomes (or any other reason) cannot readily lead to higher levels of construction, but instead is translated into higher prices.

Although not obvious at first sight, the third explanation in terms of credit markets and monetary policy has a number of subtle sub-themes that have emerged in the literature. Perhaps surprisingly, transactions costs, including stamp duty, play a role in the argument. To explain this, we need to take a slight digression.

There is little doubt that the volatility of interest rates in the post war period contributed significantly to house price volatility. The boom of the late eighties and the slump of the early nineties are prime examples. But, even accepting this, this is not necessarily the only impact of

credit markets. In the early seventies, the arguments concerning credit were straightforward. Since mortgage lenders rationed funds to most borrowers at the time, housing demand and, hence house prices, would be affected by variations in the volume of mortgage funds available. Even at that time, the argument was not entirely convincing, but becomes even less convincing in the market conditions that have prevailed since the early eighties, where borrowers have typically not been constrained by the availability of funds.

Nevertheless, it remains the case that most borrowers do not obtain 100% mortgages. Borrowers are still typically required to provide deposits. In the UK, first-time buyers on average in 2001 placed a 21% deposit on their homes. The required deposit has risen continuously since 1996 (ie, over the house price boom), reaching 24% in the third quarter of 2002. By contrast, as might be expected, moving existing owner-occupiers provide a much larger deposit – an average of 36% in 2001, reflecting the re-investment of equity from the former home. Furthermore, the percentage has changed little over the last boom. We return to the important differential effects by household type in Chapter 5.

A 20% deposit is likely to be significant for many first-time buyers, preventing entry into owner-occupation. The impact of deposit constraints on housing decisions, particularly of young households, has become a major theme of research in the US¹⁰. Broadly, the literature suggests that deposit requirements have strong effects on the ability of young households to become owner-occupiers. In a policy context, a great deal of effort has been expended, in the US, on easing the deposit requirements facing lower income households in order to attract them into owner-occupation. Furthermore, it has been demonstrated that mortgage debt gearing (the inverse of the deposit ratio) is positively correlated with the volatility of house prices¹¹. The basic argument is straightforward; areas that are highly debt geared are potentially more susceptible to negative shocks on the local economy than lower debt geared areas.

Now, how does stamp duty fit into this story? In the presence of deposit constraints, households face "hurdles" that they have to cross either in order to enter the housing market for the first time or in order to trade up. If they cannot meet the constraint, then they have the choice either of not entering the market (and perhaps renting) or purchasing a lower value house than they require. In either case, according to the theory, constraints generate:

- lower levels of effective owner-occupier housing demand than households desire and this position may exist for long time periods, and
- "lumpy" housing moving decisions – once households can meet the hurdle, they may adjust very quickly towards their desired housing positions.

Therefore, the theory suggests that constraints add to market volatility. But stamp duty and other forms of transactions costs add to the constraints or hurdles that households face. Potentially, stamp duty adds to house price volatility and lowers the volume of transactions that take place or at least changes the time lags in the relationships, ie, market adjustment becomes slower. Furthermore, those households that are closer to their borrowing limits are more likely to be affected by stamp duty than those that have large levels of equity, because the latter can increase their borrowing to cover the stamp duty. The cost of stamp duty is, consequently, spread over the time period in which the owner lives in the house. Our expectation is that first-time buyers are more heavily affected by stamp duty than existing owner-occupiers. But the main point is that Stamp Duty, by adding to the constraints that households face, potentially adds to housing market volatility.

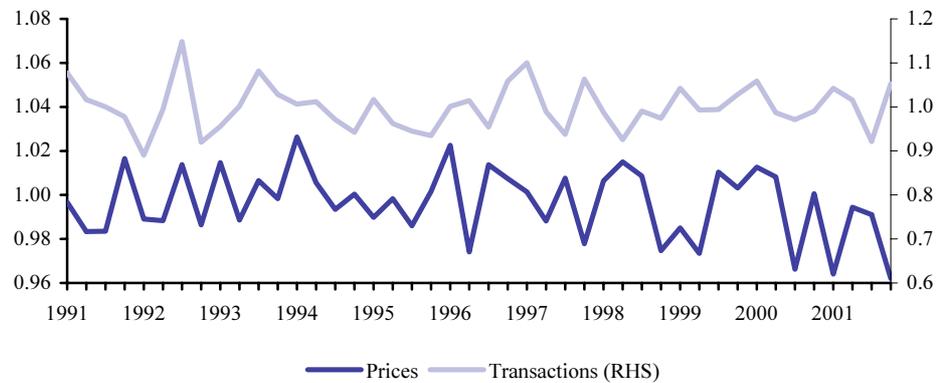
There is, however, an alternative argument – working in the opposite direction - that needs to be taken seriously¹². It is possible that high transactions costs, in fact, dampen housing volatility. The argument is that transactions costs limit the ability of investors to engage in speculative activity at times of rising prices.

Volatility – the empirical evidence at the national level

There are a number of tests that can be conducted to examine these hypotheses. Since, as Table 2 shows, most of the changes in stamp duty rates have taken place since the mid-nineties, we might expect to observe some increase in volatility in the second half of the nineties compared with earlier years¹³. We would expect any effects to be noticeable in terms of both house prices and transactions, although, from Chart 1, the biggest fall in transactions took place in the early nineties and transactions have never recovered fully since¹⁴.

Tests of increased volatility can only adequately be conducted through the use of formal empirical models and our tests of the effects of stamp duty at the national level are based on an empirical model of transactions and house prices¹⁵. Further details are provided in Appendix 2. Although stamp duty is not explicitly included as a factor in this model, if it is important, this would show up by increases in the errors associated with the model. Furthermore, given the recent changes in stamp duty rates, we would expect the errors to have become bigger and more volatile recently. However, we stress that these are aggregate national effects, which may disguise important sub-national effects.

The model is estimated up to 1999 and the errors both before and after that date are plotted in Chart 3.

Chart 3: Prediction errors - house prices and transactions

Source: Oxford Economic Forecasting

In the Chart, a value of one implies that prices or transactions in that time period were predicted exactly. Therefore, we are interested in whether the values are consistently above or below one and the degree of volatility.

Our expectation is, perhaps, that transactions would be affected more than prices, but from Chart 3, there is no evidence at all that transactions have become more volatile in response to recent increases in stamp duty. Behaviour is almost exactly what would have been predicted. House prices are rather more difficult to predict, but even here, there is little evidence that stamp duty has had any significant effect on prices. Notably, the increases do not appear to have cooled the market.

Therefore, at the national level, recent increases in stamp duty appear to have had little discernible effect on the market. In the next sub-section, we see why this is the case. But, further on in the report, we see that this is no reason for complacency and we find that we have to go below the national scale in order to discover some of the major issues that arise with respect to stamp duty.

The housing user cost of capital

Economic theory indicates that stamp duty affects housing demand through two routes, which are analytically distinct from each other; first, as discussed in the last section, by adding to the financing constraints that households face and, second, by affecting the housing costs of owner-occupiers. This second mechanism is the focus of the current sub-section. We show later that this has links to the important question of household mobility. The housing user cost of capital is

the usual way in which economists measure the per period price of owner-occupier housing services and, in principle, the presence of stamp duty can distort the price of owner-occupied housing both with respect to the price of other tenures and to other goods and services in the economy. In fact, the price of owner-occupied housing is quite complex and has a number of components associated with it. The main ones are:

- The mortgage interest rate paid by the home-owner
- The price of the house
- The extent of debt gearing as opposed to equity finance, ie, borrowing versus the use of households' own funds
- Any tax relief available
- Expected capital gains on the house
- Local taxes, such as the Council Tax
- Maintenance expenditures on the property
- Stamp duty and other transaction costs
- Depreciation.

The formal definition is given by equation (3a) in Appendix 3. In principle, the transactions' costs associated with the purchase of the property (of which stamp duty is one component¹⁶) are a part of the user cost calculation. But the importance of stamp duty, in practice, depends on:

- Its size relative to the other components above
- The extent to which stamp duty can be spread over time.

Some illustrative calculations to demonstrate the point are given below. In principle, the effect of stamp duty is straightforward – by raising housing costs, substitution into the rental sector is likely to occur. But the calculations will show that, in the UK, stamp duty is a relatively small part of the total user cost. Therefore, the aggregate market effects are likely to be limited in the UK as found in the last sub-section. By contrast, the US literature (and we discuss this below), suggests that the effects are large, with particularly important effects on labour mobility.

Table 7 calculates the user cost, distinguishing between the north of England and Greater London. Note, first, that at the average house price in each area, the stamp duty rate is the same at one per cent. We return to the distribution of prices shortly. Second, calculations of the user cost depend crucially on the expected capital gain. For the illustrative calculations, we assume a value of eight per cent, but again we return to the issue below. At these values, the user cost in London is a mere £1,908 pa and, in the North, £1,093. It is hardly surprising, therefore, that

owner-occupation is popular. By contrast, should house prices be expected to fall in London, as some commentators have predicted, then the user cost rises dramatically, because there is no longer an equity gain. For example, if prices fall by, say, 10%, then the annual user cost rises to a staggering £35,532. But, we can also calculate the expected capital gain at which the user cost is zero – housing is a free good. At the average house price, the critical capital gain is approximately 9%-10% in each area. On the assumption that the whole of stamp duty is added as a lump sum rather than spread over the period of the tenure, increases in the stamp duty rate raise the critical value one-to-one¹⁷. But importantly, at the average price, stamp duty is swamped by the other components of the user cost, notably the capital gain and the interest rate. Therefore, stamp duty appears unlikely to have a strong effect on average behaviour through the user cost. This is consistent with the findings in the last sub-section.

Table 7: Illustrative user cost calculations, based on 2001 figures

	North	Greater London
Mortgage interest rate (%)	6.0	6.0
National Savings rate (%)	4.5	4.5
House prices (£)	70,550	181,750
Loan to value ratio (%)	70	70
Rate of mortgage tax relief (%)	0	0
Local Council Tax rate	1.0	0.5
Maintenance expenditures (%)	1.0	1.0
Depreciation rate (%)	1.0	1.0
Stamp duty rate on average house price (%)	1.0	1.0
User cost of capital (assuming 8% expected capital gain)	1,093	1,908

Source: Inland Revenue, ODPM, CML, Authors own calculations

Notes: See Appendix 3 for the method of calculation

In Table 7 the user cost is calculated for mean regional house prices, where stamp duty rates are the same in the north and London but, taking account of the distribution of prices has little effect on the argument. Clearly, any effects of stamp duty on the user cost are even smaller at the bottom end of the market, where prices fall below the exemption limit. According to the Survey of Mortgage Lenders, approximately 42% of transactions by first-time buyers fell below the limit and 18% by existing owner-occupiers nationally in 2001/2002. However, stamp duty, of course, has larger effects at the top end of the market, given a rate of four per cent on sales over a value of £500,000. But only approximately one per cent of transactions incurred this rate in 2001/2002.

In summary, our conclusion is that if we really wish to understand the effects of stamp duty, analysis has to move below the aggregate national level. It is difficult to discern significant effects at this spatial level, because the influence of stamp duty is drowned by other factors. In the light of these conclusions we might ask why the US literature has paid so much attention. Although the question is discussed further when we consider mobility, the simple answer is that transactions costs are, typically, larger in the US and expected capital gains lower. This also suggests that the effects of stamp duty in the UK may be asymmetric, impeding the market when it is slowing, but not being a significant constraint when it is booming.

Stamp duty as an instrument to control house price inflation

This is an appropriate point to discuss the use of stamp duty as an instrument to control the rate of house price inflation, since the rationale is primarily through its influence on the user cost of capital. It is tempting for Governments to use stamp duty as an instrument, particularly where relatively few other policy instruments remain to influence the market, for example, mortgage interest tax relief. One case where this has occurred is Ireland but, even here, stamp duty changes constituted only one part of a much larger package of measures. But the Irish experience is instructive. Between 1997 and 2001, second-hand house prices doubled nationally, although the rate of increase in the first half of 2002 had fallen back to approximately six per cent.

Although this is not the place to go into the details of recent changes to Irish housing policy, the Government highlighted the need to curb short-term speculative demand and to strengthen the position of first-time buyers. Consequently, first-time buyers were exempted from stamp duty on second-hand properties up to a value of £150,000, whilst a higher rate of stamp duty of nine per cent was applied to all housing transactions for non-owner-occupiers, ie, those not proposing to live in the purchased property. In addition an anti-speculative tax of two per cent was to be imposed on investors (with exemptions) purchasing residential properties for non-owner-occupation. But, importantly, these measures operating on the demand side of the market were enhanced by measures to increase the supply of housing.

But, without criticising Irish actions, the question arises whether, in general, stamp duty changes were appropriate. Our view is that, at best, such policies are likely to be a blunt instrument and, in some circumstances, can add to volatility. In the Irish case, it is difficult to disentangle the influence of the stamp duty changes from other measures and, indeed, wider macroeconomic developments. For example, between 1994 and 2000, real GDP grew by almost 10% per annum, but slowed in the following two years. Therefore, the strength of the housing market (and its

subsequent slowing) was unsurprising. Furthermore interest rates fell dramatically in the second half of the nineties in the run-up to membership of the Monetary Union. Any direct housing market measures, in our judgement, were always likely to have a marginal impact, given this background and stamp duty is not suited as an instrument for short- term inflation control.

Given our discussion of the user cost of capital, it is straightforward to see why. The most volatile elements of the user cost are nominal interest rates and the (expected) capital gain. At times of rapidly increasing house prices, the user cost of capital is likely to be negative, so that stamp duty would have to be raised to very high levels indeed to have any effect. A rate of nine per cent may seem high (and, of course, it is by British standards), but it was only aimed at a segment of the market and was still much lower than the rate of house price inflation. By exempting first-time purchasers from stamp duty, however, Ireland did manage to avoid the "hurdle" problems to which we referred earlier. Finally, it should be noted that the timing of any policies has to be judged carefully. Since the expected capital gain (rather than past gains) is relevant, the fact that Irish house prices rose by 20% in 1999 was largely irrelevant. As the economy was already beginning to weaken by the time of the stamp duty increase, the danger was that the change could exacerbate the downturn. Therefore, judging the timing of these changes is difficult. Furthermore, as noted above, the effects of stamp duty may be asymmetric between upturns and downturns in the market. stamp duty is less likely to act as a constraint on actions in a boom than in a downturn.

Overall, our judgement is that the use of stamp duty in this way is a blunt instrument and should be avoided as a measure of inflation control.

Stamp duty and mobility

Most of the arguments in the previous sub-sections concern inefficiencies arising from the distortion of demand, by changing relative prices. But inefficiencies can be caused by stamp duty on the supply-side of the economy as well. The most widely discussed effect has been on the mobility of households and labour. The literature on labour mobility is vast and most lies outside our scope. But there is important literature, which considers directly the effects of transactions costs on moving decisions. Unfortunately, almost all work relates to the US, where transactions costs are considerably higher than in the UK and US conclusions cannot automatically be applied to the UK. In the UK, work on housing and mobility has taken a rather different direction, concentrating on the effect of regional price differentials and tenure in inhibiting moves from high unemployment to low unemployment regions¹⁸. Therefore, US evidence has to be adapted to a UK setting. We also need to emphasise that almost all work relates to transactions costs in general, rather than taxes, such as stamp duty, alone¹⁹.

Broadly, studies that look at the role of transactions costs are concerned with two issues, the first of which is rather technical. Economists often want to know the effect of changes in income or housing costs on housing demand and these are typically estimated from cross-section data sets. However, as we argued earlier, in the presence of transactions costs, housing demand is frequently sub-optimal; in other words, for a large proportion of households, observed housing demand is not equal to their desired housing demand and we need to observe the latter in order to calculate the income and price responses. One approach has been to use information only on recent movers, but this throws away a great deal of information and, since recent movers are not necessarily a random sample, even this approach does not guarantee reliable estimates.

This literature is of limited direct relevance to our focus of attention (although it provides a valuable analytical framework), but the second strand is more important. This examines the relationship between transactions costs and the expected length of stay in a residence – in other words, how often people move. A study of particular relevance is that by Haurin and Gill (2002). The idea is that the longer is the expected length of stay in a dwelling, in the presence of transactions costs, the more likely are households to choose owner-occupation over renting. Although this may appear intuitively obvious – since the substantial transactions costs will be spread over a longer period of time – in practice, testing the proposition is far from straightforward. It is not sufficient simply to observe that renters move more frequently than owners (which is certainly true), because highly mobile households (notably the young) are more likely to be renters anyway. This is a sample selection problem. Part of the problem arises from the fact that, typically, the planned length of stay is not observed and, furthermore, the planned length of stay is generally determined simultaneously with the choice of tenure – this adds to the modelling difficulties. Also, some transactions costs are not easily observed. Although we observe the stamp duty rates directly and can make estimates of estate agents fees, perhaps, the major transaction costs stressed in the literature are the psychological costs associated with moving – the loss of family, friends and social networks. These costs are almost impossible to measure, but probably explain why such a high percentage of moves are over such short distances. According to the Survey of English Housing, for owner-occupiers, approximately 55% of moves were for less than five miles in 1996/97 and 80% less than 20 miles.

Many tests of the effects of transactions costs on mobility and tenure choice are based on an extension to the user cost definition examined in Chapter 4 and Appendix 3. The work of Haurin and Gill (and others) allows for the fact that the effect of transactions costs on housing costs falls with the expected length of residence, although in a highly non-linear manner. If the expected length of stay is, for example, half a year, Haurin and Gill calculate on US data that the user cost

is approximately 30%, but this falls to approximately 20% after a year and to around eight per cent after 10 years. However, a word of warning is in order. These values are calculated assuming a mortgage interest rate of eight per cent and an expected rate of house price inflation of three per cent. But the latter in particular is unreasonable in a UK context. If the expected rate of house price inflation is high, as in the last sub-section, then the effect of transactions costs falls approximately proportionately with the length of time in residence, rather than in the non-linear manner described above.

As an illustration of international variations in transactions costs, Table 8, reproduced from MacLennan *et al* (1998), provides information on transaction taxes and total transactions costs (both as a percentage of the purchase price). Although the figures are now rather dated and refer to the early nineties, the international relativities are informative and probably have not changed dramatically. First, they show the low costs in the UK by international standards and the high costs in the USA. This explains why so much more academic work on the subject has been carried out in the latter. Second, the USA is, by no means, alone in facing high transactions costs – this is common in Europe.

Table 8: Transactions costs and labour mobility

Country	Total transactions cost as % price	Tax as % price
France	13.8	10.0
Germany	7.1	2.0
Italy	7.4	4.2
Spain	10.4	6.4
UK	2.0	1.0
USA	9.0	1.5

Source: MacLennan *et al* (1998)

Finally, while Quigley (2002) concludes that the transactions costs associated with housing are of little consequence to the functioning of the labour market, he still suggests that we should be concerned about transactions costs because they represent a waste of resources.

In conclusion, a large part of the US literature suggests that transactions costs (which include taxes) have an important impact on mobility in that country, although studies are, by no means, unanimous in their findings and some of the underlying assumptions may be questioned. No comparable studies have been conducted in the UK and further empirical research is required, since we cannot assume that US results will carry over to the UK. However, there is good reason to believe that the effects of stamp duty on mobility in the UK will vary between different

household types, notably between first-time buyers and moving existing owner-occupiers. These distributional effects become the major themes of Chapters 5 and 6 and are, perhaps, the key themes of our report.

The incidence of stamp duty

A final issue that needs to be considered in this section concerns the incidence of the tax. Implicitly, the analysis so far implies that the purchaser bears all the burden, but this is not necessarily the case.

There is a natural presumption that the house buyer pays any stamp duty due and, of course, physically, the purchaser writes the cheque. But that is not the full answer; in fact the incidence of the tax may be shifted back onto the seller (in terms of a lower purchase price), to a builder if the house is new²⁰ or to land owners. Overall, therefore, buyers may be no worse off. The outcome depends on a number of factors, including the nature of housing market search and the nature of the planning system and is quite complex.

Take the following example. Both buyers and sellers incur substantial costs through the nature of housing market search that leads to the final purchase. Buyers, on the one hand, incur considerable indirect costs in searching for a house to buy, particularly in terms of the time spent in this search. The seller, on the other hand, incurs costs in searching for a buyer willing to pay an acceptable price. The market is subject to inherent uncertainties so that properties may remain on the market for a long period of time. Arguably, these uncertainties may be more important to the seller than the buyer. When starting the process of sale the seller does not know exactly how much his house will sell for. The buyer, on the other hand, does not know which house she will buy, but she does know how much she can afford to pay. Thus, with respect to costs, the seller has less control over the amount of commission paid to the agent than the buyer has over the total stamp duty, which will have to be paid.

As an approximation, therefore, the amount to be spent can be regarded as given by the buyer because it is within his or her control, whilst for the seller the price is to be found. In this case, where does the incidence of stamp duty fall? The implication of the above is that the buyer determines, given his or her other expenditures, how much will be paid for the purchase of the home. Since the cost of housing represents about 25% of total household expenditure, the implication is that this can be fixed relative to other expenditure.

This, in turn, suggests that the incidence of stamp duty is on the seller, despite the fact that it is the buyer who pays. Thus, if the tax rate is raised by a percentage point, the amount that the

seller would receive would fall by one per cent. Furthermore, as some of the sales are by builders of new houses, and given that the cost of construction remains the same, in this case, an increase in the rate of stamp duty would result in a fall in the price of land for housing. If the cost of housing land amounts to about 40% of the total cost of housing, the price of housing land would fall by about two and a half per cent if stamp duty is increased overall by one per cent. If only the rate on higher value properties is changed the effects would be less because of the possibility that, at the margin, builders can change the mix of properties that they construct. The examples above are, perhaps, rather extreme and, in practice, the burden of stamp duty is likely to be shared by the different parties.

Summary

This section has primarily been concerned with the effects of stamp duty at the national level, setting out both a theoretical framework for the analysis and empirical evidence. There are a number of key points:

- There is no doubt that the slab structure of stamp duty leads to a bunching of house prices around the thresholds, generating a distortion of relative prices.
- However, nationally, it is much harder to demonstrate that changes in stamp duty rates in recent years have significantly affected the aggregate level of property transactions.
- This is unsurprising, since stamp duty in a booming housing market is swamped by other influences (which reduce housing costs and increase credit availability). But the effects are potentially greater in a downturn.
- Stamp duty is not a suitable policy instrument to use to control house price inflation in the short run.
- The effects of stamp duty on mobility are likely to vary between different household types.
- In general, in analysing the effects of stamp duty, we should not concentrate on the national picture, but should look at spatial differences and variations between household types.
- The incidence of stamp duty may not fall on purchasers at all, but could fall on the seller, the builder, the landowner or more likely some combination.

Chapter 5

The distributional differences between first-time buyers and existing owner-occupiers

In addition to the efficiency issues highlighted above, Chapter 3 noted that stamp duty may have different distributional effects for different household types ie first-time buyers and existing owner-occupiers. There are two main reasons why the effects of stamp duty vary between household types, these are:

- Typically first-time buyers will be closer to their credit limits and, therefore, are less able to borrow more to cover stamp duty liabilities.
- Theoretically, we might expect differences between first-time buyers and movers because of the price of properties they can afford and the relative stamp duty rates they then pay.

We discuss each in turn.

The first of these issues was raised in the section above on the volatility of property transactions and house prices. To recap, first-time buyers on average in 2001 made a deposit of 21%, which had risen consistently over the house price boom. But moving existing owner-occupiers provided a larger average deposit of 36%, reflecting the re-investment of equity from the previous home. This percentage has changed little over the boom. Typically, booming housing markets impose stronger constraints on first-time buyers than existing buyers. Since, as we have already seen, house price inflation leads to fiscal drag as properties move into higher tax brackets, first-time buyers are again heavily affected.

In principle, we should like to be able to test directly differences between first-time purchasers and existing owner-occupiers in their ability to meet stamp duty liabilities. Our expectation is that existing owner-occupiers could offset stamp duty liability by increasing the loan-to-value ratio, but first-time buyers would be constrained. From the previous section on mobility, implicitly, existing owners spread the payments over time, whereas first-time buyers have to face the cost upfront.

Originally to test these ideas, we decided to look at micro behaviour of individual households, using data taken from the British Household Panel Survey (BHPS) covering the period 1992-

2000 for first-time buyers and existing owner-occupiers. We attempted to model, for each of the two groups, the impact of stamp duty on the loan-to-price ratio. In fact, analysis of this form turned out not to be possible because, in the sample, almost all moving households paid stamp duty of one per cent. Therefore, there was insufficient variation to identify the separate influence of stamp duty.

Therefore, we have to adopt a different, rather less satisfactory approach, which nonetheless illustrates the differences for the two groups. Consider a first-time buyer and an existing buyer wishing to buy an average priced house in the south east, costing £151,940 in 2001/2002 (Table 4)²¹ and who pay the market interest rate of six per cent on a mortgage (Table 7). Table 9 compares the effects of stamp duty for the two, under the assumption that the existing owner can add the payment to the mortgage, whereas the first-time purchaser is credit constrained and cannot.

Table 9: Effects of stamp duty on first-time buyers and existing owners

	First-Time Buyer	Existing Owner
Purchase price (£)	151,940	151,940
Deposit (%)	21	36
Mortgage (£)	120,032	97,242
Annual interest payment (%)	7,202	5,835
Stamp duty (£)	1,519	1,519
Annual interest payment, if stamp duty added to mortgages	-	5,926

Source: ODPM, CML, Authors own calculations

Table 9 demonstrates that, under these admittedly extreme circumstances, the constrained first-time buyer would have face an upfront stamp duty payment of £1,519, but by adding the duty to the mortgage, the existing owner would require an annual increased interest cost of just £91²².

Although only illustrative, the calculations do show that the burden is likely to fall more strongly on first-time buyers – perhaps the group that the Government would like to affect least – under conditions where credit constraints start to bite.

In order to examine the second issue raised at the start of this section, we need data on the distribution of house prices. Table 10 sets out the price distribution of properties (bought with a mortgage) split between first-time buyers and existing owner-occupiers. From the table, approximately 42% of first-time buyers bought properties below the exemption limit, but only 18% of existing owner-occupiers. At this level, therefore, first-time buyers appear to benefit

most from the threshold. But two points arise. First, relatively few of the first-time buyers below the threshold will be based in the south and, hence, the question of regional imbalances again arises. Second, and slightly more esoterically, the fact that a higher proportion of first-time buyers lie below the threshold may be a reflection of the deposit and credit constraints they face. In some circumstances first-time buyers may be forced to buy a property of a lower standard than they otherwise might to avoid the burden of stamp duty. Therefore, comparisons of this form between the two groups are not reflecting "constant quality" purchases. Furthermore, other groups of potential first-time buyers, who cannot meet the deposit requirements, are squeezed out of the owner-occupier market altogether and, therefore, do not appear in the statistics. They either do not form households at all or become renters. We conclude, therefore, that simply looking at Table 10 alone can be misleading. The effects on first-time buyers of stamp duty are likely to be significantly bigger than the table suggests.

Table 10: Price distribution of purchases by first-time buyers and existing owner-occupiers, 2001/2002, %

Price Band (£000)	First-Time Buyers	Existing Owner-Occupiers
< 10	0.1	0.0
10-20	2.1	0.6
20-30	6.1	1.6
30-40	10.3	3.6
40-50	11.1	4.6
50-60	12.5	7.2
60-70	9.5	6.8
70-80	8.9	8.0
80-90	7.6	8.3
90-100	5.7	7.0
100-120	7.3	10.2
120-150	8.4	14.1
150-200	5.9	12.8
200-300	3.3	9.7
300-400	0.7	3.1
400-500	0.3	1.4
500-600	0.1	0.4
600-800	0.1	0.6

Source: Survey of Mortgage Lenders, CML

Chapter 6

Regional issues

With some notable exceptions, most of the previous analysis was conducted at the national level. But, in our view, some of the problems associated with stamp duty are not national in character, but are regional. This Chapter is concerned with these aspects and two issues arise in particular:

- The effects of stamp duty relief in disadvantaged areas, introduced in November 2001.
- Contradictions between different elements of the property tax system, which become particularly evident when viewed spatially.

Stamp duty relief in disadvantaged areas

At the end of November 2001, relief from stamp duty came into effect for the most disadvantaged areas of the country. In England, exemption is ward based, but in Scotland is based on postcodes. In each case, exemptions have been determined by reference to indices of deprivation. In these areas, exemption applies to properties valued up to £150,000. Given time lags in the publication of data, it is too early to come to any firm conclusions on the effectiveness of the measures in raising the number of property transactions, but we can begin to take a preliminary look.

Table 11: Distribution of wards of qualifying for stamp duty relief in England & Wales

Region	Numbers
North East	208
North West	294
Yorks & Humberside	123
E Midlands	129
W Midlands	116
East	55
Greater London	233
South East	60
South West	55
Wales	363

Source: www.inlandrevenue.gov.uk/so/disadvantageded.htm

Table 11 sets out the distribution of the wards receiving stamp duty relief by GOR. Unsurprisingly, they are heavily weighted towards the north, although there are still a considerable number in London, reflecting the fact that Inner London contains many of the most deprived areas in the country²³.

Next, we compare changes in the number of transactions pre- and post-introduction of stamp duty relief. Given the latest data available, in Table 12, we compare quarters two and three in 2002 with the same quarters a year earlier. However, information is not available on a ward basis from the Land Registry. Given that most of the wards receiving relief in England are in the north east, north west and London we have taken, as a sample, a number of local authority districts, where deprived wards comprise a high proportion of the total. The chosen local authorities, the numbers of transactions and the percentage change between the two time periods are shown in Table 12.

Table 12: Transactions in selected local authority districts

LAD	Number 2001 Q2+Q3	Number 2002 Q2+Q3	Percentage Change
London			
Barking	1,703	1,775	4.2
Greenwich	2,647	2,816	6.8
Hackney	1,849	1,975	6.4
Lambeth	3,348	3,435	2.6
Newham	2,846	2,776	-2.5
North East			
Darlington	1,576	1,582	0.4
Gateshead	1,924	2,162	12.4
Middlesborough	1,408	1,508	7.1
Newcastle	3,106	3,184	2.5
Stockton	2,381	2,813	18.1
North West			
Blackburn	1,651	1,704	3.2
Knowsley	1101	1207	9.6
Liverpool	3889	4360	12.1
Manchester	5009	5958	18.9
Salford	2254	2498	10.8

Source: Land Registry

It should be noted that, nationally, property transactions between the two periods increased by approximately 10%. Therefore, even in the absence of the policy change, we might have expected a significant increase in activity in these areas. Although there are exceptions (notably Manchester and Stockton), on the basis of early information, there appears little evidence so far that transactions in these selected areas have grown significantly faster than the national average, reflecting the tax advantages available in these areas²⁴.

Contradictions in the property tax system

In Chapter 2, (Table 3), we saw the regional distribution of stamp duty. Approximately 75% of the revenue came from the south of the country in 2001/2002, but less than half of transactions were in that area. Furthermore, the strong increase in yield between 2000/2001 and 2001/2002 was heavily concentrated on the south. Recent increases in house prices in the northern regions (see Table 13) would suggest that the northern yields should increase in the current financial year, but the distribution is unlikely to change significantly. In fact, given that the majority of the most deprived wards, benefiting from stamp duty relief, lie outside the south, the northern share may even fall slightly. In summary, stamp duty is primarily a southern issue.

Table 13: Regional house prices, 2002 annual percentage changes

	Q2	Q3	Q2	Q3
	ODPM Index		Nationwide Index	
North	8.1	9.5	22	18.7
Yorks	21.1	20.8	17.9	25.3
E Mids	23.3	24.5	22.9	28
E Anglia	28.7	33.8	23.3	21.7
London	8	13.6	14.8	19.4
South East	10	18.9	20.2	23.8
South West	23.4	27.8	21.5	27.3
W Mids	16.7	25.8	17.9	22.9
NW	22.8	13.1	18.8	19.7
Scotland	11.1	11.3	12.5	14.5
Wales	10.1	30	15.9	21
UK	13.7	18.9	18.1	21.7

Source: ODPM, Nationwide.

But is this pattern consistent with other elements of the property tax system, notably council tax? In fact, there is a major contradiction, arising from the fact that different parts of the property tax

system and, indeed, land use planning are not co-ordinated and have different objectives. To explain this, we need a digression into tax and planning policy.

The taxation of housing in Britain cannot be considered without taking into account the role of the planning system, because taxes and planning controls interact and should be operating together to achieve the same objectives. Returning to our discussion of optimal taxation from Chapter 3, in the analysis of methods of controlling and limiting the impact of environmental externalities, controls and taxes (or subsidies) are considered as alternatives. If the optimal level of "pollution" can be determined, then this optimal level can be reached either by imposing controls to limit the level of pollution, or by imposing taxes to force a reduction in the level of pollution down to the optimum. In the context of property, the construction of houses on greenfield sites may be identified as the pollutant. The planning system is therefore used to control and limit the amount of building.

In practice, if the supply of new housing is constrained as the demand for housing increases, the price of housing and the price of land both increase. So, in southern England, where demand has been particularly high and controls particularly effective, the price of housing is now substantially higher than it would have been in the absence of controls. Whilst this benefits existing home-owners, it is equivalent, for first-time buyers, to paying a tax equivalent to several thousand pounds. Cheshire and Sheppard (1989) have estimated that the increase in housing costs is equivalent to an income tax of ten per cent.

It is in the interaction of planning policies and tax policies that contradictions in Government policies have been evident over the years, whether the Governments have been Conservative or Labour. Indeed, for much of the third quarter of the twentieth century they operated in opposition to each other. Planning policy regarded housing land as constrained whilst tax policy encouraged the purchase of yet larger houses using yet more land. Although, in recent years, fiscal policy has moved somewhat in the direction of neutrality for housing, eg, the abolition of mortgage interest tax relief, with the effect of bringing tax policy more in line with planning policy, it would seem that the main reason for reducing mortgage tax relief was the wider fiscal imperatives of the time. It also seems that reducing the contradiction between planning policy and tax policy was accidental, since the contradiction had never been noticed in the first place.

Indeed, during the same period changes in local Government taxation worked in the opposite direction to become more opposed to planning policy. Domestic rates were abolished and replaced by the community charge, and this in turn was replaced by the council tax. But whilst domestic rates were roughly proportional to the value of a house, this was evidently not true with

the community charge, and it remained not true with the council tax. This tax, as a proportion of capital value, is highest on small houses and least on large houses. Further, since the tax reaches a maximum, the tax on very large and expensive houses is no larger than that on a quite expensive house. The council tax thus encourages people to buy, and builders to construct, larger houses, occupying more land, than they otherwise would, and thereby operates counter to planning policy.

It is in the context of the various contradictions inherent in Government policies toward housing that one has to discuss the position with regard to stamp duty. Many of the contradictions appear most clearly spatially. We need to ask whether stamp duty, council tax and planning policy are all providing a consistent message and the answer is still, no, despite the changes noted above.

Although the burden of stamp duty falls on the southern regions, in contrast, council tax lies most heavily on the north. In order to demonstrate, in Table 10, approximate estimates are made, for each GOR, of average council tax payments per dwelling as a percentage of the average house price. Although subject to margins of error, they illustrate that southern regions pay a much lower percentage than the northern areas. These differences are likely to be capitalised into house prices and contribute further to regional house price distortions. However, it is not the case that the average council tax bill (in pounds) varies dramatically between regions. The main reason for the differences in Table 14 arises from the house price variations already seen in Table 4. This, in turn, reflects the planning constraints discussed above.

Table 14: Average council tax payment as a percentage of average house prices, 2001/2002

Region	Percentage
North East	0.97
North West	0.88
Yorks & Humber	0.87
E. Mids	0.82
W. Mids	0.74
East	0.60
London	0.42
South East	0.52
South West	0.63

Source: www.local.dtlr.gov.uk/finance/ctax/ctax012.htm and Housing Statistics

Chapter 7

Alternatives to stamp duty

Although all the ills of the housing market cannot be attributable to the structure of stamp duty, its effects are sufficiently important to consider proposals for reform. Specifically, bringing it more in line with the five principles of optimal taxation discussed in some detail earlier. The alternatives that we consider lead to efficiency gains. Arguably, political responsibility is also improved, since the revenues from the tax become more transparent by reducing “fiscal drag”.

The options are relatively modest variations of the current system. First, we consider a graduated system. Instead of the current "slab" structure, (where duty is paid on the whole price, once the threshold has been exceeded), we consider a graduated system where duty is only paid on the value above the threshold. The second considers, in conjunction with the graduated system, the effect of indexation of the thresholds. One of the anomalies of the current system is that thresholds are not automatically indexed. The nil threshold was last updated, from £30,000 to £60,000, in 1993. If this had subsequently been updated in line with house price growth it would now stand at around £130,000. Furthermore, indexation is the generally expected norm in the income tax and indirect tax system.

A further option is also briefly considered in Appendix 5. This is deliberately meant to be more wide-ranging, radical and controversial. It arises from the view considered earlier that stamp duty needs to be seen in a broader context and reflects the inconsistency in the treatment of stamp duty and council tax – each operates in the opposite direction. Therefore, we consider the effects of abolishing stamp duty altogether, to be replaced by increases in council tax. This, therefore, shifts the burden away from movers, to be spread more widely across the population.

A graduated tax

From the review in Appendix 4, it is clear that that there are no alternatives to stamp duty that are without objection. For example, VAT on new housing, development taxes, capital gains taxes on housing have all been proposed in the past and rejected by Governments. In addition, significant increases in council tax would be highly unpopular. Nevertheless, as noted above, there are modest improvements that could be made to the current system that could generate unambiguous efficiency gains and which ensure that tax changes become more transparent.

Chapter 3 illustrates that the current slab structure distorts the structure of the market, and the prices at which properties are sold. The lack of transactions in the price bands £60,000 - £61,000, £250,000 - £255,000 and £500,000 - £510,000 in Table 6, the bands just above the price levels at which a new high rate comes into force, indicates that one or all of the following are occurring. Firstly, because an increase in the price of a house from say £250,000 to £252,000 costs the buyer an additional £5,000 in tax, buyers will be reluctant to offer prices just above £250,000 for reasons obvious to the seller, who will therefore have to accept the price offered. Secondly, there is tax avoidance as buyers agree to sell some furnishings in a separate transaction, so that tax is not payable in respect of this sale. The third possibility is that tax evasion is occurring as similar separate transactions occur in respect of furnishings, which do not exist, or are worthless.

All of these are possible, and their effect is the same, tax revenue is lost because transactions do not take place at these prices. It is evident that stamp duty would distort the price structure less if it were a graduated tax, one in which higher rates were only imposed at the margin. In this Chapter we provide a number of different examples of graduated stamp duty to provide a representation of different rates and thresholds that could be applied.

Illustration of graduated system

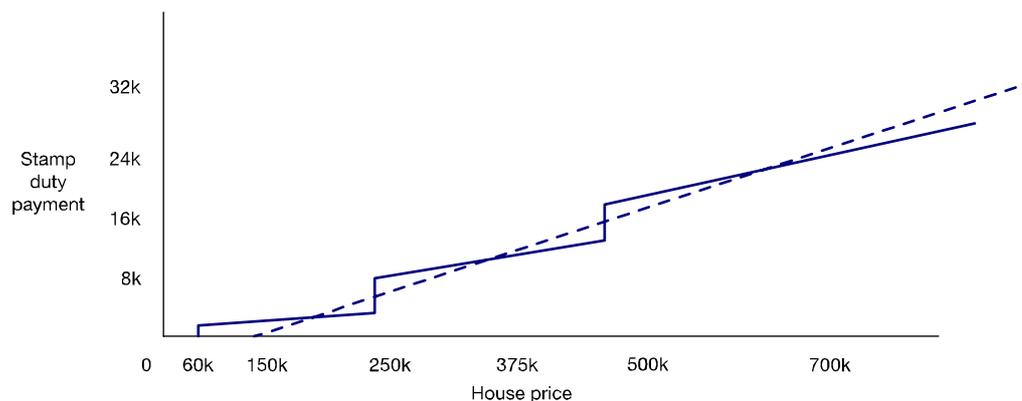
The first illustration is a graduated form of stamp duty. This option has just one rate of stamp duty payable on a marginal rate above the threshold. The rate of tax represented here reflects the current form's structure (but without the slabs). Under the current system, the existing duty paid on properties valued at just less than £250,000 would be £2,500. On properties sold at just above £250,000 duty would be £7,500. Thus, the average tax payable, mid point of this step, is £5,000. Following the same principle the mid point of the next step, at £500,000, is £17,500. It is clear that between prices of £250,000 and £500,000, the tax payable increases by £12,500, which is at a marginal rate of 5%. Thus the first illustration takes a marginal rate of tax of 5%.

This is shown in Chart 4, where the dashed line shows a graduated tax at a marginal rate of 5%. The solid line shows the form of the current slab structure. It can be seen that this 5% rate would replace most of the current structure. It is nevertheless necessary to determine the rest of the structure. At the top end, the charge levied by the two forms becomes equal at £750,000 so that the graduated rate above, say, a million pounds might be reduced to 4% to replicate the existing rates on these higher values if so desired. However, we have assumed the rate would be 5%.

At the bottom end the position is more difficult. There is no doubt that the simplest solution would be to charge no duty on sales at prices below £150,000, with a single marginal rate of five

per cent on sales at prices above that minimum. This would remove stamp duty from a very large number of house sales, indeed more than half, considerably reducing the negative effects of duty on household mobility. However, although the amounts collected are small on each dwelling, because the number of houses sold are large, a considerable tax revenue is collected from the sales of these lower value properties. Consequently, such a change would not be revenue neutral (see Table 15, option C).

Chart 4: Stamp duty: The slab and graduated systems



Source: Inland Revenue, Authors own calculations

To overcome this problem, two possibilities are examined. First, the exemption limit is set at a lower level (this turns out to be £115,000 rather than the £150,000 above, option D in Table 15); second, reduced rates similar to the existing structure are introduced with a marginal tax rate of two per cent on sales at prices between £60,000 and £210,000 and the marginal rate of five per cent, then, taking effect at £210,000 (option E). We also consider a slight variant on this with a marginal rate of 2.5% on sales at prices between £100,000 and £200,000, the marginal rate of five per cent coming in at £200,000 (option F). This latter has the effect of eliminating tax on sales at less than £100,000 and reducing it on lower priced sales up to £167,000.

Costing of proposed illustrations

In order to cost these options, we need to conduct a series of simulations. But to do this, we need a database containing the number of property transactions in the country with their associated sales prices. The most convenient source is the Survey of Mortgage Lenders, although this is, of course, only a five per cent sample. Compared with Land Registry data, the advantage is that we are able to obtain exact information on the price of each individual transaction. This is necessary for the simulations. We have taken the base for 2001/2002 - the latest for which the full year's information is available at the time of writing. From Table 1, the total yield in that year was

£2,760 million. But since we are dealing with a sample, we need to test, initially, whether it is representative and we can reproduce the actual yield of £2,760 million from the sample. Therefore, we calculated, from the sample, the implied stamp duty liability for each transaction in 2001/2002. Summing and scaling to a population level, the yield was calculated at £2,200 million. This is clearly less than the true yield. One reason for the discrepancy may be the neglect of transactions not financed by mortgage. By its nature, the Survey only includes transactions financed by mortgage. The discrepancy only matters significantly in the calculations that follow if non-mortgage financed transactions do not follow a similar price distribution. But the results below simply rescale to the £2,760 million value.

The next step, as a benchmark, is to calculate the yield under a graduated system, initially assuming the current tax rates. Therefore, the purchaser now pays a zero rate up to £60,000, one per cent between £60,001 and £250,000 (rather than on the full £250,000), three per cent between £250,001 and £500,000, and four per cent from £500,001 upwards. Clearly the yield will be noticeably lower under this scenario (see Table 15 for a complete comparison of all alternatives). However, there is one problem. In Table 6, we saw the bunching of transactions around the thresholds. Under the graduated system, the reason for this disappears and, hence, we have to make a judgement about what the price distribution would have been. There is no precise way of doing this, but from Table 6 (and more disaggregated figures) we can make a reasonable guess at how transactions just below the thresholds might have been redistributed over the next two bands. In essence, this leads to a smoothing of the figures in Table 6.

As Table 15 shows (second row), the calculated yield in 2001/2002 under the graduated system would have been £1,370 million (compared with £2,760 million under the current system). In other words the yield would approximately halve. But remember, of course, that this yield is still greater (in nominal terms) than at any time between the mid-eighties and 1999/2000 (see Table 1). The anomaly is the outturn yield in 2001/2002, resulting from the failure to index the thresholds. Remember the responsiveness of stamp duty yield to a change in house prices is strong.

This point cannot be stressed too strongly and recurs in all the simulations. Although we typically look at revenue neutral tax changes below, using revenues in 2001/2002 as our baseline, the level of taxation in that year was very high by historical standards and there is a good case for considering neutrality with respect to some more "normal" state of the housing market – or perhaps the annual average over the economic cycle.

Consequently, were the Government to maintain the unprecedentedly high 2001/2002 tax yield, each tax rate would have to double. The highest rate would need to rise to eight per cent, although the rate would, of course, apply to a much smaller tranche than currently.

Effects of proposed changes

We can also examine the effects of these changes on properties at different points in the house price distribution. Clearly there will be winners and losers. Those previously just above the £60,000 threshold will gain, since they would be paying tax on a much smaller sum (although at double the rate, ie, two per cent). Our simulation implies the cross-over point for the first band comes at approximately £120,000 – not far from the national average house price. For properties valued between £120,000 and the next threshold at £250,000, households pay higher levels of tax. This also suggests that households in the south, where average prices are higher, will lose and households in the north will gain. However properties just above the £250,000 threshold gain and the second cross-over point comes at approximately £370,000. Therefore properties between £370,000 and £500,000 pay more. For similar reasons, properties valued above approximately £520,000 face higher bills.

At this point, the alternatives in Chart 4 may be compared in a Table. Option C of Table 15 refers to the dotted line in the figure, ie, a fixed marginal rate of five per cent above £150,000 with no duty charged below this level. The table suggests that yield would fall to approximately £1,800 million. Therefore, option D, the threshold is reduced to £115,000. This achieves approximate revenue neutrality with the current system. However, even at this threshold, a high percentage of transactions would no longer attract duty. It should be noted that a high proportion of these households will be first-time purchasers, who are particularly adversely affected by the current system.

But option E illustrates that neutrality can also be achieved by introducing an additional two per cent band between £60,000 and £210,000 with 5% above £210,000. The final case (option F) indicates some loss of revenue if the starting threshold were raised (accompanied by a slightly higher marginal tax rate).

Table 15: Alternatives to the current system of stamp duty (Yields)

		Estimated Tax Yield (without indexation)
Option A	Current tax system	£2,760m
Option B	Graduated system with current tax rates*	£1,370m
Option C	Graduated system with 5% marginal tax rate above £150,000	£1,800m
Option D	Graduated system with 5% marginal tax rate above £115,000	£2,760m
Option E	Graduated system with : 2% £60K-£210K 5% > £210K	£2,750m
Option F	Graduated system with : 2.5% £100K-£200K 5% > £200K	£2,170m

Source: Inland Revenue, Authors own calculation.

Notes: * This simulation removes the effects of the slab

Indexation

Indexation is not necessarily an alternative to the reforms considered in the previous sub-section, but is complementary. We have seen that, under the current system, the responsiveness of revenues to a change in house prices is high (estimated to be 1.6). But, under a graduated, indexed system, the responsiveness of tax yield with respect to house price changes will be closer to a value of one. In other words, it reduces the volatility of revenues over the cycle as house prices change. Therefore we discuss the additional effects of indexation on two of the packages in Table 15 - the second row of the table (the graduated system with current tax rates) and the fourth row (the graduated system with a marginal tax rate of five per cent on transactions above £115,000). As we shall see, the results have to be carefully interpreted.

However, for the first case, we have to decide from which time period indexation should take place. This is, inevitably, arbitrary, but since (from Table 1) the yield did not begin to rise rapidly until the second half of the nineties, we have chosen to index, beginning in financial year 1998/99. As noted in endnote 7, indexation needs to be in line with house prices rather than the RPI if fiscal drag is to be minimised. More mundanely, indexation by the RPI over the period would only raise thresholds by approximately 10%. By contrast, over the four years to 2001/2002, using the ODPM house price index, this leads to a 55% increase in thresholds. Therefore, in the scenario shown in the second row of Table 15, the exemption limit would rise to £93,000 and the highest rate of four per cent would apply above £775,000. However it should be noted that these are national thresholds. Since prices over this period rose by less than the national average in the north, but by more than the average in the south, indexation benefits the former relative to the latter. We have not attempted to consider the possibility of regionally differentiated thresholds.

Our estimates indicate that, for option B, indexation would reduce the yield further to £800 million, compared with £1,370 million. Once again, the loss of revenue to the Government looks

(and is) substantial, but the figures are not out-of-line with past experience. Again, the exceptions have been the last couple of years. However, should revenue neutrality (at 2001/2002 levels) need to be preserved, the required highest rate of duty (on the top tranche only) would now need to increase to approximately 13.5%.

However, indexation of the system as in option D of Table 15 cannot be discussed in quite the same way, since this is a proposal that has never previously been in existence. Indeed, the threshold of £115,000 was designed to ensure revenue neutrality compared with the current system. In this case, indexation simply ensures that fiscal drag does not take place in future years. Indexation is an integral part of the structure, ensuring that higher proportions of households are not drawn into the tax net.

Finally, a potential pitfall should be noted. If thresholds are indexed this creates an incentive for a bunching in the timing of transactions. If thresholds are expected to be increased (because prices are rising), households will delay their transactions until the uprating has come into effect. Similarly, if prices are falling, there is an incentive to bring forward purchases. However this become less of an issue if the number of bands is small. Consequently, our proposal for a five per cent marginal rate above £115,000 minimises the problem, particularly since properties above the mean are taken out of taxation. From our analysis we would recommend the introduction of a graduated and indexed system of stamp duty.

Chapter 8

Conclusions

The economic effects of stamp duty have rarely been considered in detail in this country, even though its administrative structure is under review. Although changes to the rates have become more numerous in recent years, policy does not appear to have considered the fundamental justification for the tax. In this report, we have highlighted a number of inadequacies in the current system.

- The yield is highly volatile over the housing cycle. For example, revenues have risen rapidly, from less than £1 billion in 1997/98 to £2.8 billion in 2001/2002. The increase has only occurred partly in response to direct rises in the rates of duty. More important, and less transparent, are the indirect effects of the house price boom that have pushed households into higher tax brackets. We stress that there is no necessary reason why yield should be so volatile; it is a result of the current structure.
- It might be argued that the Government should be happy with rapidly increasing stamp duty revenues at a time when other tax revenues have failed to meet expectations since it acts as a form of automatic stabiliser to Government revenues. We demonstrated that the responsiveness of revenues to a rise in house prices is very strong. But the stabilisation has only occurred because the housing market is booming at a time when other sectors of the economy have fared less well. This cannot be guaranteed to continue. If, as might often be the case, the housing market declines with the rest of the economy, then stamp duty revenues will also fall. Furthermore, it should be remembered that, in any downturn in the housing market, stamp duty revenues will fall disproportionately under the current system. This would be less of a problem under a graduated, indexed system.
- The current "slab" structure violates the generally recognised principles of optimal taxation. For example, it causes major "bunching" of prices around the thresholds, distorts relative house prices and generates efficiency losses for the economy as a whole.
- In our view, the distributional effects of stamp duty are particularly important. These distributional influences exist over both space and household types. Spatially, stamp duty falls very heavily on the south of the country, where prices are highest. Although very early to tell, we can detect little effect of the exemption from stamp duty of the most deprived wards in the country since November 2001. Exemption was introduced against the background of rising transaction volumes in any case.

- Stamp duty has differential effects between first-time buyers and existing owner-occupiers. The problem arises from the fact that the former are less likely to be able to increase the size of the mortgage in order to spread payments over time. This is particularly likely to be the case where first-time buyers are increasingly reaching their credit limits as house prices rise. Existing owner-occupiers are likely to experience few problems since the value of their equity will have risen.

But, in fact, it is relatively straightforward to devise modest changes to the current system that meets many of the above criticisms. In particular, we would recommend a graduated indexed tax. Indexation and graduation are not alternatives, but both provide improvements to the current system, although it has to be recognised that indexation could lead to a bunching in the timing of transactions. If uprating of thresholds is expected, households will delay their transactions until the changes come into effect. This problem is minimised if there are few bands.

In the absence of indexation, our simulations find that the simplest revenue neutral solution would be a five per cent marginal tax rate above a threshold of £115,000. Large numbers of transactions would then be taken out of the tax net altogether, since the average house price in the UK in 2001/2002 was approximately £120,000. Although taxation, in general, causes distortions to markets and our own proposals are no exception, the distortions introduced are likely to be less than under the current system. Alternatively, a tax rate of two per cent between £60,000 and £210,000 and five per cent above this point would also achieve revenue neutrality and would resemble more closely the current system.

Finally, our proposals argue that indexation of thresholds is desirable to minimise fiscal drag and to ensure that higher proportions of households are not drawn into the tax net.

Appendix 1

The determinants of stamp duty yield

Here we present briefly the results of an estimated equation, determining the yield from stamp duty on residential transactions. Yield depends on three main factors – the duty rates, the volume of transactions and the level of house prices. Estimated on pooled data across the standard regions, the equation takes the following form.

$$\ln(YIELD) = a_1 + a_2 \ln(PH) + a_3 \ln(TRANS) + a_4(RATE) \quad (1a)$$

YIELD = yield from stamp duty (£ million)

PH = average house price in each region (£000s)

TRANS = number of housing transactions in each region (000s)

RATE = stamp duty rates (captured by dummy variables)

Table 16: The determinants of stamp duty yield

Dependent Variable: Ln (YIELD)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-18.59077	0.416000	-44.68932	0.0000
Ln (PH)	1.635871	0.044239	36.97796	0.0000
Ln (TRANS)	1.021272	0.025689	39.75479	0.0000
DUM9192	-1.123489	0.066013	-17.01914	0.0000
DUM93	-0.486062	0.033161	-14.65780	0.0000
DUM97	0.100685	0.047803	2.106262	0.0370
DUM98	0.152468	0.060099	2.536933	0.0123
DUM99	0.113634	0.060292	1.884740	0.0615
DUM00	0.038135	0.060159	0.633906	0.5272
R-squared	0.983244			
Adjusted R-squared	0.982294			
S.E. of regression	0.134306			

Source: Authors CML Calculation.

Notes: The coefficients are estimated from pooled data and hence the coefficients are constrained to be equal across the regions. In fact the coefficients are very similar when region coefficient variations are permitted.

DUM9192 = dummy for the 1991/92 Stamp Duty holiday, DUM93, DUM97, DUM98, DUM99,

DUM00 = dummies for the tax rate changes in these years.

Appendix 2

A joint model of house prices and transactions

The results in Chart 3 are closely related to a model derived in Andrew and Meen (2003). The exact results are taken from a version used by Oxford Economic Forecasting.

The joint model to be estimated takes the form of a conditional VAR, where the measure of disequilibrium is the conditioning variable. The precise form of the model to be estimated is given by equation (2a).

$$\begin{bmatrix} \gamma_{11}(L) & \gamma_{12}(L) \\ \gamma_{21}(L) & \gamma_{22}(L) \end{bmatrix} \begin{bmatrix} \Delta \ln(g) \\ \ln(TR/H) \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \end{bmatrix} [\ln(diseq)_{t-1}] + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \end{bmatrix} \quad (2a)$$

where $\gamma_{ij}(L)$ are lag polynomials.

g = real house prices

TR = volume of housing transactions

H = owner-occupier housing stock

H^* = desired owner-occupier housing stock

TR/H = turnover rate

$(diseq) = (H^*/H)$ = measures housing market disequilibrium.

ε_i = error terms

$\Delta \ln$ = first difference of the natural logarithm (which approximates a percentage growth rate)

γ_{ij} ; α_i are parameters to be estimated.

In this form, both the growth rate in real house prices and the turnover rate respond to housing market disequilibrium induced by shocks. Different speeds of adjustment are captured through different values of the α terms. Models of perfect price adjustment are encompassed within the general model, and imply that transactions are unaffected by market disequilibrium. The Berkovec and Goodman (1996) propositions that (i) transactions change before prices in response to any permanent shock and (ii) prices exhibit permanent changes, while transactions only vary temporarily, can be tested through appropriate coefficient restrictions.

Although stamp duty is not explicitly included, if it is important, this would be a model misspecification, to be reflected in the model's prediction errors. However, we stress that these are aggregate national effects, which may disguise important sub-national effects.

The model of house prices and transactions was estimated on data up to the end of 1999. Andrew and Meen (2003) find empirical support on UK data consistent with the Berkovec and Goodman ideas. However, as noted, above, stamp duty does not appear as an explicit variable in these models; however, if changes in stamp duty are important then we expect the adjustment lags in the models to be longer (since the hurdles are greater) and to observe greater volatility in both variables. Both should be reflected in the model's error terms, ie, the elements that are unexplainable. Given the recent increases in stamp duty, we would expect the errors to become larger and more volatile.

Given that the equations are estimated up to 1999, an examination of the subsequent errors constitutes a post-sample test. The errors are plotted in Figure 3 in the main text. In that figure, a value of one implies that prices or transactions in that time period were predicted exactly. Therefore, we are interested in whether the values are consistently above or below one and the degree of volatility. In particular, we are concerned with behaviour pre and post 1999.

Our expectation is, perhaps, that transactions would be affected more than prices, but from Figure 3, there is no evidence at all that transactions have become more volatile in response to recent increases in stamp duty. Behaviour is almost exactly what would have been predicted. House prices are rather more difficult to predict, but even here, there is little evidence that stamp duty has had any significant effect on prices. Notably, the increases do not appear to have cooled the market.

Appendix 3

The housing user cost of capital

The basic definition

The housing user cost of capital is the usual way in which economists measure the price of owner-occupier housing services and it has been argued that housing costs should be measured in this way in the RPI (although there are problems with its adoption in practice). It attempts to take into account all the elements of owner-occupier housing costs, but perhaps the most controversial is a measure of the expected capital gain on the property. This, by its nature, is difficult to measure, but in fact turns out to be very important in assessing the impact of stamp duty on the housing market. The main components of the user cost are:

- The mortgage interest rate paid by the home-owner (R_m)
- The interest rate on a “typical” asset held by households (R_d)
- The price of the house (PH)
- The extent of debt gearing as opposed to equity finance (LVR)
- Any tax relief available (θ)
- Expected capital gains on the house ($P\dot{H}^e$)
- Local taxes, such as the Council Tax (LTR)
- Maintenance expenditures on the property (M)
- Stamp duty and other transaction costs (SD)
- Depreciation (δ)

Therefore, formally, the user cost (UCC) is defined by equation (3a).

$$UCC = [LVR(R_m(1-\theta)) + \delta - P\dot{H}^e + LTR + M + SD + (1-LVR)R_d]PH \quad (3a)$$

Adding transactions costs

For illustration, assuming a 100% loan to value ratio (LVR) and ignoring local taxes and maintenance expenditures, the user cost is now defined by (4a)

$$UCC = [(R_m(1-\theta)) + \delta - P\dot{H}^e + SD]PH \quad (4a)$$

Implicitly, this means that households count 100% of their stamp duty payments (SD) (or more generally transactions costs) as part of current housing costs. But, as discussed in the main text, in fact the costs fall with the expected length of stay. A simple version, which Haurin and Gill (2002) suggest performs well is given by (5a).

$$UCC = [(R_m(1-\theta) + \delta - \dot{P}H^e]PH + \beta/N + c/PH.N \quad (5a)$$

β expresses transactions costs as a proportion of the house value, (N) is the expected length of stay in the dwelling and (c) is any element of transactions costs which are unrelated to the property value.

Appendix 4

The taxation of property

Annual taxes

There are, at root, three kinds of taxes on property. The first is an annual tax on the property. This can be based on some estimate of the current capital value. This is the current position with respect to the council tax. Alternatively, it can be based on some estimate of the current market rent, ie, the current annual value to the owner, who may also be the occupier. This was the position with domestic rates on housing, and is the position with regard to the uniform business rate on commercial property. Property taxes of this kind have the advantage, for Governments, that they are very difficult for taxpayers to avoid, and the disadvantage, for Governments, that they can be politically unpopular.

This political unpopularity arises for three reasons. First, there is a need for periodic revaluations. Because these can be costly, Governments tend to delay them with the result that, when the properties are finally revalued the taxes levied on some properties increase substantially, whilst they fall substantially on others. The latter keep quiet whilst the former are vociferous in their objections. A taxpayer revolt of this kind, in Scotland, after the first revaluation of domestic properties for fifteen years, led, at the end of the eighties, to the abolition of domestic rates, and their replacement by the community charge, and, later, by the council tax.

The second reason for the unpopularity of annual property taxes with the electorate is that it is the only major tax which is paid directly to the Government, and which is unconnected with any other transaction. They are therefore highly visible, unlike taxes like VAT or income tax. These latter are either paid in connection with some other transaction, or, as with PAYE, deducted at source from the income, which is being taxed. Indeed the only other example of a similar tax is the television license fee, which is also not popular.

The third reason is that if the tax is determined by a property valuation, which remains unchanged for long periods, the tax rate has to increase each year to enable the revenue raised to remain the same in real terms. The property tax does not have the buoyancy of VAT or income tax where the tax rates do not have to be increased from year to year because the tax take increases as prices and incomes rise.

It may be noted that this political unpopularity is not absolutely inevitable. Property taxes in the USA are much higher than in Britain. In the USA, the tax averages slightly more than one per cent across US cities (Ling and McGill, 1992) and it is quite a large proportion of annual housing expenditures. The real estate tax typically accounts for about 15% of a home-owner's annual cash costs for housing. Excluding financing costs, property taxes rise to as much as 40% of out-of-pocket expenditures. The problem is eased by the fact that the law in many states requires valuations to be current. As a result considerable effort is put into ensuring that they are current and accurate. This helps to avoid the kind of taxpayer revolt, which occurred in Scotland. It also ensures that there is some tax buoyancy. However since property taxes are levied at higher rates than in Britain, covering most local Government expenditure, the amounts which have to be paid by a household are substantial and taxpayer revolts have still occurred. The most notorious of these was "Proposition 13" in California where, in a referendum, the electorate voted to limit the amount, which could be raised through the property tax.

Development taxes

A second form of property taxation is a tax on the development or redevelopment of land. Classical economic theory says that this should not distort behaviour, but modern economic analysis would suggest that in fact it does. Fairly conclusive evidence of this was provided when the UK Government introduced a 100% development charge, or betterment levy, in 1947, in the belief that it would not distort the market, but the levy was abolished a few years later because the property market had ground to a standstill. A development gains tax at a rate of 70% was introduced in 1974 and maintained in one form or another through to 1985 when it was abolished on the grounds that the revenue raised was not worth incurring the cost of collection. It has been replaced by a less direct, negotiable, form of taxation in that local authorities try to extract from developers commitments to pay for infrastructure or other benefits if they are granted planning permission. These commitments called "planning gain" or "planning obligations" may include, in the case of new housing, a promise that a proportion of the housing built will be "affordable".

Sales taxes

Taxes on the transfer of the ownership of property are the third kind of property taxation. These can take different forms, in addition to stamp duty. The first possibility is a Value Added Tax imposed on the sale of new properties. This is done in the UK in the case of commercial property, but not in the case of housing. Housing is taxed in this way, however, in some European countries. For example the rate of VAT on new housing in Italy is four per cent to first time buyers, but nine per cent to others.

A second possibility is a capital gains tax (CGT). Capital gains – the increase in the value of assets over time – are just another form in which individuals receive a return to capital and, arguably, should be taxed in the same way as other returns. There are, however, serious problems in the measurement of both capital gains and losses. The fact that capital gains are taxed only when the asset is sold gives rise to the locked-in effect; individuals may retain an asset when, in the absence of taxation, they would have sold it. This effect also arises as assets held until death completely escape capital gains taxation. Because the actual decrease in the value of an asset as it wears out or becomes obsolete cannot be easily measured, simple rules to estimate depreciation are employed. Even the simplest rules, such as taking off one-tenth the value of an asset each year for an asset that lasts ten years, tend to be excessively generous. That is, they provide allowances in early years that exceed true economic depreciation (the decrease in the value of the asset in a perfect competitive capital market). As a result, they introduce distortions, with longer-lived assets typically being favoured. Tax neutrality requires either that depreciation allowances correspond to true economic depreciation, or that the total value of the asset be depreciated in the year of purchase (in which case the tax becomes a tax on pure profits, not a tax on the return to capital). Ideally, the tax system would tax real returns, not nominal returns; there would be full indexing for inflation. But inflation is hard to measure. Partial indexing – indexing of capital gains but not of debt – may result in even greater distortions than no indexation. In summary, the key problems in implementing capital taxes are:

- measuring capital gains increases in value
- measuring depreciation, and
- separating out real gains from inflationary gains.

If VAT is paid on the first sale of a property CGT may be paid on subsequent sales. In the UK it may be paid on the sale of commercial properties (but rollover relief generally ensures that it escapes) and on the sale of second homes. It is not levied on the sale of the principal home. If it is levied on the principal home it may have significant economic effects. For example, in the UK, after the rapid house price increases of recent years many owners would have to pay such large amounts of tax that it would discourage movement and encourage avoidance measures. Thus in Italy where a form of Capital Gains Tax is charged, and which used to be at a relatively high rate, house owners were reluctant to sell, holding on to properties and seeking an income from letting, rather than selling and paying tax. A further problem is that whilst share sales can be spread over time to benefit from annual tax free allowances, the lumpiness of property sales makes this strategy impossible. For these reasons gains from owner-occupied housing in the US are largely exempt from tax because home-owners are allowed to exclude a gain of \$500,000 (\$250,000 if filing single) as long as the house was the primary residence for at least two of the

last five years. Gains in excess of the exclusions are taxed in full at the applicable capital gains rate (depending on holding period and when the home was purchased). If a home is sold before it has been occupied for two years, the gain is included in taxable income unless a job change, poor health, or other unforeseen circumstances precipitated the move. In those special cases, the exclusion is reduced for each month less than twenty-four months of occupancy on a pro rata basis. For example, if a single taxpayer moves to another city to take a job after living in a home for twelve months, the amount of gain that may be excluded from income is \$125,000, rather than \$250,000.

Appendix 5

A revised property tax system

In this appendix a more radical alternative is considered, aimed at addressing the contradictions in the current system. In the event, there is really only one possibility if radical reform is to be contemplated. The stamp duty is a lump sum tax payable on the purchase of a house and regarded as a cost relating to the ownership of the house. Because it is a lump sum the cost to the owner as a cost per annum varies with the length of time that the building is occupied. It would be more efficient if it were to become an annual tax, payable in annual instalments over the period of ownership²⁵. It should also be in a form which is not easily avoided.

The simplest way in which this can be achieved is to add it to, or make it part of the council tax, reducing central Government grants to local authorities in compensation. There are two possible counter arguments. The first is that the council tax is regressive and the property tax is progressive. However, the regressivity of the council tax is counter to planning and housing policies and should be amended. Thus it would be possible to make it more progressive by relating the rate of tax directly to the value of the property. More acceptable might be the introduction of more bands of tax. At present there are eight. The introduction of a ninth and tenth bands would increase progressivity in relation to higher value homes, and higher income households, without fundamentally altering the nature of the council tax.

Another possible counter argument is that a shift to council tax from stamp duty would affect the whole housing market, including the rented sector, not just the owner-occupied sector. But if the aim is neutrality between sectors, then the tax system should neither encourage nor discourage renting or ownership, and there seems to be no reason why a tax which primarily affects the owner-occupied sector should not be spread across all forms of tenure.

But detailed consideration of reforming council tax to overcome regressivity and regional distortions is outside our scope. Here we simply provide ball-park estimates of the required increase in council tax payments as a percentage of property values, were stamp duty to be abolished on residential property, assuming the 2001/2002 yield (£2,760 million) needs to be recovered.

In 2001/2002, the yield from council tax was approximately £15.3 billion. Although it is difficult to provide precise estimates of the market value of the housing stock, if the average UK house price in 2001/2002 was approximately £114,000 and the number of owner-occupied dwellings at March 2001 (the latest observation available) was 17.59 million, then the market value of the owner-occupied housing stock was approximately £2,005 billion. Consequently council tax payments as a percentage of the market value of housing, on these crude estimates, are approximately 0.75%²⁶. If all the stamp duty yield were transferred to council tax, the proportion rises to 0.9%. Expressed differently, given an estimated 24.1 million households in 2001, to offset the loss of stamp duty yield, nationally, the average household council tax bill would have to rise by an additional £115 per annum, although it should again be remembered that stamp duty yield in the last two years has been exceptionally high.

It is hard to believe that any such increase imposed nationally would be politically acceptable. However, the regional distortions of the current council tax system are worth stressing. In the second column of Table 17, the percentages from Table 10 are repeated, illustrating that southern regions pay a much lower percentage of house values than the northern areas.

Table 17: Average council tax payments as a percentage of average house prices 2001/2002

Region	Percentage	Increase in council tax payment (£)
North East	0.97	30
North West	0.88	50
Yorks & Humber	0.87	35
E. Mids	0.82	45
W. Mids	0.74	60
East	0.60	125
London	0.42	270
South East	0.52	200
South West	0.63	120

Source: www.local.dtlr.gov.uk/finance/ctax/ctax012.htm and Housing Statistics

Therefore in the third column of Table 17, we attempt to make an approximate estimate of the increase in council tax bills were the increases to reflect the current regional distribution of stamp duty payments. In other words, since stamp duty payments are heavily weighted towards the south, the required increases in council tax show the same profile. As the table shows, the biggest increases are in London and south east. At these higher levels, the average council tax payment as a proportion of the average house price would rise to 0.57% and 0.64%²⁷. This is still considerably less than currently paid in the north.

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Endnotes

- 1 Similar arguments have been made recently in the US. The housing market remained one of the few strong sectors of the economy through the slump.
- 2 Inland Revenue 2002.
- 3 Inland Revenue 2002.
- 4 Although yield in 1992/3 was heavily affected also by the Stamp Duty holiday between December 1991 and August 1992.
- 5 See Andrew and Meen (2003).
- 6 The results are discussed in more detail in Appendix 1.
- 7 Note that uprating has to be in line with the price of housing, rather than the RPI, if fiscal drag is to be minimised.
- 8 In addition, speculative bubbles may occur, which are not of direct relevance here.
- 9 In a comparative analysis, Meen (2001) shows that the responsiveness (elasticity) of house prices with respect to household incomes in the UK is between two and three. In other words, a one per cent increase in incomes leads eventually to an increase in house prices of two to three per cent.
- 10 See Haurin *et al* (1994, 1997), for example.
- 11 The argument has been most closely associated with the work of Stein (1995) and Lamont and Stein (1999)
- 12 See Maclennan *et al* (1998).
- 13 Note, however, that changes do not have to emerge as a result of explicit Government action. Fiscal drag raised revenue from Stamp Duty in the late eighties as a result of high house prices and is doing the same again at the current time. This is a natural result from the estimated elasticity of revenue with respect to house prices. The point is that these "automatic" changes potentially add to volatility in the same way as explicit policy changes.
- 14 Andrew and Meen (2003) examine the reasons for the fall.
- 15 See Andrew and Meen (2003) for a closely related model.
- 16 Other transactions costs include solicitor's and estate agent fees.
- 17 We discuss the effects of tax spreading as set out in Chapter 4.
- 18 The work of Oswald (1996), which suggests that ownership is associated with higher unemployment, has proved particularly controversial, but see Coulson and Fisher (2002) for counter evidence.
- 19 The question has been considered by Venti and Wise (1984), Harmon and Potepan (1988), Edin and Englund (1991), Haurin and Gill (2002) and Quigley (2002) amongst others.

20 Advertisements can currently be found where the builder offers to pay the purchaser's Stamp Duty liability.

21 For reasons explained in Chapter 5 we need to consider the same constant quality house.

22 Plus a small annual repayment of the capital sum.

23 In fact Kensington and Chelsea have three wards receiving relief.

24 It is, of course, possible that they might have increased significantly slower than the average in the absence of the policy change.

25 We have seen, however, that if the duty is added to the mortgage, it can effectively become an annual charge, but this option is not open to all.

26 Notice that there is an inconsistency. The denominator excludes the market value of rental dwellings.

27 On the assumption that house prices do not fall to reflect the higher tax payments.

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