The Effect of UK Building Society Conversion on Pricing Behaviour *

Shelagh Heffernan**

Abstract

The Building Society Act, 1986, allowed British building societies to convert from mutual to plc bank status - quoted on the stock market. Seven mutuals converted in the period 1995 to 2000. This study examines the pricing behaviour of the converted mutuals and remaining building societies to address the question of whether a change in ownership structure caused managers of the new stock banks to place profit/shareholder concerns ahead of the interests of the customer/owners of mutual building societies. The results of an econometric study using monthly interest rate data (1995-2001) on deposit products and mortgages confirm that managers began to set prices which would improve profits, at the expense of depositors and mortgagees. Deposit/mortgage rates were found to be permanently lower/higher post conversion, the converts responded more rapidly to changes in the market rate of interest, and the new banks offered proportionately more rip-offs than the remaining building societies.

JEL classification: G20, G21, L11

Key words: Mutuals, converted banks, managerial incentives, bargains, rip-offs

**Professor of Banking and Finance,
Cass Business School, City University,
106 Bunhill Row,
London. UK. EC1Y 8TZ

W: http:// www.staff.city.ac.uk/s.a.heffernan/
E: s.a.heffernan@city.ac.uk
T: 44 (0) 207 040 8737

Mutuals-WP.doc

The Effect of UK Building Society Conversion on Pricing Behaviour

1. Introduction

Dating back to the 18th century, UK building societies have a long history in British retail finance. Members of a society paid subscriptions, and once there was enough funding, a selection procedure determined the member who would receive funds for house purchase or building. The early societies were attached to licensed premises (e.g. the Golden Cross Inn in Birmingham, 1775) and were wound up after all members had paid for their houses. The first legislation on them was passed in 1836[1]. In 1845, the permanent societies, such as the Chesham Building Society emerged. Members kept a share (deposit) account at a society and could, after a period of time, expect to be granted a mortgage. Over time, depositors and mortgagees were not necessarily from the same group[2]. As mutual organisations, every customer (depositor or borrower) has a share in the society, with the right to vote on key managerial changes. Each vote has the same weight, independent of the size of the deposit or loan.

In 1984, an informal but effective cartel linking the building societies dissolved after Abbey National broke ranks. By this time, many of the larger societies saw the "big four[3]" and other banks as their main competitors. The Building Societies Act (1986) allowed building societies to offer a full range retail banking products typical of a bank. However, there were important restrictions: 90% of a building society's assets had to be residential mortgages and wholesale money plus deposits could not exceed 20% of liabilities, subsequently raised to 40%, then 50%.

The 1986 Act also gave building societies an option to convert to public limited company (plc) or bank status. Two-thirds of a building society's "shareholders" (each with one vote) had to approve conversion, and the new bank was licensed by the Bank of England[4]. The Act protected converted building societies from take-over for a period of five years, unless the majority of shareholders voted in favour of such take-

---

[1] The Benefit Building Societies Act, 1836, followed by the Building Societies Acts in 1874 and 1894.

[2] See Boddy (1980) and Boleat (1982) for more detail on the background to building societies.

[3] In 1984, the "big four" consisted of Barclays, the Midland, National Westminster, and Lloyds.

[4] At the time, the Bank of England was responsible for the prudential supervision of banks. In 1997, the newly elected Labour government announced the creation of the Financial Services Authority (FSA) which would regulate all financial firms, including banks and building societies. The FSA's role as an integrated regulator was formalised in the Financial Services and Markets Act, 2000; by November 2001, the FSA announced it had assumed full responsibility for supervision.

overs. In 1989, Abbey National was the first building society to become a bank and
more conversions followed. The details are summarised in table 1.

Table 1: Conversion to Bank Status

Building Society	Conversion Date	Assets* (£ mn)	Additional Comments
Abbey National	7/1989	214,906	
Cheltenham & Gloucester	8/1995	Na	C&G converted to plc status and was simultaneously taken over the Lloyds-TSB group. It is a separate subsidiary
Alliance&Leicester	6/1997	39,477	
Bristol & West	4/1997	Na	Acquired by the Bank of Ireland
Halifax	6/1997	182,520**	Halifax and Leeds Permanent Building Societies merged in 1995; the new Halifax then converted to bank status.
Northern Rock	10/1997	26,409	
B'Ham Midshires	4/1999	Na	Taken over by Halifax in 4.99
Woolwich	10/1997	36,584**	Taken over by Barclays bank plc in 2000
Bradford & Bingley	12/2000	23,955	

*year end, 2001, except **: year end 2000; na: not available

Source: British Bankers Association (2002)

Though Cheltenham and Gloucester, Birmingham Midshires, Bristol and West, and
the Woolwich are owned by other banks, they continue to report separate deposit
and loan rates, and for this reason, were included in the sample of converted building
societies.

The conversions between 1995 and 1997 resulted in two-thirds of the assets being
transferred out of the sector. The 1997 Building Societies Act amended parts of the
1986 Act, giving greater protection to the remaining, albeit dwindling, building society
group. Any converted society attempting a hostile take-over of an existing mutual lost
the five year protection. In place of the prescriptive 1986 Act was a proscriptive
approach: building societies could undertake all forms of banking, unless explicitly
prohibited. However, at least 75% of their assets must be secured by residential
property, and 50% of funding has to come from shareholder deposits.

It has been argued that managers of building societies can build up reserves or earn
a smaller margin on loans and deposits because they do not have to maximise
profits, service external capital, or pay dividends to shareholders. Instead, their
objective is to maximise the utility of their customer-shareholders. Each building

society shareholder has only one vote, making it more difficult to co-ordinate shareholder action to exert influence on managerial decision making. By contrast, the manager of a plc bank is answerable to shareholders. Shareholders are not necessarily customers and their voting power increases with the percentage of shares held. Hence profit maximisation is the key objective.

Williamson (1963, 1971) was one of many authors to explore the phenomenon of expense preference behaviour, whereby managers (with discretion to do so) maximise their own utility through bigger salaries and bonuses, increasing the number of staff reporting to them, company cars, lavish offices, etc. Earlier, Baumol (1958) had proposed total revenue maximisation subject to a minimum profit constraint as a more plausible hypothesis than profit maximisation for non-owner managed companies. According to Manne (1965), managers of publicly limited companies are subject to monitoring by the announcement of quarterly and annual results, which provide performance-related information.

There is some literature on managerial incentives in mutual and shareholder owned (stock) organisations. Fama and Jensen (1983) note the effects of diluted ownership which prevails in mutuals, making control of managers more difficult than in stock firms. Jensen and Meckling (1996), among others, argued that compensation packages which include share ownership improves incentives for managers to act in the interest of their shareholders.

Barnes (1983) applied discriminant analysis to 59 UK building societies (1978-80) to test the hypothesis that a divorce between ownership and control can explain periods of low profitability. He concluded that expense preference and growth policies (measured by a managerial expense ratio and branch network expansion, respectively) did explain lower profitability. But Valnek (1999) investigated the performance of 17 building societies and plc "retail"[5] banks in the UK for the period 1983-1993. Using a variety of measures, he showed that the mutuals outperformed the banks, and suggested this was due to owners and depositors being one and the same, thus avoiding costly agency conflicts and gaining from the efficiency associated with a homogeneous clientele.

---

[5] The banks are described as retail, but the majority of UK banks offer retail and wholesale banking services. Though Valnek does not address this issue, he reduces his sample of banks to 7 in order to match the data between the two groups.

However, agency problems are present, whatever the ownership structure. It means the interests of the customer-shareholder (building societies) or shareholder (banks) may be undermined by the manager trying to maximise his or her utility. In both cases, the source of the problem is asymmetric information, where the manager has more information about the daily operation and position of the firm. Nonetheless, it is likely that the managers will be more accountable in a stock company, given that they are bound by some minimum profit constraint, since shareholders can sell their shares. The constraint on the building society manager is less pronounced because depositors/mortgagees, with less information and higher switching costs[6], are less likely to move their accounts elsewhere.

The majority of conversions were initiated by building society management, which would suggest they believed they could be gain more as a bank[7]. They probably thought that increased status, the potential for higher bonuses, etc. would more than compensate for any increased accountability to shareholders.

Customers and shareholders are one and the same for managers of building societies, but once they convert to bank status, a wedge is driven between them. Once profits, rather than customer utility, becomes the maximand, converts' deposit and loan rates should respond more quickly to a change in the market rate of interest. In addition, the margins earned by converts should be higher than the remaining building societies. The objective of this study is to assess, whether post conversion, pricing behaviour changed in such a way that favours shareholders more than customers.

The paper proceeds as follows. Section two describes the data and methodology, section three discusses the main findings, and section four concludes.

2. Methodology
To compare the pricing behaviour of converted building societies and mutuals, monthly interest rates were obtained on 90 day term deposits, instant deposits (can be withdrawn with no penalty), chequing accounts (a current account paying interest

---

[6] Shares can be sold with relative ease; switching accounts is more difficult, especially for customers with mortgages.

[7] The Bradford and Bingley converted against management advice, due to the influence of "carpetbaggers" - new members of a society who invest in it to force a vote on conversion and thus make a windfall gain. Members of the Nationwide and Britannia building societies followed management advice and voted against conversion, despite carpetbagger attempts to have them converted.

with a cheque book and debit card) and variable rate mortgages. The period examined is January 1995 to December 2001. The data source is *Money£acts*, published by MoneyFacts Group Ltd*.* During this period, eight building societies converted to bank status, but the sample also includes Abbey National, the first to convert, in 1989. See table 1 for the list of converts.

Table 2 summarises the building societies used for purposes of comparison. They range from well known building societies such as Nationwide, to others such as Furness, Leek United, and West Bromich, which may not be household names, but do offer their products nation-wide, though they have fewer branches[8]. However, by this time, new technology meant customers seeking these products did not need not be near a branch or building society to have an account. Also, not all the building societies offered every product, especially chequing accounts and term deposits[9], another reason why it is important to include as many building societies as possible.

---

[8] Any building society which catered exclusively to a particular community was excluded.

[9] A building society (or convert) may have offered a product (e.g. chequing account, mortgage) but had to be excluded either because the bank/building society has not reported the rates to *Money£acts*, or the period for which the data were available was too short.

TABLE 2: Building Societies in the Sample

Building Society	Assets * £mn
Nationwide	69,273
Britannia	12,620
Yorkshire	9,294
Portman	5,565
Skipton	4,269
Leeds & Holbeck	4,139
Chelsea	4,018
West Bromwich	3,321
Cheshire	2,928
Principality	2,737
Norwich & Peterborough	2,459
Nottingham	1,734
Stroud & Swindon	1,144
Lambeth	721
National Counties	704
Furness	506
Leek United	500
Universal	433
Saffron Walden	401
Market Harborough	307
Melton Mowbray	292
Teachers	200
Tipton&Cosley	187
Loughborough	173
Mansfield	153

year end 2000 or 2001;
Source: Building Societies Association, *Annual Report*

Money£acts reports annual interest rates at monthly frequencies by tiers, i.e. £1, £100, £500, £1000, £10,000, and so on. To avoid a potential time bias[10] from the use of tier rates, statistics from the British Bankers Association were used to obtain annual average deposit levels for the instant, term, and chequing accounts. The full details of the computations appear in table A1 of the appendix. The average representative amounts for each deposit product are:

---

[10] The reported tiers are not adjusted for inflation, which could cause a time bias. Problems arise with inflation and real deposit/loan growth, which means these tiers should ideally keep being adjusted upwards.

Product	High*	Low*
Term Deposits – 90 day	£25,038	£2,504
Instant Deposits	£25,038	£2,505
Chequing Accounts	£ 3,182	£318

* The figures which appear in the table are the average for the 6 year period, 1995-2001. See table A1 for annual deposit levels.

The deposit rate paid by each bank or building society for a given representative deposit level was obtained from the monthly publications of *Money£acts.* For example, the representative amount for term high in 1995 was £23,379, and Abbey National paid a rate of 4.78% for a deposit of that size in December, 2000. To indicate which representative amount is being used, the deposit products have the suffix, "high" and "low" attached. The names of each product, to be used throughout the paper, are term high, term low, instant high, instant low, cheque high, and cheque low, and mortgages.

The mortgage rate is an annual variable rate on a repayment mortgage (reported at monthly frequencies), reported to *Money£acts* by each bank or building society. It was not possible to look at rate setting behaviour for personal loans because an insufficient number of building societies either did not offer them or did not report rates to *Money£acts.*

A modified version of a generalised pricing model[11], is used to assess the pricing behaviour of the converts and mutuals. The estimating equation for each deposit product and mortgage is:

$$R_{ij} = \alpha + \beta_i LIBOR_i + \sum \eta_{ij} LIBOR_{i-j} + \phi_i f(MOS)_i + \lambda TT_t + \varepsilon_{it} \qquad (1)$$

R_{ij} = the rate of interest paid by firm i in month j on the product; an annual rate sampled at a monthly frequency.
$LIBOR_i$: the three month £ London interbank rate in month j
$LIBOR_{i-j}$ $LIBOR_i$ lagged by j months, j=1,2,3
MOS: the number of months since a building society converted from the date of the last interest rate entry, December, 2001.
TT: time trend.
ε: error term.

Preliminary co-integration exercises, using the Johansen maximum likelihood procedure, established the presence a unit root and captured the dynamics of retail

---

[11] This methodology was first developed by Heffernan in the early 1990s, but see Heffernan (2002).

deposit and loan rates to changes in a base rate. For this reason, LIBOR (a proxy for the market rate of interest) lagged up to three months was considered more than sufficient to capture any lags in the adjustment to a change in LIBOR. Unless otherwise stated, there were 84 observations for each financial institution (FI) [12]. The reasonably large sample size made it possible to run individual regressions for each bank or building society. The data were also pooled across all firms, for each product, to increase the degrees of freedom.

3. Econometric Results

There were unacceptable levels of serial correlation if Ordinary Least Squared procedure is applied to the individual firm estimations. The use of an autoregressive error regression model (i.e. AR (1) or AR (2)), which computes maximum likelihood estimators, resolved the problem.

Different regressions were run to include all possible combinations of LIBOR, the three lagged LIBORS, the different functional forms for the months variable, and the time trend. The results reported in tables A2-A8 show the preferred equations, selected by the standard statistical criteria. These were p ratios for the coefficients on each variable, the adjusted R^2, and, where applicable, the Durbin-Watson statistic. A blank in any of the columns indicates the variable was statistically insignificant and dropped from the preferred estimated equation.

Referring to tables A2 through A8, the reported estimations do well in terms of these three criteria. The majority of individual time series regressions yield an adjusted R^2 of >.95, and the Durbin Watson (DW) statistics are within the acceptable range for the given number of observations, so the null hypothesis of no serial correlation is accepted. The pooled results display predictably lower adjusted R^2s. There was no significant heteroscedasticity, which can often arise in pooled regressions of this sort. If the coefficient appears in **bold**, it means the p-statistic indicated significance at the 99% level of confidence; a * beside a coefficient means it is significant at the 95% level of confidence.

3.1 Pricing Behaviour
Using the results from the preferred estimation of equation (1) on individual mutuals/converts, three components are considered when assessing individual

---

[12] For term low, some FIs had fewer observations.

pricing behaviour. The difference between unity and the sum of the significant LIBOR coefficients (ΣL), shows the degree of _long run[13] smoothing_. The size of the coefficient on the constant term, if significant, indicates the amount of mark-up or mark-down of a bank's deposit rate over LIBOR. Finally, there is evidence of _delayed smoothing_ if any of the coefficients on the lagged LIBORs are significant. The interaction of the three findings is used the assess how competitive a given firm's product is.

The coefficient on current LIBOR shows how quickly a convert or mutual responds to a change in LIBOR. Table A3 shows the current LIBOR is significant in 7 of the 9 cases for converts, but only 5 out of 20 for non-converts. 15 of the 20 mutuals have a significant LIBOR lagged by 3 months, in contrast to only 5 of the 9 newly converted banks. Also, all the building societies have a 3 month lagged LIBOR with a significant coefficient, but only 4 of the 9 converts do. The pattern is repeated for the other products – a much higher proportion of converts have a significant current LIBOR than mutuals; it is especially pronounced for instant high, the chequing accounts and mortgages. This finding suggests that typically, the converted banks react faster to a change in LIBOR than the mutuals, which is what would be expected if the converted building societies were more concerned about satisfying shareholders.

However, other factors must be considered to complete the picture on pricing behaviour. It is important to look at the sum of the significant LIBOR coefficients (ΣL in tables A2 to A8). In the absence of a significant constant term, the closer this figure is to unity, the more competitive the product is, and firms in this category are long run non-smoothers, because given time, they adjust the deposit or mortgage rates in line with changes in LIBOR. Some firms however, react more quickly than others. A relatively low ΣL means that a FI's total response to changing market rates is small. By contrast, firms with a high ΣL show greater sensitivity to changes in LIBOR, meaning their deposit rate moves, sooner or later, in line with the market rate of interest. A significant constant term suggests a different type of pricing behaviour. It means the convert or mutual does react to a change in LIBOR, but also engages in marking up or down the deposit rate. Looking at the results in tables A2-A8, it is usually the case that there is an inverse relationship between the size of the constant term, if significant, and ΣL.

---

[13] Where the long run is defined as 3 months.

Table A3 (term low) is used to illustrate these points. From table A3, it is evident that among the converts, the Woolwich is clearly a smoother. The sum of the significant LIBOR coefficients is 0.646. Assume LIBOR is steady at 6%. The results show the Woolwich would have offered 5.66% before demutualistion, and about 5.3% a month after conversion[14]. With a change in LIBOR, deposit rates rise or fall, up to 2 months later, by less than 2/3 ($\sum L$ =.646).

Cheltenham and Gloucester, on the other hand, is not a smoother, and is sensitive to LIBOR changes. Within 3 months, this convert will respond to a change in LIBOR almost one for one. C&G has a significantly negative constant of –1.209%, but a high sum of LIBOR ($\sum L$), at .979. Therefore, up to conversion, C&G's mark down from LIBOR is steady at about 1.34%[15], and varies little over an interest rate cycle.

The Norwich and Peterborough Building Society (N&P) is an example of the general rule that the size of $\sum L$ and the constant term are negatively related. This building society's depositors do exceptionally well when rates are high or have recently been very high but badly when rates are low. With LIBOR steady at 3%, N&P's deposit rate is barely positive at 0.79%[16] and the mark down is 2.21%. An increase in LIBOR to 5% results in a jump in the deposit rate to 4.67%, with a mark down of just 1.33%.

Melton Mowbray Building Society has a significant constant term, with a coefficient of -1.2 and $\sum L$ = 0.91. Suppose current LIBOR is 5%, then, from $\sum L$, it appears Melton Mowbray is setting a deposit rate that is 91% of the competitive rate, minus 1.2%. Market Harborough Building Society exhibits a similar pattern of behaviour.

Furness and Lambeth building societies have significantly <u>positive</u> constant terms (at the 10% level), which helps to compensate for a deposit rate that hardly adjusts to the change in LIBOR, even in the long run. In the extreme, such as for cheque low (table A7), Chelsea and National & Provincial building societies' rates do not respond to a change in LIBOR. Rather it is their respective constant terms which determine the rate paid. Looking across all the deposit products, the $\sum L$ is < 0.5 for most of the

---

[14] In the absence of conversion [1/(1+MOS)] = 0. The coefficients on the constant term and $\sum L$ give an interest rate of 5.73%. One month after conversion, [1/(1+MOS)] =0.5; adjusting for months post mutualisation (0.5 * 0.858=0.43), giving a deposit rate of 5.73-0.43=5.3%

[15] With LIBOR at 6%, C& G's deposit rate = (6 *0.979)-1.209=4.665. 6%-4.665=1.335%=1.34%.

[16] [(1.23)(3%)-3.17%] = 0.79%

firms with a significantly positive constant term, though there are some exceptions among the term high and instant low deposits, where $\sum L$ can be as high as 0.7.

Looking at all the deposit products together, roughly the same proportion of mutuals and converts engage in marking up or down, and it is the exception rather than the rule for term high deposits and both cheque products. For term low and instant deposits at least a half, if not more, of the FIs had significant constant terms suggesting a considerable degree of marking up/down. Also, though it is often the same firms engaging in this type of pricing behaviour across the products, this is not always so. There is a striking variation in pricing behaviour among the banks and building societies.

Turning to the repayment mortgages (table A8), nearly all the building societies and new converts have positive and significant constant terms. The higher the coefficient on the constant term, the lower the $\sum L$ coefficient, indicating it is the norm for these firms to mark up the mortgage rate.

The time trend coefficient when significant, tends to be negative. The pooled regressions have a negative and significant coefficient on the time trend for all but two deposit products (cheque low and term high), confirming the deposit rates tended to fall over the period. For the individual firm equations, a significantly negative time trend is the norm for no-notice and term high deposits, and a much higher proportion of converts have negative signs. A minority of firms, both convert and mutuals, have significantly positive coefficients for term low, the chequing accounts, and instant low. These results are further evidence of differences in pricing behaviour over the period, and therefore, a substantial departure from what would be expected in a highly competitive market.

For the mortgage (pooled) regression, the time trend does not appear in the preferred equation. The individual regressions show a significantly negative time trend coefficient, for virtually all the converts but about half the mutuals, meaning the mortgage rate fell over the period.

Summarising the key findings so far, first, the mutuals respond to a change in LIBOR more slowly. However, there is little to distinguish between the two groups when it comes to firms using mark-ups/downs to offset their responsiveness to a change in

LIBOR. The extent of marking up or down appears to be associated with the type of product rather than the firm. But these findings confirm that the pre-1984 cartel days, when just one rate was set by all building societies, are long gone. There is strong evidence of firms adopting different pricing strategies, as shown by the variation in the size of the constant term, the speed/degree of response to a change in LIBOR, and the time trend coefficients.

3.2 Months Since Conversion

Pooling greatly increases the number of observations available for each of the products. It also permits a further test of how the number of months since a mutual converted to a bank influences pricing behaviour. This captures the idea that managerial behaviour will not necessarily change overnight; any change in the converts' culture will take time. Three non-linear functional forms were used to test this hypothesis: [1/(1+MOS)], [log (1 + MOS)], $\sqrt{MOS}$. If the coefficients are found to be significant, it would confirm that rate setting behaviour adopted in the early months of conversion diminished over time. A linear version is also tested; if significant it would indicate there is no change the way interest rates are set over the period.

Referring to the MOS columns in tables A2 through A8, one of the concave specifications generally outperformed the linear version. In the pooled regression, the functional form of [1/(1+MOS)] is significant and did better than the other specifications for all the products but cheque low[17]. A rectangular hyperbola, it is convex and decreasing in the months since conversion. The term is really an expanded dummy: unity for pre and non-converts, and tending to zero for banks which converted a very long time ago, such as Abbey National. Its significance implies a straightforward conversion path during the transition, capturing the idea that most of the effect of the conversion shows up early on, to be followed by ever diminishing subsequent effects. The variable has a value of one for mutuals and pre-converts, but post conversion, it declines to ½ after one month, 1/3 after 2 months, ¼ after 3 months and so on, falling asymptotically to zero. Thus, over 90% of the adjustment to the long run rate occurs within a year.

The coefficient on [1/(1+MOS)] is also used to assess the overall effect of conversion on deposit and mortgage rates. Table 3 summarises how conversion has affected

---

[17] For cheque (low), the $\sqrt{MOS}$ and linear functional forms were the only ones found to be significant at the 10% and 1% levels, respectively, with coefficients of nearly 0.

rate setting behaviour. Compared to mutuals, the converts' deposit rate ends up permanently lower; mortgage rates permanently higher. For example, depositors at a convert holding a cheque high account will find that within a year of converting, there is a permanent drop of 1.1% in the deposit rate, which is 90% complete. To summarise, post-conversion, the new banks reduced their deposit rates by as much as 1.2%, and raised the mortgage rate by 0.2%.

Table 3: Conversion to Bank Status: Effect on Deposit and Loan Rates.

Product	Effect of Conversion on Rates
Term Deposit –High @25,038*	0.1% permanently lower for converts[18]
Term Deposit – Low @2504*	1.2% permanently lower for converts
Instant High @25,038*	1.2% permanently lower for converts
Instant Low @ 2504*	0.8% permanently lower for converts
Cheque High @ 3182*	1.1% permanently lower for converts
Repayment Mortgages	0.2% permanently higher for converts

* Average of the high and low deposit levels over 7 years.

3.3 Bargains and Ripoffs

The terms "bargain" and "rip-off" originate from a theoretical model developed by Salop and Stiglitz (1977). In their model, consumers face unseen information costs. Some know the distribution of prices and others don't. The former only buy bargains; the latter buy randomly. A firm can survive by charging either a low price (bargain) or a high one (rip-off). Rip-off firms stay in business provided there are enough purchases by ill-informed (or inert) consumers. Firms offering bargains profit from a higher volume of sales, because well informed customers buy their relatively cheaper product. Thus, the relative bargains and bad buys co-exist, and there is a twin-peak price distribution.

For a variety of reasons some customers are more informed than others, or some have less choice because they want to be near a bank branch. This implied inertia creates a situation which may favour the coexistence of bargains and rip-offs, and the data allow an empirical application of the Salop-Stiglitz model.

The individual firm regressions produce a mean deposit or mortgage rate for each of the mutuals and converts. To rank the converted banks and building societies, a margin was computed. For deposits the margin is defined as the mean LIBOR rate - Mean Deposit Rate (MLR – MDR); for mortgages, it is the mean LIBOR rate less Mean Mortgage Rate (MLR – MMR).

---

[18] The rate is obtained from the coefficient on the pooled [1/(1+MOS)] variable, and has been rounded.

The results are reported in tables 4 and 5. The average margin is used to classify FIs according to the number of bargain and rip-offs in each product category. A bank offers a bargain if the margin is below average; a rip-off if above average.

The size of the differences in the margins of the best bargain and worst rip-off varies considerably among the products. The difference between the best bargain and worst rip-off is just 0.51% for mortgages (table 4), rising to just over 4% for Instant-low and term-low. However, looking at the ranges alone can be misleading. For example, cheque-low has a range of just 1.17% but the margins are relatively high: varying from under 5% to just over 6%. By contrast, the best mortgage bargain has margin is 0.99%, but the margin of the worst buy is 1.48%

Ranking the average margins (see below) shows the chequing and instant accounts have the highest margins. A number of factors explain the differences in the size of the margins for each product. Most UK banks and building societies offer repayment mortgages, which are close to being risk free because it is secured by property. Customers seeking out a mortgage are more likely to be price sensitive and search out the best deal, because the investment, for the majority of buyers, is the largest they will make in a lifetime.

Table 4: Bargain and Rip-offs - Deposits

TERM LOW	MARGIN*	TERM HIGH	MARGIN
BS14	0.93	BS15	0.13
CBK8	**1.06**	**CBK9**	**0.47**
BS6	1.14	BS19	0.64
BS12	1.37	BS21	0.66
BS11	1.73	BS5	0.86
BS8	1.90	BS25	0.94
CBK6	**1.92**	BS14	1.10
BS15	1.96	BS8	1.19
BS16	2.07	BS24	1.23
BS13	2.11	BS22	1.24
BS17	2.19	BS6	1.35
<u>**AVERAGE**</u>	<u>**2.53**</u>	<u>**AVERAGE**</u>	<u>**1.35**</u>
BS7	2.53	**CBK2**	**1.37**
BS18	2.54	BS11	1.38
BS19	2.62	**CBK6**	**1.40**
BS20	2.65	**CBK4**	**1.40**
BS21	2.67	BS17	1.45
CBK3	**2.74**	**CBK8**	**1.46**
CBK1	**2.76**	**CBK7**	**1.50**
CBK4	**2.86**	BS13	1.50
BS22	2.86	**CBK3**	**1.56**
CBK2	**2.96**	BS12	1.57
BS23	3.14	BS7	1.59
CBK5	**3.24**	BS9	1.64
CBK9	**3.29**	BS20	1.66
BS9	3.85	BS16	1.75
BS24	4.13	**CBK1**	**1.81**
CBK7	**5.00**	BS24	1.83
RANGE	4.1	**RANGE**	2.12

CHEQUE LOW	MARGIN	CHEQUE HIGH	MARGIN
BS1	4.93	BS1	2.76
CBK5	5.32	<u>**AVERAGE**</u>	<u>**4.20**</u>
CBK1	5.51	BS4	4.34
<u>**AVERAGE**</u>	<u>**5.69**</u>	**CBK5**	**4.77**
CBK6	5.69	BS7	4.93
BS7	5.77	**CBK4**	**5.00**
CBK3	5.89	**CBK6**	**5.53**
BS9	5.97	**CBK1**	**5.59**
BS4	6.02	**CBK3**	**5.72**
RANGE	1.17	**RANGE**	2.96

Table 4: CONTINUED- Bargains and Rip-offs - Deposits

INSTANT LOW		INSTANT HIGH	
	MARGIN		**MARGIN**
BS4	1.51	BS4	1.51
BS7	3.14	BS3	1.89
BS11	3.23	BS2	2.27
BS13	3.32	BS8	2.42
BS2	3.40	BS11	2.53
CBK4	**3.55**	BS7	2.54
BS10	3.72	BS13	2.66
BS8	3.84	BS10	2.88
CBK8	**3.85**	**CBK4**	**3.07**
BS6	4.01	**CBK8**	**3.12**
CBK6	**4.10**	**AVERAGE**	**3.23**
AVERAGE	**4.20**	BS6	3.37
CBK3	**4.34**	BS1	3.48
CBK5	**4.35**	**CBK3**	**3.51**
BS5	4.42	BS9	3.72
BS9	4.59	**CBK5**	**3.73**
CBK9	**4.76**	**CBK6**	**3.84**
CBK2	**5.09**	**CBK9**	**3.88**
BS3	5.19	**CBK2**	**4.08**
CBK7	**5.23**	**CBK7**	**4.25**
BS1	5.26	BS5	4.25
CBK1	**5.68**	**CBK1**	**4.74**
RANGE	4.17	**RANGE**	3.23

* MARGIN = MLR - MDR
MLR: Mean LIBOR Rate; MDR: Mean Deposit Rate, 1995-2001
CBK: Converted Bank; BS: Building Society

Consumers are less likely to search out the best deal for deposit products if the sums are quite small. All FIs will take advantage of the implied consumer inertia by offering lower deposit rates, as demonstrated in the table below. Once notice has to be given, or a substantial investment is involved, the margins fall away.

Ranking of Average Margins

Cheque Low	5.29%
Cheque High	4.20%
Instant Low	4.20%
Instant High	3.23%
Term Low	2.53%
Term High	1.35%
Mortgages	1.24%

The higher the amount on deposit, the greater the competition for those funds from other sources (such as bonds, tracker funds, and individual savings accounts [ISAs]), making them more interest sensitive, thereby reducing the margins FIs can earn. Term-high has relatively small margins (the biggest is 2.25%) because at deposit levels of around £25,000[19], not only is it is competing with other savings and investment products, but notice is required for withdrawals. By contrast, margins are higher for instant and cheque accounts because there are no close substitutes for these accounts. Converted banks and some of the larger building societies are the only firms offering the chequing account, creating margins in excess of 6% for one bank.

---

[19] For term-high, the average deposit level over the 6 years is £25,038. See table A1.

Table 5: Bargains and Rip-offs – Mortgages

MORTGAGES

	MARGIN*
BS5	0.99
BS7	1.06
CBK5	**1.26**
BS8	1.26
BS11	1.30
BS3	1.30
BS6	1.31
BS2	1.32
BS4	1.33
<u>**AVERAGE**</u>	<u>**1.24**</u>
BS1	1.33
CBK4	**1.35**
CBK6	**1.36**
CBK8	**1.37**
BS10	1.38
CBK3	**1.38**
BS13	1.43
CBK1	**1.45**
CBK7	**1.46**
CBK2	**1.48**
CBK9	**1.50**
RANGE	0.510

*MARGIN = MMR - MLR
MMR: Mean Mortgage Rate; MLR: Mean LIBOR Rate, 1995-2001
CBK: Converted Bank; BS: Building Society

In tables 4 and 5, the converted building societies appear in bold. Their products are, with few exceptions, rip-offs, earning some of the highest margins in each product category. CBK3, CBK2, and CBK7 are the worst, offering no bargains in any of the product groups. CBK1, CBK9, and CBK6 each have one bargain; the CBK4 and CBK5, respectively, have 2 bargains but 5 rip-offs. CBK8 is almost evenly split with 3 bargains and two rip-offs. Another revealing statistic is the density ratio; defined as the ratio of the percentage of converts offering rip-offs to the percentage offering bargains. It varies from 1.14 for the chequing accounts[20], to 4.81 for term high. Aggregating over all the products, the ratio is 2.5; so converts offer over 53% of the rip-off products, and just over a fifth (21%) of bargains.

These observations lend support to the idea that the converts are keen to earn the highest possible spreads because they are answerable to their shareholders. The building societies offer many more bargains because they are more likely to do the best for their customers, who are their shareholders[21]. This point reinforces the findings reported in table 3, which showed that compared to mutuals, the new banks permanently raised deposit rates, and lowered loan rates.

4. Conclusion

In 1989, Abbey National was the first building society to convert to mutual status, followed by eight more between 1995 and 2000. The main purpose of this study was to assess whether the pricing behaviour of these converts was affected when profits replaced customer/shareholder utility as the maximand.

The study employed annual interest rate data (quoted at monthly frequencies) for the period 1995 to 2001, from a sample of converted building societies and mutuals. With the exception of Abbey National, some converted over the period and the rest kept their mutual status. Four products were included: term deposits, instant (no-notice) deposits, chequing accounts, and mortgages.

Most of the econometric findings indicate that stock banks became more price-sensitive post conversion, which is consistent with the expectation that the new converts became more responsive to shareholders. Converts were found to be far

---

[20] Given the small number of observations for the two chequing products, cheque low and cheque high were aggregated to arrive at a ratio of 1.14.

[21] Tables 4 and 5 show building societies offering both bargains and rip-offs. The difference is the concentration of converts in the rip-off category.

more likely to respond to a change in current LIBOR than the building societies, though there was a noticeable dispersion in all aspects of pricing behaviour for both converts and mutuals. The coefficients on the time trend showed the converts' deposit and mortgage rates were more likely to fall over the period. A regression of pooled data (across converts and mutuals) revealed that following conversion to bank status, the rates on all the convert deposit products were permanently lower; their mortgage rates permanently higher.

Applying the Salop and Stiglitiz model, all financial institutions were classified according to whether they offered bargains and rip-offs in each product category. The results showed that the new converts offered predominantly rip-off products, further evidence to support the expectation that they became more responsive to shareholders post-conversion.

References

Barnes, p. (1983), "The Consequences of Growth maximisation and Expense Preference Policies of Managers: Evidence from UK Building Societies", *Journal of Business, Finance and Accounting*, 10, 4, 521-530.

Baumol,W. (1958), "On the Theory of Oligopoly", *Economica,* 25, August, 187-98.

Boddy, M. (1980), *The Building Societies*, London: Macmillan

Boleat, M. (1982*), The Building Society Industry*, London: Allen & Unwin

British Bankers Association (2002), *Annual Abstract of Banking Statistics*, London: British Bankers Association

Building Societies Association (2000, 2001), *Annual Report*, London: Building Societies Association

Heffernan, S.A. (2002) "How do Financial Institutions Really Price their Banking Products?, *Journal of Banking and Finance,* 26,10, 1997-2016.

Valnek, T. (1999), "The Comparative Performance of Mutual Building Societies and Stock Retail Banks", *Journal of Banking and Finance,* 23, 925-938.

Williamson, O.E. (1963), "Managerial Discretion and Business Behaviour", *American Economic Review*, 53, 1032-57.

Williamson, O.E. (1971), *The Economics of Discretionary Behaviour: Managerial Objectives in the Theory of the Firm*, New Jersey: Prentice Hall.