Organizational Form, Business Strategies and the Demise of Demutualized Building Societies in the UK

RADHA K SHIWAKOTI [a]

ABDULLAH IQBAL [b]

WARWICK FUNNELL [c]

[a] Senior Lecturer in Accounting, Brunel Business School, Brunel University London, Uxbridge, UB8 3PH. UK. radha.shiwakoti@brunel.ac.uk; Telephone +44 1895 268299

[b] **Corresponding author:** Senior Lecturer in Accounting and Finance, Kent Business School, University of Kent, Chatham. UK. Phone: +44 1634 202980.

A.Iqbal@kent.ac.uk

[c] Professor of Accounting and Public Sector Accountability, Kent Business School. University of Kent, Canterbury. UK. W.N.Funnell@kent.ac.uk

Organizational Form, Business Strategies and the Demise of Demutualized Building Societies in the UK

Abstract

This paper examines and compares the performance and operating behavior of demutualized building societies (DBS) over the period of 1987-2007 relative to mutual building societies and major retail banks in the UK. We find significant differences in their operating behavior over this period and show that the operating behavior varies with the form of ownership. We also investigate the potential causes of the failure of all DBS in the UK. Our findings show significant changes in the funding and lending strategies of DBS which expose them to higher risk. We also find a strained capital formation and deteriorating capital base of DBS in the post-conversion period. Our results suggest that changes in the business model, diminished capital base and, in part, failing to get all the necessary funding from the wholesale market at the time of the financial crisis of 2007-08 contributed to the demise of a once a successful financial institution in the UK.

Abbreviations**: Demutualized Building Societies (DBS); Mutual Building Societies (MBS)**

Organizational Form, Business Strategies and the Demise of Demutualized Building Societies in the UK

1.   Introduction

Prior literature shows that the form of ownership can have a significant influence on the performance of an organization, especially a financial institution. For example, organizations with a mutual form of ownership, where the members are the owners, experience lower levels of profitability than profit maximising, privately owned organizations (see Wilson et al. (2010), O'Hara (1981)). Fama (1980) and Fama and Jensen (1983) find that this could be due to the greater potential for conflict between managers and owners in mutual organizations over the relative importance which should be given to 'social' objectives rather than to 'profit maximizing' objectives. Other studies, however, show that mutual banks are often more efficient than privately owned banks because of the disciplining effect of the actions of depositors (see for example Saunders et al. (1990)).

In the UK, mutual building societies have been the most important mutual financial institution and hold about 18 % of the total retail deposits and 22 % of the total outstanding residential mortgage loans (BSA (2017)). The unique feature of UK building societies was that initially they were established only as mutual institutions. This changed after the Building Societies Act 1986 which allowed mutual building societies to demutualize and transform themselves into the stock-form of banks. Ten of the 15 largest building societies demutualized between 1989 and 2000, transferring about 80 % of the industry's assets to the banking sector (see Table 1). Since 2000, there have been no new demutualizations. This is due to the remaining mutual building societies establishing charitable foundations where new members, from 1997, are required to relinquish their rights to conversion benefits (windfall gain) to the charitable

foundation if the building society is converted to a company or there is a take-over of the building society. The absence of further conversions[1] is also related to the small size of most of the remaining mutual building societies where a stand-alone conversion is not a realistic possibility. Although all British demutualized building societies were very large and successful while they were mutual, remarkably none of them exist today on a standalone basis.

TABLE 1 ABOUT HERE

The main objective of this paper is to establish why once successful building societies with long histories and strong brands became financially vulnerable and failed to survive when they converted to the stock-form of ownership. This occurred not only in the UK but also in the US. For example, in the US the largest demutualized savings and loan association, Washington Mutual, also collapsed in 2008. Much of the previous research concerning the demutualization of building societies in Britain has focused mainly on the most prominent examples of failure, notably the demise of Northern Rock, rather than demutualized building societies as an entire group (see, for example, Eisenbeis and Kaufman (2009), Shin (2009), Marshall et al. (2011), Branston et al. (2009)). Klimecki and Willmott (2009, p. 120) used discursive analysis to examine changes in the business models of two demutualized societies, Northern Rock and Bradford & Bingley, 'in the context of the neoliberal expansion of the financial sector'. Prior research mainly focuses on causes, motives and the process of demutualization (see, Stephens (2001), Tayler (2003), Martin and Turner (2000)). One particular objective of this paper is to examine the interplay among strategy (particularly funding and lending strategies), ownership form, and performance from 1987 to 2007 of mutual

---

[1] In this study, 'demutualization' and 'conversion' are used interchangeably.

building societies, demutualized building societies, and retail banks.[2] The performance and strategic decisions of demutualized building societies, both prior and subsequent to adopting the new form of ownership, are compared to, and contrasted with, building societies which remain mutual and with retail banks to gauge differences in their behaviour and any subsequent changes in their behaviour after demutualization.

This paper extends the literature in several ways. First, this study covers the total population of demutualized building societies in the UK. Second, we investigate UK building societies which have unique features compared to savings and loans associations or the insurance industry where mutual and stock firms co-exist. Third, we investigate whether the form of ownership has an impact on the performance and efficiency of demutualized building societies for which we compare their pre- and post-demutualization performance. In addition, we compare the performance of demutualised building societies with (a) building societies which remain mutual and (b) with major UK retail banks.[3] Fourth, this study provides further evidence about the relationship between ownership, performance (and/or efficiency), and risk taking behaviour of financial institutions. Prior literature on the form of ownership and performance (efficiency) has produced contradictory results. For example, O'Hara (1981) finds that mutual firms are less efficient than stock firms. Similarly, Erhemjamts and Leverty (2010) report improved operational efficiency after demutualization in their study of demutualised life insurers in the US between 1995 and 2004. However, Jeng et al. (2007) do not find improved performance after demutualization of life

---

[2] Other than Abbey National, all building societies demutualized in or after 1995.

[3] It is to be noted that UK banking sector is highly concentrated and dominated by a few very large banks. Drake and Simper (2003) consider that market shares of UK banks are oligopolistic. Matthews et al. (2007) report the monopolistic competition in British banking and confirm that competition remained the same despite the conversion of building societies. During the financial crisis, the term 'Too big to fail' was used for major British banks. Since the financial crisis, the UK government has introduced several reforms and issued new banking licences for the first time in a century and several challenger banks are emerging in recent years (for details, see, Casu and Gall (2016)).

insurance firms which had demutualized before 1995. This study of the demutualization of UK building societies, all of which subsequently failed, therefore provides the means to understand these very different findings about the relationship between the form of ownership and performance by broadening the context from the US to the UK. Finally, the study sheds light on the potential reasons why once successful building societies failed to survive after converting to the stock-form of ownership.

The paper offers a brief history of building societies and their demutualization in Section 2. Section 3 discusses the theoretical background. Sections 4 and 5 outlines data, variables, and research methods. Section 6 reports empirical results on the relationship among strategy, performance, and form of ownership for demutualized societies, mutual societies and banks. Section 7 provides concluding comments.

2. UK building societies and demutualization

Building societies originated in the UK in the late 18th century when a small group of highly paid workers pooled their savings to buy houses for each member, after which their association was terminated. By the 1840s similar associations had begun to accept savings from a wide range of members who were not investing for the purpose of buying houses for themselves and by 1845 the first permanent building society was established. Gradually these local building societies disappeared and developed as regional and national organizations. Despite this growth, for over 100 years UK building societies retained their mutual identity while in other countries, most notably in the US, both mutual and stock savings and loans associations, similar to building societies, co-existed.

In the US, the pace of demutualizations increased significantly in the savings and loans industry in the 1980s and early 1990s. Esty (1997a, p.26) reports that by the early 1980s savings and loan regulators in the US were arguing that organizational form had a major

6

impact on a firm's performance and 'based on these beliefs, the regulators encouraged mutual-to-stock conversions'. Esty (1997a, p. 60) further suggests that failing mutual thrifts were forced 'to convert to stock ownership to facilitate mergers with healthy stock thrift'. In contrast, in the UK, when demutualization was permitted after 1986, only successful, profitable, and large building societies converted to the stock-form of ownership. These demutualizations, other than that of Bradford and Bingley, were initiated internally by the managers, not by government regulators as had been the case in the US, and approved by the members who owned the building societies.

The UK building societies compete in the same market as banks with similar products and services. However, unlike the banking sector the operational flexibility of mutual building societies is restricted, most especially the purposes for which lending is permitted.[4] For example, Llewellyn and Holmes (1991) report that other than the UK, mutual institutions in several countries have no restrictions and are free to engage in any banking business. This is further confirmed by Garcia-Marco and Robles-Fernandez (2008, p. 336) where they report that in Spain commercial banks and savings banks, the latter operating in markets similar to UK building societies, compete in the same products and there is no legal restriction on their lending. These clearly show the distinctive features of UK building societies with comparable firms in the US and European countries.

3.   Theoretical background and motivation

Extant literature offers a number of explanations as to why firms change their form of ownership. For example, Jensen and Meckling (1976) show that when economic

---

[4] The Building Societies Act requires that at least 75 % of building society assets must be loans fully secured on residential property and 50 % of the funds must be raised from the individual members (retail depositors) of the society. Although the Butterfill Act 2007 allows the Treasury to increase the limit of building societies' funding to up to 75 % from wholesale markets, this has yet to be implemented.

efficiencies are to be achieved, organizational change takes place. San-Jose et al. (2014) find efficiency as a reason to change in the Spanish banking system. However, Cowling and Sugden (1998) consider that the efficiency approach is incompatible with the modern big corporation and offer instead a strategic decision making approach 'as important for distinguishing the essence of the modern large corporation' (p. 59). Mayers and Smith (1986) discuss the possibility of expropriation in organizational change. Erhemjamts and Leverty (2010) investigate the US life insurance industry and find that operational efficiency is one of the important determinants of organizational change and show that it improves after demutualization. Cole and Mehran (1998, p. 291), using a sample of demutualized US thrift institutions, also conclude that 'after conversion and the expiration of ownership-structure restrictions, firm performance improves significantly'. They argue that restrictions harm a company's performance because it prevents them from choosing an optimal structure. Demirguc-Kunt and Huizinga (2010) also provide a similar type of explanation where they argue that differences in asset-mix could impact an institution. These findings are particularly important for this study with the restrictions on the types of funding and lending permitted for UK mutual building societies.

Another explanation for changing the form of ownership refers to risk taking behaviour. For example, Esty (1997b) finds that organizational form has an impact on risk-taking behaviour of financial institutions with stock-form institutions having more incentive to take risk than mutually-owned savings and loans associations. Lack of capital market discipline is another reason explored in the literature to explain the differences in operations of different forms of organizations (see Altunbas et al. (2001), Llewellyn and Holmes (1991)), given that mutual firms face little pressure from the market and are less efficient than the stock-form of banks. These aspects also highlight that UK

building societies are unique in their operations as compared to similar types of organizational forms elsewhere as well as retail banks in the UK. By examining the operating behaviour of demutualized building societies in comparison to those which retained their mutual status and retail banks, this study seeks to answer the following questions:

i.   What made successful financial institutions so vulnerable once they changed their form of ownership?

ii.   Did demutualized societies change their funding and lending strategies and did this play a role in their demise?

iii. Does the organizational form affect investment and funding strategies?

iv.   Does the form of ownership have an impact on the performance of a firm?

4.   Data and variables

The sample consists of all ten demutualized building societies (DBS) in the UK that either floated on the London Stock Exchange or were taken over by other demutualized societies and retail banks. Table 1 (Panel A) shows that six of these DBS were floated on the stock market while the remaining four were taken over by other DBS or retail banks. Of the societies which floated, Woolwich was bought by Barclays plc in 2000 and Abbey National by the Spanish bank, Santander, in 2004. One DBS, Northern Rock, was the first major financial institution in the UK to be brought to the brink of collapse, and subsequently nationalised by the British Government in February 2008. Another large DBS, Halifax, merged with the Bank of Scotland in 2001 to form Halifax Bank of Scotland (HBOS). During the financial crisis of 2007-08, HBOS was threatened with closure and was taken over by Lloyds TSB in January 2009. This take-over was encouraged by the government to avoid another nationalisation and it came after Santander's takeover of Bradford and Bingley (the last building society to

demutualize) in September 2008. Alliance and Leicester was also taken over by Santander at the peak of the financial crisis in late 2008. This study also encompasses the ten largest building societies which remain mutual (MBS)[5] and seven major UK retail banks (Banks) that continue to operate[6] (see Table 1, Panel B for list of MBS and Banks).

This study covers a period of 21 years between 1987 and 2007. This period has been chosen for two reasons. First, Haynes and Thompson (1999, p. 844) notes that 'since 1987, the UK building societies have been in direct competition with for-profit rivals and have had the option of demutualizing to become commercial banks'. Second, the first demutualization took place in 1989 and at least two years of data is needed to compare pre- and post-demutualization performance (Esty, 1997b). Thus, the study period covers two years before the first demutualization of a building society in 1989 and ends when the financial crisis began in 2007. This was just before the run on the Northern Rock Bank, a DBS, and partial nationalisation of Bradford and Bingley. Most of the financial data is acquired from 'thedata ltd[7], a commercial data provider company.

Variables were chosen for the study which are considered as the main reasons/determinants for demutualization by DBSs in the UK in their transfer documents and elsewhere in the conversion from of mutual to stock-form of

---

[5] Since mid-1980s, competition increased between the building societies; and banks also entered into the mortgage market. This led to a wave of mergers among building societies and the concentration of their assets. In 2007-08, the ten largest building societies considered in this study (Table 1, Panel B) shared just over 85% of building societies' assets and 74% of branches (BSA, key statistics, 2007/08).

[6] In the UK, it is very common to compare and report performance of only major banks. For example, the Bank of England regularly reports major UK banks in their Financial Stability Report. KPMG also reports the performance of major banks in their annual UK banks performance benchmarking report. KPMG reports performance of building societies in different peer groups because of the big differences in the size of the building societies. Matthews et al. (2007) also studied major British banks.

[7] 'thedata ltd' has become suppliers of software to the financial services industry and do not collect and provide financial data anymore.

organization. The reasons cited by the UK demutualized firms were: greater access to capital, less restrictive regulatory regime, greater freedom to compete with the banks and their desire for more flexibility in the operation of business to allow them to diversify their business beyond mainly lending for residential mortgages and relying on retail deposits for their funding.[8] These are also considered as the determinants of demutualization in prior studies of US savings and loan associations (see for example, Masulis, 1987). Overall, the variables used in the analysis are grouped under: profitability, growth, operating efficiency, funding and lending, and risk exposure. These are discussed here and also defined in Appendix I.

4.1 Measures of profitability

Profitability is measured using: (a) return on assets (ROA); (b) profit growth before and after tax (PBT and PAT); (c) return on equity (ROE); (d) gross yield (GY); and (e) net interest margin (NITM). ROA is computed from total income minus total operating expenses divided by total assets. Profit growth is profit for the current year minus profit in the previous year divided by profit in the previous year. ROE is the ratio of profit before tax, including extraordinary expenses to total equity and reserves. GY is the ratio of total interest and similar income divided by interest earning assets while NITM is the ratio of net interest receivable divided by interest earning assets.

4.2 Measures of growth

While growth is important for all types of organizations, DBSs have more growth potential than MBSs because of their ability to raise equity capital from the market when they need additional capital.[9] Growth is measured as: (a) asset growth (asstgro),

---

[8] Discussion on restrictions imposed on building societies in their operation are discussed on p6. Please see Stephens (2001), Taylor (2003), Shiwakoti et al. (2008) for details of the reasons/motives for demutualization in the UK in detail.

[9] It may be worth noting that building societies have only limited access to capital. As a mutual society, their shares are not marketable and there are no outside shareholders. A common method of raising

which is computed using current year's assets less last year's assets divided by last year's assets; (b) diversification associated with growth, measured by increases in total other income (TOIinc); and (c) the ratio of total other income to total income (TOITI). TOITI is important as the housing crisis and recession in the early 1990s forced many societies to diversify their operation rather than just relying on the mortgage market (interest income). The Building Societies Act 1986 allowed building societies to diversify into non-traditional areas of business. However, the Act offered them less operational flexibility than that of banks which is expected to be overcome when they have the ability to diversify their operations after demutualization. The means by which different institutions increase their capital is measured by the ratio of profit transferred to reserves divided by total equity and reserves, excluding subordinated debt, defined here as capital formation (CF). After demutualization, these societies become owned by outside shareholders to whom they are expected to pay dividends, thereby creating the possibility of a deterioration in CF. Alternatively, they could increase their risk portfolio to increase their profit and maintain or increase their capital base. Mutual building societies remain owned by members and, thus, they do not pay dividends with all profits transferred to reserve.

4.3   Measures of operating efficiency

As noted earlier, one of the motivations for change in the form of ownership is to increase operating efficiency. This is measured by (a) the management expense ratio (Mgtexp), computed from total operating expenses divided by total assets, and (b) the

---

finance is by issuing permanent interest bearing shares (PIBS). In 2010, HM Treasury produced a discussion paper on building society capital and related issues followed by an All-Party Parliamentary Group inquiry for Building Societies & Financial Mutuals (July 2011). Gaining access to capital was one of the reasons given by demutualized societies for changing their organizational form.

cost to income ratio (costi), which is the ratio of total operating expenses divided by total income where cost of funding is deducted.

4.4   Measures of risk

The relationship between risk and the form of ownership continues to be a prominent concern of studies of ownership. As measures of risk the present study uses: (a) loan-loss write-off (DWOCA); (b) yearly provision for doubtful debts (PROCA); (c) net worth ratio (NWrat); and (d) core capital (CC). The first two ratios indicates the risk exposure and quality of assets. DWOCA is debts written-off during the year divided by total commercial assets. Commercial assets are used rather than total assets because provision-for and writing-off of debts are related to commercial assets. PROCA is the ratio of provision for doubtful debts to commercial assets and measures the riskiness of assets undertaken by the firm during the year. NWrat is included in the study for comparison with previous studies in the US where one of the objectives in the US for allowing conversion of savings and loans associations was to increase net worth of the company (see Esty 1997b). With demutualized firms able to issue new equity capital, it is expected that the core capital ratio (CC) should increase after demutualization. Access to equity capital was one of the main reasons motivating the move from mutual to stock-form of ownership. Capital ratio is particularly important for financial institutions, with its importance increasing after the recent financial crisis. There is a continuing debate about how much capital financial institutions should hold to avoid another financial crisis. This study uses total equity and reserve divided by total assets instead of regulatory capital to measure the capital ratios. Beltratti and Stulz (2012) argue that capital markets consider this ratio to be more important than regulatory capital ratio.

4.5 Measures of funding and lending

Lending strategy is captured by the ratio of loans for residential mortgages to total commercial assets (resCA). This ratio gives an indication of changes in asset composition. Funding strategy is captured by the ratio of the percentage of retail funding and deposits to total share deposits and loans (RFPSDL). This ratio indicates the composition of liabilities and changes in these over the period examined. Changes in funding strategy will have an impact on the cost of funding (costfund) which is captured by the ratio of cost of funding (total interest and similar charges plus fees and commission payable and other charges) divided by total share deposits and loans. Finally, we also report loan-to-deposit ratios of sample firms.

5. Methodology

Our sample includes three sub-groups: ten demutualized building societies (DBS), ten mutual building societies (MBS), and seven banks (Banks), belonging to the same industry (i.e. banking) (see Table 1). Each DBS is matched with an MBS and a Bank to make our treatment (DBS) and control groups (MBS and Banks) more comparable and to minimise the potential effect of omitted variables on our results. We use ROA (our main performance measure variable) of each DBS in the year before demutualisation to match with an equivalent MBS and Bank. This approach is similar to Barber and Lyon (1996) and Kothari et al. (2005). We report both mean and median values of each sub-group's profitability, growth, operating efficiency, risk exposure, and funding and lending characteristics in relevant tables but draw our conclusions based on medians.

To determine what caused changes in the operating behaviour of DBSs, the sample period is divided into pre- and post-conversion (or demutualization) sub-periods, with

conversion year as year zero, and perform the following comparisons.[10] First, we compare the performance of DBSs from three years before to three years after conversion, which is more meaningful than just comparing the year-on-year performance of the DBS sample. Next, we compare the performance of DBS with those of MBS and Banks in both the pre- and post-conversion sub-periods. For this a three-year window is used for pre-conversion period and three and five year windows for post-conversion period. This helps in assessing the impact of changing status on the operating behaviour of DBS, MBS and Banks. The Wilcoxon-Mann-Whitney (WMW) test is used to examine if different variables (under each category) for DBS are significantly different from those for mutuals (MBS) and Banks and across the two (pre and post) sub-periods.

In accordance with earlier studies (for example, Esty (1997b), Valnek (1999), and Dietrich and Wanzenried (2011)), regression analysis is performed to determine which specific form of ownership perform better, using both profitability (ROA - return on assets) and efficiency (costi - cost to income ratio) measures as the dependent variables. Following prior studies, ROA is used to measure profitability (see for example, Esty (1997b)) and costi ratio to measure efficiency (see Mesa et al. (2014)). Financial institutions also regularly report cost to income ratio (costi) in their financial highlight in the annual reports and accounts. Consistent with Esty (1997b) and Valnek (1999), the following model is used:

---

[10] The pre- and post-conversion years are different for different firms because DBSs demutualized in different years. Please refer to Table 1 for the year of demutualization and list of DBSs.

$$ROA_{it} \text{ or } costi_{it} = \gamma_1 DBSdum + \gamma_2 Bankdum + \beta_1 Prpodum + \beta_2 Lnta_{it} + \beta_3 TOITI_{it} +$$

$$\beta_4 resCA_{it} + \beta_5 RFPSDL_{it} + \beta_6 Prpodum*DBSdum + \beta_7 Prpodum*Bankdum +$$

$$\beta_8 Prpodum*Lnta_{it} + \beta_9 Prpodum*TOITI_{it} + \beta_{10} Prpodum*resCA_{it} +$$

$$\beta_{11} Prpodum*RFPSDL_{it} + \delta_t Year\ Dummies_t + \beta_0 + \varepsilon_{it}$$

Here, in each Least Square Dummy Variable (LSDV) regression, ROA is the return on assets, costi is the ratio of total operating expenses to total income minus cost of funding, and i and t represent sample firm and year. To differentiate among the three types of firms in our sample, we cluster the data around DBS, MBS and Banks and use two dummies, DBSdum and Bankdum. DBSdum takes value of one for demutualized firms (DBS) and zero for MBS and Banks over the full sample period. Bankdum takes the value of one for banks and zero for DBS and MBS. Prpodum is also a dummy variable representing pre- (a value of zero) and post- (a value of one) demutualization period. The natural log of total assets (lnta) is included in the model to control for size (Esty 1997b) due to the differences in the sizes (total assets) of DBS, MBS and Banks. For example, during the sample period average total assets of sample DBS, MBS, and Banks are £58 billion, £12 billion, and £300 billion, respectively.[11] To control for diversification, TOITI is included in the model. Given the differences in the product-mix of DBS, MBS, and Banks, their relevant lending (resCA) and funding (RFPSDL) characteristics (representing their business models) are included in the regression. All the independent variables are interacted with Prpodum to control for cross-section heterogeneity and to test whether the relevant type of firm/characteristics affect performance (profitability or efficiency as the case may be) in the post-demutualization

---

[11] All six demutualized firms, which floated on London Stock Exchange were in FTSE 100 constituents at the time of their demise. Out of these six, Abbey National, Alliance & Leicester, Halifax and Woolwich became the constituents of FTSE 100 at the time of flotation and Northern Rock and Bradford & Bingley joined FTSE 100 in 2001 and 2002, respectively.

period. In addition, Prpodum is used to interact with each group dummy to assess whether the performance/efficiency improve in the post conversion period. The model also includes year dummies to control for cyclical/time effects but for brevity their coefficients (δ_t) are not reported. γ_{1-2} are coefficients of group dummies, β_{1-11} represent coefficients of relevant variables for each firm i, β_0 is the intercept and ε_{it} is the error term.

6.   Results and discussion

6.1   Univariate results

Descriptive statistics of different variables for all three groups of firms over the full sample period are presented in Table 2. It shows that DBS have higher ROA and Banks have higher ROE. MBS exposure to different risk measures is lower than those for DBS and Banks. Banks have the lowest rate of capital formation and have both higher management expenses and cost to income ratios. MBS has higher net worth and core capital.

<div align="center">TABLE 2 ABOUT HERE</div>

Lending (resCA) and funding (RFPSDL) measures show that there are differences in product-mix and business structures across the three forms of businesses. The Table shows that the lending model of both DBS and MBS are similar, lending primarily for residential mortgages (more than 90 %). This ratio for Banks is only about 25 %. As expected, Banks are less reliant on retail funding and are more diversified compared to both DBS and MBS. For example, approximately 26 % of Banks' income is generated from non-interest income, a finding which is similar to that of Demirguc-Kunt and Huizinga (2010) for an international sample of commercial banks. This percentage for DBS and MBS is much lower at about 10 and 8, respectively. DBS also has the highest average cost of funding of about 7 %. The business model adopted by DBS appears

more risky than that adopted by Banks and MBS. Demutualized societies became more fragile by increasing their reliance on more volatile non-retail funds. Thus, these results clearly show that in many aspects demutualized societies look different from mutual building societies and that they increasingly look similar to banks in their operating behaviour. However, especially large standard deviations in funding, lending, and capital formation measures suggest differences within the DBS group.

6.2   DBS before and after conversion

Table 3 shows the operating behaviour of DBS in the pre- (three years before) and post- (three years after) conversion period. The WMW test shows that most of the variables used to compare the changes in operating behaviour before and after demutualization of DBS are not significantly different from each other with a few exceptions. For example, ROE and total other income to total income (TOITI) ratio show significant increases coupled with significant decreases in net interest margin, debt write-offs, capital formation, and net worth ratio. However, it is not surprising to observe a significantly higher ROE in the post demutualization period, that is late- 1990s onwards, as stock form of companies are under pressure to meet expectations of shareholder returns. A degree of caution is necessary while interpreting decreases in net interest margin and debt write-offs for in the early 1990s interest rates were very high in the UK and there was a crisis in the housing market. These economic conditions, leading to higher interest margins and higher written-offs in the pre-conversion period, started to ease off in the mid-1990s. Additionally, significant changes can be seen in the business model. For example, DBS are relying less on retail funds and deposits and also lending less in residential mortgages after demutualization. That said, the magnitude of the change in funding model is more vivid than in the lending model, although this change has little effect on cost of funding of DBS.

TABLE 3 ABOUT HERE.

6.3 DBS vs. MBS and Banks, pre-conversion (the pre-demutualization period)

Table 4, Panel A (columns 8 and 9) shows some significant differences in the operating behaviour between DBS and MBS and between DBS and Banks in the pre-conversion period.[12] It shows that converted societies (DBS) are more diversified compared to the societies which remain mutual (MBS). For example, the median of total other income to total income (TOITI) for DBS is 7.96 and for MBS is 6.02 and the difference is significant at the 1% level. Despite most of MBSs being smaller when compared to DBS, no significant differences can be seen in their lending (resCA) strategy with both groups lending more than 93% in residential mortgages. However, their funding strategy (RFPSDL) appears significantly different, where MBS relies more (79%) on retail funds and deposits than the DBS firms (75%).

Interestingly, building societies which remain mutual were exposed to higher risk and made more provisions for bad and doubtful debts (PROCA), although this difference was insignificant. It is worth noting here that between 1988 and 1991 mortgage arrears and repossessions[13] increased significantly in the UK, coinciding with a period of recession[14] when risk exposure increased dramatically for both mutual and demutualized societies. This is consistent with, for example, Wilson et al. (2010, p. 163) who suggest that 'provisioning for loan-losses varies with the business cycle'. Both provision and debt written-off ratios clearly show that MBS are affected more from this crisis. This is not surprising as Murphy and Salandro (1997, p. 19) in the US

---

[12] We only report some of the main results here. Please refer to Appendix II for full set of results for all variables/measures during the three years pre-conversion (Panel A), and three (Panel B) and five years (Panel C) post-conversion periods.

[13] See Bramley, G. (1994) for details of the housing crisis in the UK in the early 1990s.

[14] See Pain, D. (2003) for factors affecting provision for loan losses of the major UK banks, including demutualized building societies.

also find that 'cyclical decline in property values resulted in a decline in the credit quality of loan portfolios with a substantially greater impact on those savings banks that converted from mutual to stock status'. No differences are found in the efficiency measured by management expense. In addition, most of the measures reported in Table 4 (Panel A) and Appendix II (Panel A) are broadly similar, suggesting that no major differences are present between DBS and MBS in the pre-conversion period.

The comparison between DBS and Banks (column 9) shows they are very different in most of the characteristics other than the growth variables.[15] For example, DBS are investing largely in residential properties and relying more on retail deposits. However, Banks are more diversified and have significantly higher ROE and the lowest cost of funding amongst the three groups. Overall, this comparison and the results in column 10 (MBS vs Banks) highlight that the operating behaviour of DBS and MBS is quite different from that of the Banks.

<div align="center">TABLE 4 ABOUT HERE</div>

6.4 DBS vs. MBS and Banks, post-conversion (the post-demutualization period)

Table 4, (Panel B) column 8 (DBS vs. MBS) and column 9 (DBS vs. Banks) reports the operating behaviour over three years after demutualization. It shows that in this short period after conversion, the operating behaviour of DBS significantly widened as compared to that of MBS across most of the measures. For example, median ROE of DBS (26.02) almost doubled that of MBS (13.63), which could be explained by the stock form of organization having pressure from the shareholders to meet shareholder return expectations. As expected, net interest margin also widened for DBS as compared to that for their MBS counterparts, possibly due to the abolition of

---

[15] Please refer to Appendix II (Panel A) for full set of results during the three pre-conversion years.

preferential interest rate given to members compared to standard rate offered by the banks[16]. This is consistent with Heffernan (2005) for the period 1995-2001 where she also reports the highest interest margins on most of the products offered by demutualized societies compared to mutual societies.

Results show that DBS are also taking significantly higher risk (PROCA) compared to MBS. This is in complete contrast to their behaviour in the pre-conversion period, indicating that the stock-form (demutualisation) of ownership leads to taking higher risks. This is consistent with Esty (1997b, p.25) where he notes that 'conversions from mutual to stock ownership are associated with increased investment in risky assets ...'. Pain (2003) also reports that changes in the composition of loan portfolio will impact the banks' loan-loss provisions. He further reports that higher lending to riskier sectors generally increases loan-loss provisions. Investigating the UK unit trusts, Shinozawa (2007) also finds that the mutual firms are more risk-averse than the stock-form of ownership and suggests that risk exposure differs between the two different organizational groups. Similarly, Hoggarth and Pain (2002, p. 116) consider that 'provisions are typically one of the first quantitative indicators of a deterioration in the loan quality and, at the same time, a key contributor to fluctuations in bank earnings and capital'. Wilson et al. (2010) also provide a similar explanation and suggest that 'loan-loss provisions are directly linked to a financial institution's current loan portfolio'. Our results also show that DBS are accumulating bad quality assets (DWOCA) in their portfolio within this short period after demutualization. This is further supported by significant changes in their lending policy measured by lending for residential properties (resCA) during this period. MBS are consistently lending over

---

[16] We are grateful to reviewers for providing these possible explanations.

95% of their loans in residential mortgages but this percentage for DBS falls to 91% three years after their demutualization.

Consistent with the changes in lending, stark changes can be seen in the funding strategy. The funding model of DBS and MBS is significantly different from the period when both groups were mutual societies, with DBS relying more on wholesale funding. Reliance on retail funding (median RFPSDL) by demutualized societies in this post-conversion period is 69%, substantially down from about 75% before conversion, which is very similar to that for Banks (at about 68%). Speight and Parkinson (2003) argue that the increased use of wholesale funding in recent years is a result of the rapid growth in customer lending rather than growth in their customer deposits. In addition, they argue that UK households are borrowing more from banks and building societies resulting in a slow increase in retail deposits and an increased use of wholesale markets to fund such growth. Some other possible reasons for increased use of wholesale funding are a fall in the savings rate and the removal of quantitative limits on mortgage and other consumer borrowing.[17] These results are also consistent with DBS and MBS increasing their loan-to-deposit ratios (LntoDep) during this period.

Capital formation (CF) deteriorated in this period (See Appendix II, Panel B) for both DBS and MBS, with MBS maintaining slightly higher values for this measure. The recent financial crisis has further emphasised the importance of higher capital for banks and financial institutions to minimise the impact of losses. Findings from this study show that MBS have a consistently higher capital base (CC) than both DBS and Banks. Ayadi et al. (2010) also find consistently higher capital levels for cooperative banks compared to commercial banks in Germany and argue that this is one of the reasons

---

[17] We are grateful to reviewers for providing these possible explanations.

why most of the cooperative banks were less affected by the financial crisis. DBS also appear more diversified (TOITI) than MBS, with Banks being more diversified than the other two groups. This is consistent with prior studies (see, for example, Hadaway and Hadaway (1981), Mester (1993), and Valnek (1999)). Similarly, management-expense ratio, one of the measures of efficiency, significantly widened between DBS and MBS in this post-conversion period. This might be the result of higher remuneration paid to DBS directors after the conversion. Examining the causes of the conversion of UK building societies, Shiwakoti et al. (2004) report large increases in remuneration of chief executives and directors and conclude that the potential for directors to enhance their remuneration was one of the major driving factors behind the conversion of building societies. In US savings and loan conversion, Masulis (1987) also reported large wealth gains to management after conversion.

The operating behaviour of Banks (Table 4 Panel B, columns 9 and 10) show that they are taking more risks than both the other groups (DBS and MBS). However, both the funding and lending models of Banks seem consistent with those of DBS. Overall, the results show that during the three years after conversion, the behaviour of DBS has started to diverge from MBS while it has started to converge with Banks.[18,19]

We also show changes in key variables over a longer period (−3 to +10 years) between DBS and MBS in Figure 1, DBS and Banks in Figure 2, and MBS and Banks in Figure 3. Figure 1 clearly shows that DBS and MBS have been on diverging paths in their operation after the demutualization.

---

[18] Please refer to Appendix II, Panel B for full set of results over three-year post-conversion period.

[19] When the examining window is extended to a five-year post-conversion period (as reported in Appendix II, Panel C), the differences in the operating behaviour of DBS widen further in comparison with MBS. Other results are similar to those reported for the three-year post-conversion window. However, the magnitude of differences increased over this period.

FIGURES 1 TO 3 ABOUT HERE

The above discussion indicates that there are clear differences in the business model of DBS. For example, Banks are offering just over 22% of their lending to residential mortgages (resCA) but this figure is about 89% for DBS. Surprisingly, DBS are indifferent on their funding model (RFPSDL) with the Banks, Banks appear significantly more diversified (TOITI) than DBS. In addition, DBS became the least capitalised group within the five years after demutualization (see Appendix II, Panel C). Overall, results show that Banks are better in adopting a business model that suits them and are better capitalised than those of their DBS counterparts. These results show that DBS are increasingly looking similar to banks and, thus, organizational form could be seen to affect business strategies. For example, DBS changed their business model (i.e. their funding and lending strategies) and increasingly started to behave more like retail banks after demutualization. Similarly, DBS are increasingly and significantly becoming more diversified than MBS but the extent of this diversification is moderate compared to Banks.

Overall, it seems that the funding strategy played a significant role in the demise of demutualized societies, particularly around the time of the financial crisis when most of DBS could not survive as independent firms. As discussed above, the shift in operating behaviour between DBS and MBS is quite remarkable even over a shorter post-conversion period. Although these results provide support to the proposition that DBS began to behave differently from that of MBS soon after demutualization, further tests performed are reported in the next sub-section.[20]

---

[20] We also match DBS with MBS using cost to income (costi) ratio in the year before demutualization and compare the performance of these two groups across all characteristics (result not reported for brevity) in both pre- and post-demutualization periods. However the results largely remain qualitatively similar to ROA-based matching, as reported in sub-sections 6.2 and 6.3.

6.5   Performance and form of ownership

Extant empirical literature on the impact of form of ownership on firm performance shows mixed results. Jensen and Meckling (1976) and Fama and Jensen (1983) suggest that mutual organizations, which are owned by members and have diffused ownership, result in weak control by owners over management. This leads to a lack of capital market discipline resulting in fewer incentives to improve efficiency. This is confirmed by Chaddad and Cook (2004) for the US demutualization of savings and loan and insurance industries. They report that demutualization generally enhances efficiency. McNamara and Rhee (1992, p. 236) also support enhanced efficiency 'as the justification and result of demutualization'. Others (see, for example, Mester 1993), however, suggest that mutual firms are more efficient in their operations. Casu and Girardone (2009) also find mutual firms being more efficient in Europe. In the UK, Valnek (1999, p. 936) reports superior performance of mutual building societies over retail banks and suggests that 'the benefits of mutual organizations have outweighed the benefits of stock organizations'.

Table 5 reports regression results. In the LDSV (least square dummy variable) regression model, both profitability and efficiency measures are used as dependent variables. Profitability is represented by return on assets (ROA) and efficiency by cost to income (costi) ratio. We begin analysis with ROA as an indicator variable for form of ownership (DBSdum, value of 1 for DBS and 0 for MBS and Banks), Bankdum (value of 1 for Banks and 0 for DBS and MBS); a dummy variable for pre- (value of 0) and post- (value of 1) conversion period (Prpodum), and a number of explanatory and control variables as discussed in Section 4. In the analysis, group dummies and all independent variables are interacted with Prpodum to model cross-sectional heterogeneity and year dummies are included to control the impact of time.

TABLE 5 ABOUT HERE

Regression with ROA as dependent variable shows that the demutualization dummy (DBSdum) is positive but insignificant, suggesting that DBS performance is indifferent from MBS and Banks over the full sample period. In addition, pre-post dummy (Prpodum) is also positive and insignificant. However, the interaction of DBSdum with Prpodum is positive and significant, suggesting that DBS experience superior performance in the post-conversion period. Untabulated results show that all year dummies after 1991 are negative and significant (except 1991), indicating deteriorating performance over time. Results for independent and control variables show that only the variable for lending (resCA) is positively and significantly contributing to profitability. The other three control and independent variables are negative but only funding variable (RFPSDL) has negative and significant impact on performance. Overall, the above result confirms that DBS have higher ROA but once controlled for conversion and time effects, their ROA decreases suggesting that demutualization is not rewarding and performance deteriorates after conversion. The overall impact of size on ROA is negative and both negative and significant in the post-conversion period based on its interaction with Prpodum. This is not surprising as Esty (1997b) and Carhill and Hasan (1997) also document negative and significant coefficient of size variable in their studies of US savings and loan association, which are similar in nature to building societies in the UK. The interaction of lending (resCA) and funding policies (RFPSDL) with Prpodum also show significant changes. For example, lending to residential mortgage has a marginally negative impact whereas the use of wholesale funds has a significant positive impact on profitability in the post-conversion period. Results also show no significant changes in the non-interest income in the post-conversion period.

The ROA-regression model has an adjusted R-squared of 68%, which is much higher than those reported in earlier studies (see Esty (1997b), Shinozawa (2007)).

In the second regression (columns 5 to 7), profitability variable (ROA) is replaced with efficiency variable, the cost to income (costi) ratio. Referring to previous literature, Halkos and Salamouris (2004) report that simple cost to income ratio estimates the efficiency of banks. The results of this study show that Prpodum is negative but insignificant suggesting no significant changes in efficiency after conversion. Similarly, DBSdum is also negative and insignificant. The coefficients on interaction of Prpodum with different variables are statistically insignificant with the exception of that of the interaction with TOITI (a proxy for diversification). It shows a negative and significant relation between diversification and costi in the post-conversion period, implying that diversification increases the cost to the firms. This is consistent with the extant literature. For example, studying the effects of focus versus diversification on bank performance on Chinese banks, Berger et al. (2010) report that diversification is associated with higher costs. Stiroh (2004) also found little diversification benefit from shifting to non-interest income. In the earlier period comparing the UK commercial banks and building societies, Vittas (1991) also concluded that high operating ratios of banks is largely associated with their business mix, the diversification of their business. In contrast to some earlier studies (see for example, Halkos and Salamouris, (2004), Mesa et al. (2014)), our results show that size has no impact on efficiency of banks. For example, Halkos and Salamouris (2004) find that larger asset size is associated with improved efficiency. However, Mesa et al. (2014) report no relation between efficiency and size for larger banks (with assets more than $25 billion). The results show that an increase in wholesale funding (RFPSDL) has significant and negative impact on the efficiency of our sample firms. We also find that overall income diversification (TOITI)

27

led to an increase in the cost to income ratio, though it is argued that non-interest income is risky and more highly volatile than interest income. In addition, the study has found negative and only a marginally significant relation between asset diversification (resCA) and efficiency. Untabulated results show that cost to income ratio significantly increased in early 1990s around the housing crisis (ERM crisis) while no significant changes were observed in other years. Overall, the above results confirm that DBS did not achieve the main objective of demutualisation, that is, significant improvement in efficiency after the change to the stock-form of ownership.

7.   Conclusion

The main objective of this study is to investigate the possible causes of the demise of demutualized building societies (DBS) in the UK. The study performed thorough analysis of the business strategy, ownership, and performance of UK financial institutions comprising the population of demutualized building societies and a sample of seven major retail banks (Banks), and the ten largest building societies which remain mutual (MBS). To establish the causes of disappearance of DBS, several tests were performed. First, we compare pre- and post-conversion behaviour of DBS. To explore this further, the performance and efficiency of DBS with MBS and Banks was compared in the pre- (−3 to −1 years period) and post-demutualization periods (+1 to +3 years and +1 to +5 years). It is also possible that a change in the operating behaviour may have had little to do with changes in the organizational form and more to do with changes in the market. To overcome this problem, control for time period effects is incorporated in the regression model. While performance and operating behaviour are examined directly across pre-and-post conversion periods of DBS, the results show improvement only in ROE along with changes in their business models. Additionally, DBS experienced a deteriorating capital base and capital formation.

28

The behaviour of all DBS, MBS and Banks was compared in the pre- and post-conversion periods to find the origin of differences. The results show significant differences in their operating behaviour in the post-conversion period. In addition, demutualized building societies were found to substantially change both their funding and lending strategies (business model) with funding strategy changes being more dramatic than those associated with lending strategy. DBS are less reliant on retail funds and deposits after conversion than retail banks but still DBS are largely lending for residential properties. Their lending strategy is more risky than those of MBS and Banks. For example, loan to deposit ratio just before the financial crisis was 400 % for demutualized societies, 126 % for mutual building societies and 115 % for banks.[21] This ratio was just over 850 % for Northern Rock in the year of demise and 321% in 2006, which became a symbol of financial crisis in the UK. Converting societies did not experience any significant improvement in their efficiency after demutualization.

The MBS sample also appear better capitalised compared to the DBS sample when both were mutual, but in the post-conversion period the capital formation for DBS deteriorate and become significantly lower than that for MBS. Most noticeable changes are in their risk exposure across both risk measures. Such risk is not reflected in the profitability performance of DBS. Their diminished reliance on more expensive retail funds and deposits has no impact on their cost of funding. In fact, cost of funding remains higher for DBS as compared to MBS both in pre- and post-conversion periods. These results clearly show that DBS are increasingly looking different from MBS and more similar to Banks. However, Banks appear better capitalised than DBS. Although Banks have higher risk exposure than DBS, Banks are also compensated more for such risks than are DBS. The business model of Banks is also different from that of DBS and

---

[21] Loan-to-deposit ratios of sample firms are reported in Tables 2-4.

their cost of capital is significantly lower than that for DBS. These results show changes in the business model of DBS which might have contributed to the demise of a once successful financial institution in the UK.

Regression results further confirm indifferent performance of DBS after conversion. Indicator variables for pre-post dummy and DBS dummy are positive but insignificant. Results also confirm that DBS have changed their business model after demutualization. Once interacted, proxies for funding and lending variables changed the sign and results are significant. Regression with efficiency variable (cost to income ratio) shows no significant changes in efficiency after demutualization. Overall, a deteriorating capital base and problematic capital formation during the post-demutualization period, the inability to reduce the cost of funding and failure to get funding from the market during the financial crisis have contributed to the demise of demutualized societies.

The study finds a weak relationship between the form of ownership and performance of the firm. The results suggest that demutualization does not produce success that could have been achieved in the mutual form of ownership and this might have contributed to a reluctance for further demutualizations. Another possible reason might have been the preventive measures taken by most of the remaining building societies by establishing a charitable foundation where new members are required to surrender their rights to windfall gains to the charitable foundation in the case of conversion to a company or takeover of the society.

References:

All-Party Parliamentary Group for Building Societies & Financial Mutuals (Short Inquiry) 2011. Fostering diversity: Promoting mutual: http://www.mutuo.co.uk/wp-content/uploads/2011/09/Fostering-diversity-APPG-Report.pdf (accessed on 01.05.2013).

Altunbas, Y., Evans, L., Molyneux, P., 2001. Bank ownership and efficiency. Journal of Money, Credit, and Banking 33 (4), 926-54.

Ayadi, R., D., Llewellyn, T., R., Schmidt, H., Arbak, E., De Groen, W. P., 2010. Investigating diversity in the banking sector in Europe: Key developments, performance and role of cooperative banks. Centre for European Policy Studies, Brussels.

Barber, B., M., Lyon, J., D., 1996. Detecting abnormal operating performance: The empirical power and specification of test statistics. Journal of Financial Economics 41 (3), 359-399.

Beltratti, A., Stulz, R. M., 2012. The credit crisis around the globe: Why did some banks perform better? Journal of Financial Economics 105 (1), 1-17.

Berger, A. N., Hasan, I., Zhou, M., 2010. The effects of focus versus diversification on bank performance: Evidence from Chinese banks. Journal of Banking & Finance 34, 1417-1435.

Bramley, G., 1994. An affordability crisis in British Housing: Dimensions, causes and policy impact. Housing Studies 9 (1), 103-124

Branston, J. R., Tomlinson, P.R., Wulson, J.R., 2009. 'Strategic failure' and the case of the UK's former building societies: Lessons for the reform of governance in the banking sector. University of Bath, School of Management, Working Paper Series 2009.09.

Building Societies Association. 2017. Latest statistics, BSA https://www.bsa.org.uk/statistics/bsa-statistics# (accessed 30/05/2017).

Carhill, M., Hasan, I., 1997. Mutual to stock conversion, information cost, and thrift performance. The Financial Review 32 (3), 545-568.

Casu B., Girardone, C., 2009. Testing the relationship between competition and efficiency in banking: A panel data analysis. Economics Letters 105, 134-37.

Casu, B., Gall, A., 2016. Building societies in the financial services industry. Plagrave Macmillan, London.

Chaddad, R. F., Cook, M. L., 2004. The economics of organization structure changes: A US perspective on demutualization. Annals of Public and Cooperative Economies 75 (4), 575-94.

Cole, R. A., Mehran, H., 1998. The effect of changes in ownership structure on performance: Evidence from the thrift industry. Journal of Financial Economics 50 (3), 219-317.

Cowling, K., Sugden, R., 1998. The essence of the modern corporation: Markets, strategic decision-making and the theory of the firm. The Manchester School 66 (1), 59-86.

Demirguc-Kunt, A., Huizinga, H., 2010. Bank activity and funding strategies: The impact on risk and returns. Journal of Financial Economics 98 (3), 626-50.

Dietrich, A., Wanzenried, G., 2011. Determinants of bank profitability before and during the crisis: Evidence from Switzerland. Journal of International Financial Markets, Institutions & Money 21 307-27.

Drake, L., Simper, R., 2003. Competition and efficiency in the UK banking: The impact of corporate ownership structure. Research paper No 03-07, Loughborough University, Loughborough.

Eisenbeis, R. A., Kaufman, G. G., 2009. Lessons from the demise of the UK's Northern Rock and the US's Countrywide and IndyMac. In F. Bruno, David. T. Llewellyn (eds) The Failure of Northern rock: A Multidimensional Case Study, (pp.73-98. Vienna: SUERF- The European Money and Finance Forum: http://www.suerf.org/download/studies/study20091.pdf (Accessed 22.11. 2012).

Erhemjamts, O., Leverty, J. T., 2010. The demise of the mutual organizational form: An investigation of the life insurance industry. Journal of Money, Credit, and Banking, 42 (6), 1011-36.

Esty, B. C., 1997a. A case study of organizational form and risk shifting in the savings and loan industry. Journal of Financial Economics 44 (1), 57-76.

Esty, B. C., 1997b. Organizational form and risk taking in the savings and loan industry. Journal of Financial Economics 44 (1), 25-55.

Fama, E. F., 1980. Agency problems and the theory of the firm. Journal of Political Economy 88 (2), 288-307.

Fama, E. F., Jensen, M. C., 1983. Separation of ownership and control. Journal of Law and Economic 26 (2), 301-25.

Garcia-Marco, T., Robles-Fernandez, M. D., 2008. Risk-taking behaviour and ownership in the banking industry: The Spanish evidence. Journal of Economics and Business 60 (4), 332-54.

Girardone, C., Nankervis, J. C., Valentza, E., 2009. Efficiency, ownership and financial structure in European banking: A cross-country comparison. Managerial Finance 35 (3), 227-45.

Halkos, G. E., Salamouris, D. S., 2004. Efficiency measurement of the Greek commercial banks with the use of financial ratios: A data envelopment analysis approach. Management Accounting Research 15 (2), 201–224.

Hadaway, B. L., Hadaway, S. C., 1981. An analysis of the performance characteristics of converted savings and loan associations. The Journal of Financial Research 4 (3), 195-206.

Haynes, M., Thompson, S., 1999. The productivity effects of bank mergers: Evidence from the UK building societies. Journal of Banking & Finance 23 (5), 825-46.

Heffernan, S., 2005. The effect of UK building society conversion on pricing behaviour. Journal of Banking & Finance 29 (3), 779-97.

Hoggarth, G., Pain, D., 2002. Bank provisioning: The UK experience. Financial Stability Review June, 116-27.

Jeng, V., Lai, G. C., McNamara, M. J., 2007. Efficiency and demutualization: Evidence from the US life insurance industry in the 1980s and 1990s. Journal of Risk and Insurance 74 (3), 683-711.

Jensen, M. C., Meckling, W. H., 1976. Theory of the firm: Managerial behaviour, agency costs and ownership structure. Journal of Financial Economics, 3 (4), 305-60.

Klimecki, R., Willmott, H., 2009. From demutualisation to meltdown: A tale of two wannabe banks. Critical Perspective on Internal Business 5 (1/2), 120-40.

Kothari, S. P., Leone, A. J., Wasley, C. E., 2005. Performance matched discretionary accrual measures. Journal of Accounting and Economics 39 (1), 163-197.

Llewellyn, D. T., Holmes, M. J., 1991. In defence of mutuality: A redress to an emerging conventional wisdom. Annals of Public and Co-operative Economics 62 (2), 319-54.

Marshall, J.N., Pike, A., Pollard, J. S., Tomaney, J., Dawley, S., Gray, J., 2011. Placing the run on Northern Rock. Journal of Economic Geography 12, 157-81.

Martin, R., Turner, D., 2000. Demutualization and the remapping of financial landscapes. Transactions of the Institute of British Geographers 25 (2), 221-241.

Masulis, R.W., 1987. Changes in ownership structure: Conversions of mutual savings and loans to stock charter. Journal of Financial Economics 18 (1), 29–59.

Matthews, K., Murinde, V., Zhao, T., 2007. Competitive conditions among the major British banks. Journal of Banking & Finance 31, 2025-2042.

Mayers, D., Smith, Jr. C. W., 1986. Ownership structure and control: The mutualization of stock life insurance companies. Journal of Financial Economics 16 (1), 73-98.

McNamara, M. J., Rhee, S. G., 1992. Ownership structure and performance: The demutualization of life insurers. Journal of risk and Insurance 59 (2), 221-38.

Mesa, R. B., Snachez, H. M., Sobrino, J. N., R., 2014. Main determinants of efficiency and implications on banking concentration in the European Union. Spanish Accounting Review 17 (1), 78-87

Mester, L. J., 1993. Efficiency in the savings and loan industry. Journal of Banking & Finance 17 (2-3), 267-286.

Murphy, N. B., Salandro, D., 1997. Form of ownership and risk taking in banking: Some evidence from Massachusetts savings banks. Journal of Economics and Finance 21 (3), 19-28.

O'Hara, M., 1981. Property rights and the financial firm. Journal of Law and Economics 24 (2), 313-33.

Pain, D., 2003. The provisioning experience of the major UK banks: A small panel investigation. Bank of England, Working Paper No. 177 (accessed on 28/11/2017,www.bankofengland.co.uk/archive/Documents/historicpubs/.../2003/wp 177.pdf)

San-Jose, L., Retolaza, J. L., Prunonosa, J. T., 2014. Efficiency in Spanish banking: A multistakeholder approach analysis. Journal of International Financial Markets, Institutions and Money 32, 240-55.

Saunders, A., Strock, E., Travlos, N. G., 1990. Ownership structure, deregulation, and bank risk taking. Journal of Finance 45 (2), 643-54.

Shin, H. S., 2009. Reflections on Northern Rock: The bank run that heralded the global financial crisis. Journal of Economic Perspective 23 (1), 101-19.

Shinozawa, Y., 2007. The effect of organizational form on investment products: An empirical analysis of the UK unit trust industry. Corporate Governance: An International Review 15(6), 1244-58.

Shiwakoti, R. K., Ashton, J.K., Keasey, K., 2004. Conversion, performance and executive compensation in UK building societies. Corporate Governance: An International Review 12, 361-370.

Shiwakoti, R.K., Keasey, K., Hudson, R., 2008. Comparative performance of UK mutual building societies and stock retail banks: Further evidence. Accounting & Finance 48, 319-336.

Speight, G., Parkinson, S., 2003. Large UK-owned banks' funding patterns: Recent changes and implications. Financial Stability Review December, 135-42.

Stephens, M., 2001. Building society demutualisation in the UK. Housing Studies 16 (3), 335-352.

Stiroh, K. J., 2004. Diversification in banking: Is noninterest income the answer? Journal of Money Credit and Banking 36 (5), 853-882.

Tayler, G., 2003. UK building society demutualisation motives. Business Ethics: A European Review 12 (4), 394-402.

Valnek, T., 1999. The comparative performance of mutual building societies and stock retail banks. Journal of Banking & Finance 23 (6), 925-38.

Vittas, D., 1991. Measuring commercial bank efficiency: Use and misuse of bank operating ratios (English). Policy, Research working papers; no. WPS 806. Financial policy and systems. Washington, DC: World Bank.

Wilson, J. O.S., Casu, B., Girardone, C., Molyneux, P., 2010. Emerging themes in banking: Recent literature and directions for future research. The British Accounting Review 42 (3), 153-69.

Table 1: List of demutualized building societies, sample mutual building societies, and banks

Panel A: Total assets of building societies and the percentage of assets demutualized

Year of demutualiza-tion	Name of demutualized building society (DBS)	Total assets of DBS at the start of demutualization year £ million	Total assets of all building societies (DBS and MBS) at the start of demutualization year £ million	Percentage of total assets demutuali-zed sample only
1989	*Abbey National	315,36.9	193,332.5	16.31%
1995	Cheltenham and Gloucester	19,403.4	300,606.4	6.45%
1996	National and Provincial	14,133.0	301,306.3	4.69%
1997	*Alliance and Leicester *Halifax *Woolwich *Northern Rock Bristol and West	193,523.5	320,640.3	60.36%
1999	Birmingham and Midshires	82,28.2	162,405.0	5.07%
2000	*Bradford and Bingley	23,885.2	168,783.4	14.15%

DBS shown with an * were floated on the London Stock Exchange and the remaining DBS were taken over by other demutualized building societies or retail banks.

Panel B: Names of matched mutual building societies (MBS) and banks

Mutual building societies (MBS)		Banks	
Britannia	Nationwide	Bank of Scotland	Standard Chartered Bank
Chelsea	Portman	Barclays Bank	National Westminster Bank
Coventry	Skipton	Lloyds TSB Bank	The Royal Bank of Scotland
Derbyshire	West Bromwich	HSBC Bank	
Leeds	Yorkshire		

Panel A of the table provides names of the building societies which demutualized (DBS) and the year of their demutualization. It also reports total assets of the demutualized building society and of all building societies at the start of the year in which they demutualize. The last column reports the percentage of total assets which demutualize in that particular year. Panel B reports the names of the next ten largest building societies which maintained their mutualized form (MBS) and the banks included in the sample.

Table 2: Descriptive statistics of all variables based on firm year observations, 1987 to 2007

Group	DBS				MBS				Banks			
Variable	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Obs.	Mean	Median	Std. Dev.	Obs.
Measures of Profitability:												
ROA	7.301	6.420	2.592	156	6.563	5.710	2.470	210	5.542	5.110	2.761	155
PBTinc	11.847	13.510	36.833	146	12.447	11.160	38.011	200	19.799	11.830	56.250	138
PATinc	13.863	13.260	47.918	146	13.263	11.500	38.705	200	21.162	15.810	50.074	138
ROE	23.523	24.750	7.306	156	15.949	14.250	6.993	209	24.270	23.778	10.742	154
GY	8.217	7.360	2.685	156	7.388	6.520	2.718	210	6.895	6.830	2.386	154
NITM	3.340	3.270	1.680	156	2.570	2.270	1.626	210	2.519	2.579	0.712	158
Measures of growth:												
asstgro	14.900	12.960	12.878	146	13.802	12.975	13.097	200	15.888	9.723	34.256	152
TOIinc	20.087	14.800	40.791	146	14.311	10.925	26.180	200	18.708	14.230	38.025	138
TOITI	9.750	7.350	7.077	156	7.555	5.760	7.324	209	25.827	25.442	9.889	154
CF	10.702	11.060	6.817	155	10.432	9.720	4.239	209	6.986	7.839	6.068	158
Measures of operating efficiency:												
Mgtexp	1.423	1.280	0.661	156	1.201	1.010	0.637	210	2.442	2.460	0.716	134
Costi	56.877	54.920	15.604	156	58.399	56.580	11.764	210	64.667	64.400	8.513	129
Measures of risk:												
DWOCA	0.221	0.150	0.260	156	0.164	0.030	0.322	210	0.217	0.039	0.264	160
PROCA	0.246	0.160	0.291	156	0.186	0.050	0.356	210	0.277	0.245	0.286	158
NWrat	4.616	4.620	0.938	156	5.354	5.330	0.784	210	4.906	4.650	1.198	160
CC	4.405	4.450	0.971	156	5.050	5.090	0.908	210	4.789	4.570	1.191	160
Measures of funding and lending:												
resCA	90.594	94.570	9.860	156	95.371	97.180	4.736	210	24.568	22.010	12.517	160
RFPSDL	69.203	74.130	14.825	156	76.872	77.980	9.924	210	65.762	67.416	11.760	160
Costfund	6.787	5.750	2.573	155	6.216	5.320	2.424	210	4.561	4.357	2.107	153
LntoDep	128.80	115.34	65.16	156	111.501	109.580	13.378	209	101.205	95.810	22.987	160

This table provides some descriptive statistics of the variables used in the paper. DBS represents demutualized building societies, MBS mutualized building societies and Banks, commercial banks. Variables shown in table are defined in Appendix I.

Table 3: Pre- and post-demutualization mean and median values for different variables for DBS sample, in event time

	Mean		Median		WMW z-stat
	Pre-demutuali-zation	Post-demutuali-zation	Pre-demutuali-zation	Post-demutuali-zation	Full sample (pre-post)
Variable					
Measures of Profitability:					
ROA	6.563	6.401	6.350	5.960	0.886
PBTinc	18.216	10.412	12.785	7.395	1.395
PATinc	16.776	18.978	11.430	10.630	0.203
ROE	22.307	25.576	22.410	26.020	-2.779 [a]
GY	7.396	7.300	7.180	6.705	0.974
NITM	3.407	2.508	3.280	2.000	3.173 [a]
Measures of growth:					
asstgro	10.854	11.927	9.135	12.065	-1.170
TOIinc	12.194	16.863	6.885	16.460	-1.193
TOITI	9.480	12.448	7.960	11.395	-1.970 [b]
CF	12.439	8.102	12.445	9.300	3.838 [a]
Measures of operating efficiency:					
Mgtexp	1.425	1.398	1.350	1.345	0.241
costi	53.966	51.879	56.610	47.955	1.204
Measures of risk:					
DWOCA	0.348	0.108	0.220	0.090	3.373 [a]
PROCA	0.243	0.154	0.170	0.110	1.556
NWrat	5.419	4.772	5.420	4.945	2.057 [b]
CC	4.891	4.963	4.890	4.960	0.109
Measures of funding and lending:					
resCA	93.434	90.274	93.570	91.195	1.904 [b]
RFPSDL	75.054	68.742	74.790	69.000	3.206 [a]
Costfund	5.827	5.818	5.640	5.225	0.733
LntoDep	115.762	122.069	114.430	120.470	-1.598

The table reports mean and median values of different variables, in event time, for three years before (−3 to −1) and three years after (+1 to +3 as) demutualization for the demutualized building societies (DBS) sample. The year of demutualization (year 0) is as reported in Table 1 and the variables are as defined in Table 2 (or Appendix I). It also reports z-stat for equality of medians using Wilcoxon-Mann-Whitney (WMW) test for the full sample. Superscripts a, b, and c represent significance at 1%, 5%, and 10% levels.

Table 4: Mean and median values of selected variables for DBS, ROA matched MBS, and ROA matched Banks, in event time

Panel A: DBS vs MBS vs Banks in the pre-demutualisation period (−3 to −1 years relative to event year 0)

Variable	Mean			Median			WMW z-stat		
Column (1)	DBS (2)	MBS (3)	Bank (4)	DBS (5)	MBS (6)	Bank (7)	DBS-MBS (8)	DBS-Banks (9)	MBS-Banks (10)
ROA	6.563	6.136	5.945	6.350	5.820	5.710	1.561	2.566 [a]	1.008
ROE	22.307	17.015	31.398	22.410	16.100	29.569	3.717 [a]	-4.403 [a]	-5.960 [a]
NITM	3.407	3.036	2.877	3.280	3.040	2.687	1.734 [c]	2.386 [b]	0.902
TOITI	9.480	6.804	24.024	7.960	6.020	25.020	2.535 [a]	-5.928 [a]	-6.354 [a]
Mgtexp	1.425	1.327	2.746	1.350	1.360	2.684	0.506	-5.182 [a]	-6.184 [a]
PROCA	0.243	0.332	0.278	0.170	0.260	0.330	-1.081	-0.402	0.697
CC	4.891	5.457	4.394	4.890	5.490	4.197	-1.983 [b]	3.157 [a]	3.714 [a]
resCA	93.434	94.929	25.498	93.570	95.180	20.363	-1.112	6.420 [a]	6.420 [a]
RFPSDL	75.054	80.697	68.639	74.790	78.870	70.535	-3.227 [a]	3.714 [a]	5.862 [a]
LntoDep	115.762	106.382	99.196	114.430	107.740	97.281	3.375 [a]	4.591 [a]	2.861 [a]
Panel B: DBS vs MBS vs Banks in the post-demutualisation period (+1 to +3 years relative to event year 0)									
ROA	6.401	5.963	5.721	5.960	5.620	5.163	1.107	1.871 [c]	1.342
ROE	25.576	13.592	26.195	26.020	13.630	28.470	5.431 [a]	-0.700	-4.564 [a]
NITM	2.508	1.687	2.708	2.000	1.330	2.715	3.163 [a]	-2.615 [a]	-4.716 [a]
TOITI	12.448	8.974	24.593	11.395	6.670	25.010	2.556 [a]	-4.815 [a]	-5.868 [a]
Mgtexp	1.398	1.104	2.434	1.345	0.995	2.450	1.917 [b]	-4.751 [a]	-6.079 [a]
PROCA	0.154	0.064	0.357	0.110	0.080	0.480	2.079 [b]	-1.664 [c]	-3.269 [a]
CC	4.963	5.361	4.983	4.960	5.330	4.720	-2.045 [b]	0.460	2.411 [b]
resCA	90.274	95.306	24.997	91.195	97.655	22.092	-2.790 [a]	5.713 [a]	6.596 [a]
RFPSDL	68.742	75.763	66.046	69.000	76.965	67.822	-2.023 [b]	0.569	3.063 [a]
LntoDep	122.069	112.964	105.389	120.470	111.040	95.810	1.725 [c]	3.611 [a]	2.441 [a]

The table reports mean and median values of selected variables (see Appendix I) for DBS, MBS, and Banks during the three pre- (Panel A) and three post- (Panel B) demutualization years. It also reports Wilcoxon-Mann-Whitney (WMW) z-stat for equality in medians for DBS vs MBS, DBS vs Banks, and for MBS vs Banks. Superscripts a, b, and c represent significance at 1%, 5%, and 10% levels. The number in parenthesis shows column number.

Figures 1 to 3: Graph of median values of selected variables (as defined in Appendix-I) for DBS, ROA matched MBS, and ROA matched Banks for years –3 to +10 in event time

Figure1: Median values of variables for DBS and ROA matched MBS

Figure 2: Median values of variables for DBS and ROA matched Banks

Figure 3: Median values of variables for ROA Matched MBS and Banks
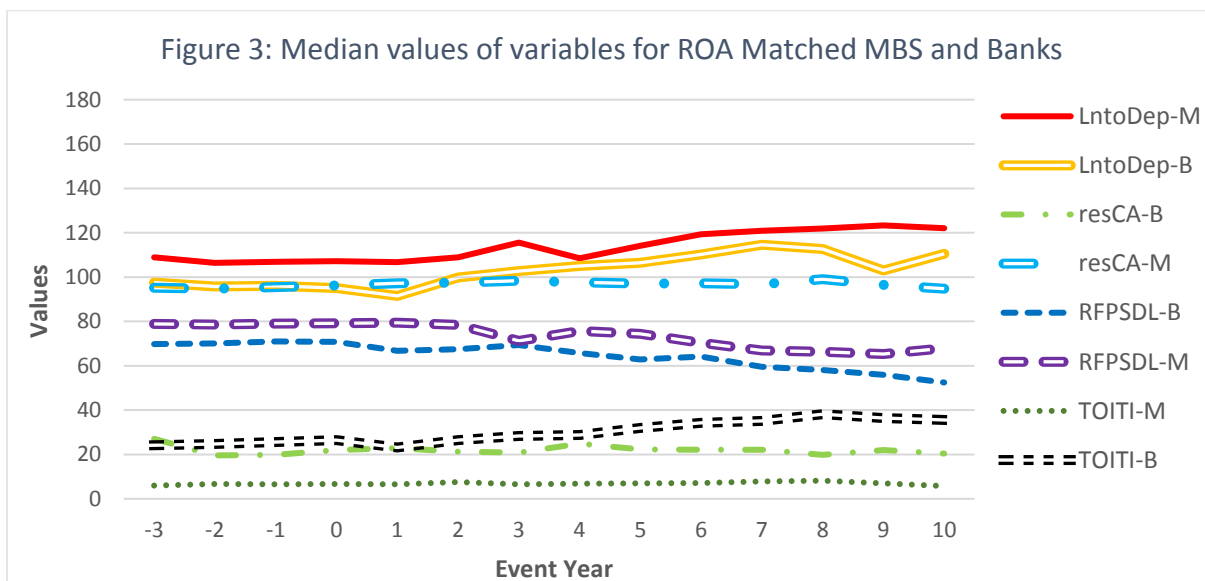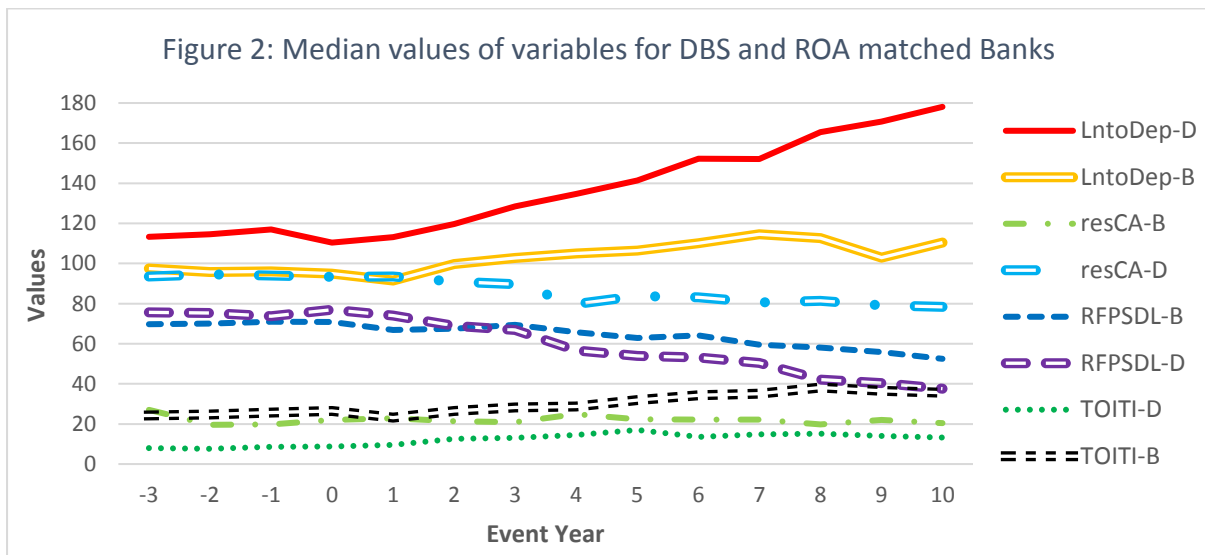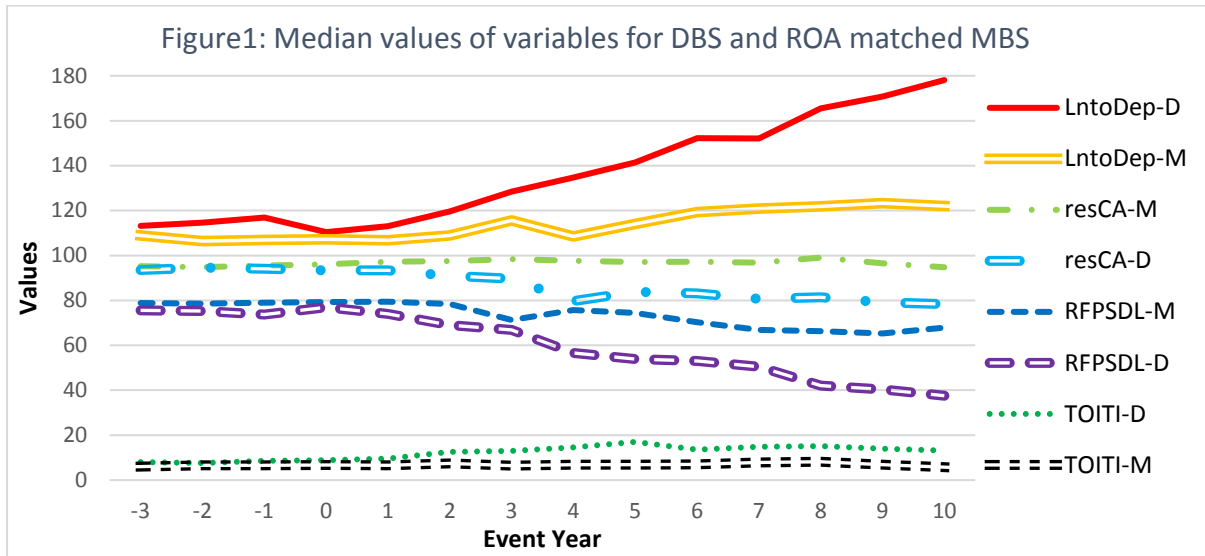
Table 5: Least square dummy variable (LSDV) regression results

ROA_{it} or $costi_{it} = \gamma_1 DBSdum + \gamma_2 Bankdum + \beta_1 Prpodum + \beta_2 Lnta_{it} + \beta_3 TOITI_{it} +$

$\qquad \beta_4 resCA_{it} + \beta_5 RFPSDL_{it} + \beta_6 Prpodum*DBSdum + \beta_7 Prpodum*Bankdum$

$\qquad + \beta_8 Prpodum*Lnta_{it} + \beta_9 Prpodum*TOITI_{it} + \beta_{10} Prpodum*resCA_{it} +$

$\qquad \beta_{11} Prpodum*RFPSDL_{it} + \delta_t Year\ Dummies_t + \beta_0 + \varepsilon_{it}$

	ROA			Costi		
Column	2	3	4	5	6	7
	Coeff.	C.R.S.E	p-value	Coeff.	C.R.S.E	p-value
Prpodum	3.75	2.29	0.11	-4.54	19.88	0.82
DBSdum	1.46	1.64	0.38	-5.37	14.15	0.71
Bankdum	3.25	2.94	0.28	-30.78	19.41	0.12
Lnta	-0.12	0.16	0.47	0.10	1.30	0.94
TOITI	-0.03	0.03	0.23	1.06	0.17	0.00
resCA	0.03	0.02	0.09	-0.23	0.14	0.10
RFPSDL	-0.03	0.02	0.05	-0.27	0.13	0.05
Prpodum*DBSdum	5.22	2.11	0.02	-8.00	16.40	0.63
Prpodum*Bankdum	2.98	3.18	0.36	17.80	20.96	0.40
Prpodum*Lnta	-0.49	0.20	0.02	0.01	1.56	0.99
Prpodum*TOITI	0.04	0.02	0.15	-0.58	0.19	0.01
Prpodum*resCA	-0.03	0.02	0.09	0.16	0.14	0.27
Prpodum*RFPSDL	0.04	0.01	0.02	-0.11	0.17	0.53
Intercept	11.08	1.68	0.00	91.91	15.74	0.00
Year Dummies (1988-2007)	included			included		
No of observations	519			519		
Adjusted R-squared	68%			32%		

This table reports coefficients, clustered robust standard errors (C.R.S.E) and p-values using a Least Square Dummy Variable (LSDV) model and controls for fixed effects across three types of firms (DBS, MBS, and Banks). The dependent variable in each model is either ROA or costi, where ROA is return on assets (measure of profitability) and costi is cost-to-income ratio (measure of operating efficiency). The data is clustered around DBS, MBS, and Banks for which we use two dummies: DBSdum (a dummy variable for demutualized firms) and Bankdum (a dummy variable for commercial banks). The group of firms which remain mutual (MBS) is the reference group. Prpodum is also a dummy representing pre- and post-demutualization periods relevant to the demutualization year 0. Lnta is natural log of total assets. TOITI, CC, resCA, and RFPSDL are as defined in Appendix I). All the variables are interacted with Prpodum to model cross-sectional heterogeneity. The models also include year dummies to control for time effects but are not reported for brevity.

Appendix I: Definition of variables

Variable	Definition
Return on assets (ROA)	Total income minus total operating expenses divided by total assets.
Profit before tax increase (PBTinc)	Profit before tax for the current year minus profit before tax in the previous year divided by profit before tax in the previous year.
Profit after tax increase (PATinc)	Same as PBTinc but here profit after tax figure is considered.
Return on equity (ROE)	Profit before tax plus extraordinary expenses divided by total equity and reserves.
Gross yield (GY)	Ratio of total interest and similar income divided by interest earnings assets
Net interest margin (NITM)	Ratio of net interest receivable divided by interest earnings assets.
Capital formation (CF)	Retained earnings for the year divided by total shareholders' funds.
Asset growth (asstgro)	Similar to PBTinc but here assets are used instead of profit.
Total other income increase (TOIinc)	Similar to PBTinc but here total other income is used.
Total other income to total income (TOITI)	Ratio of total other income divided by total income.
Management expense ratio (Mgtexp)	Total operating expenses divided by total assets.
Cost to income (costi)	Ratio of total operating expenses divided by total income minus cost of funding.
Debt written off (DWOCA)	Debt written-off amount during the year divided by total commercial assets.
Provision for doubtful debts (PROCA)	Ratio of the provision for bad and doubtful debts for the year divided by total commercial assets.
Net worth ratio (NWrat)	Total assets minus total liabilities (net worth) divided by total assets.
Core capital (CC)	Ratio of total equity and reserves (shareholder's fund) divided by total assets.
Residential mortgage (resCA)	Ratio of loan on residential mortgage to total commercial assets.
Retail funds and deposits (RFPSDL)	Ratio of retail funds and deposits to total share deposits and loan.
Cost of funding (costfund)	Ratio of total interest and similar charges plus fees and commission payable and other charges divided by total share deposits and loans.
Loan to deposit ratio (LntoDep)	Ratio of total loans to total deposits

Appendix II: Mean and median values of different variables for DBS, ROA matched MBS, and ROA matched Banks, in event time

Panel A: DBS vs MBS vs Banks in the pre-demutualisation period (−3 to −1 years relative to event year 0)

Variable	Mean			Median			WMW z-stat		
Column (1)	DBS (2)	MBS (3)	Bank (4)	DBS (5)	MBS (6)	Bank (7)	DBS-MBS (8)	DBS-Banks (9)	MBS-Banks (10)
ROA	6.563	6.136	5.945	6.350	5.820	5.710	1.561	2.566 [a]	1.008
PBTinc	18.216	21.905	39.543	12.785	19.465	24.377	-0.623	-1.087	-0.502
PATinc	16.776	24.040	50.394	11.430	23.735	28.886	-1.163	-1.527	-0.627
ROE	22.307	17.015	31.398	22.410	16.100	29.569	3.717 [a]	-4.403 [a]	-5.960 [a]
GY	7.396	7.256	7.349	7.180	7.010	7.430	0.467	-0.517	-0.828
NITM	3.407	3.036	2.877	3.280	3.040	2.687	1.734 [c]	2.386 [b]	0.902
asstgro	10.854	7.075	9.672	9.135	7.895	7.301	0.885	0.537	-0.294
TOIinc	12.194	12.261	10.630	6.885	-0.225	4.699	0.836	0.356	-0.648
TOITI	9.480	6.804	24.024	7.960	6.020	25.020	2.535 [a]	-5.928 [a]	-6.354 [a]
CF	12.439	10.811	10.727	12.445	10.850	11.946	2.059 [b]	0.892	-0.894
Mgtexp	1.425	1.327	2.746	1.350	1.360	2.684	0.506	-5.182 [a]	-6.184 [a]
costi	53.966	58.441	64.744	56.610	57.090	65.052	-0.925	-3.199 [a]	-2.520 [a]
DWOCA	0.348	0.450	N/A	0.220	0.360	N/A	-0.327	−	−
PROCA	0.243	0.332	0.278	0.170	0.260	0.330	-1.081	-0.402	0.697
NWrat	5.419	5.704	4.479	5.420	5.760	4.263	-1.555	4.206 [a]	4.386 [a]
CC	4.891	5.457	4.394	4.890	5.490	4.197	-1.983 [b]	3.157 [a]	3.714 [a]
resCA	93.434	94.929	25.498	93.570	95.180	20.363	-1.112	6.420 [a]	6.420 [a]
RFPSDL	75.054	80.697	68.639	74.790	78.870	70.535	-3.227 [a]	3.714 [a]	5.862 [a]
costfund	5.827	5.752	4.977	5.640	5.410	4.890	0.490	2.911 [a]	2.853 [a]
LntoDep	115.762	106.382	99.196	114.430	107.740	97.281	3.375 [a]	4.591 [a]	2.861 [a]

Panel B (Table 4): DBS vs MBS vs Banks in the post-demutualisation period (+1 to +3 years relative to event year 0)

Variable	Mean			Median			WMW z-stat		
Column (1)	DBS (2)	MBS (3)	Bank (4)	DBS (5)	MBS (6)	Bank (7)	DBS-MBS (8)	DBS-Banks (9)	MBS-Banks (10)
ROA	6.401	5.963	5.721	5.960	5.620	5.163	1.107	1.871 [c]	1.342
PBTinc	10.412	14.203	28.744	7.395	9.665	13.270	-0.745	-0.974	-0.637
PATinc	18.978	15.950	28.742	10.630	11.230	15.720	0.128	-0.481	-0.819
ROE	25.576	13.592	26.195	26.020	13.630	28.470	5.431 [a]	-0.700	-4.564 [a]
GY	7.300	6.584	6.984	6.705	6.060	6.714	2.034 [b]	0.481	-1.107
NITM	2.508	1.687	2.708	2.000	1.330	2.715	3.163 [a]	-2.615 [a]	-4.716 [a]
asstgro	11.927	13.868	19.837	12.065	13.750	8.229	-1.214	1.029	2.199 [b]
TOIinc	16.863	13.837	17.631	16.460	15.275	14.520	0.447	0.514	0.136
TOITI	12.448	8.974	24.593	11.395	6.670	25.010	2.556 [a]	-4.815 [a]	-5.868 [a]
CF	8.102	9.845	8.089	9.300	9.395	8.670	-1.139	-0.569	0.622
Mgtexp	1.398	1.104	2.434	1.345	0.995	2.450	1.917 [b]	-4.751 [a]	-6.079 [a]
Costi	51.879	58.238	62.737	47.955	60.265	62.275	-2.290 [b]	-3.343 [a]	-1.906 [c]
DWOCA	0.108	0.097	0.328	0.090	0.065	0.360	0.661	-2.452 [a]	-3.565 [a]
PROCA	0.154	0.064	0.357	0.110	0.080	0.480	2.079 [b]	-1.664 [c]	-3.269 [a]
NWrat	4.772	5.561	5.128	4.945	5.550	4.940	-2.801 [a]	-0.252	2.593 [a]
CC	4.963	5.361	4.983	4.960	5.330	4.720	-2.045 [b]	0.460	2.411 [b]
resCA	90.274	95.306	24.997	91.195	97.655	22.092	-2.790 [a]	5.713 [a]	6.596 [a]
RFPSDL	68.742	75.763	66.046	69.000	76.965	67.822	-2.023 [b]	0.569	3.063 [a]
Costfund	5.818	5.590	4.818	5.225	5.115	4.720	0.405	2.057 [b]	2.161 [a]
LntoDep	122.069	112.964	105.389	120.470	111.040	95.810	1.725 [c]	3.611 [a]	2.441 [a]

Panel C (Table 4): DBS vs MBS vs Banks in the post-demutualisation period (+1 to +5 years relative to event year 0)

Variable	Mean			Median			WMW z-stat		
Column (1)	DBS (2)	MBS (3)	Bank (4)	DBS (5)	MBS (6)	Bank (7)	DBS-MBS (8)	DBS-Banks (9)	MBS-Banks (10)
ROA	5.835	5.487	5.317	5.585	5.325	4.790	1.016	2.068 [b]	1.742 [c]
PBTinc	15.385	10.310	24.153	10.205	9.665	10.625	0.432	0.006	-0.491
PATinc	27.904	11.357	25.539	12.345	9.580	10.384	1.156	0.513	-0.543
ROE	24.959	13.346	25.152	25.020	13.185	24.478	6.823 [a]	0.006	-6.087 [a]
GY	6.661	6.056	6.415	6.385	5.805	6.475	1.958 [b]	0.412	-1.173
NITM	2.149	1.527	2.605	1.805	1.275	2.634	3.761 [a]	-4.403 [a]	-6.462 [a]
asstgro	14.759	13.594	15.232	12.860	13.175	8.880	0.083	1.878 [c]	2.596 [a]
TOIinc	17.914	11.366	18.182	12.315	13.410	13.457	0.552	0.663	0.121
TOITI	13.240	9.314	26.791	12.985	6.725	28.150	3.344 [a]	-5.930 [a]	-7.510 [a]
CF	7.347	9.521	6.956	8.440	9.245	7.492	-1.964 [b]	0.591	2.494 [a]
Mgtexp	1.340	1.058	2.443	1.275	0.925	2.428	2.459 [a]	-6.057 [a]	-7.483 [a]
costi	52.855	58.360	63.502	52.640	58.735	62.985	-2.443 [a]	-4.000 [a]	-2.558 [a]
DWOCA	0.130	0.078	0.316	0.095	0.040	0.350	2.651 [a]	-2.687 [a]	-4.884 [a]
PROCA	0.174	0.060	0.352	0.140	0.060	0.445	3.597 [a]	-1.873 [c]	-3.720 [a]
NWrat	4.550	5.481	5.317	4.475	5.550	4.965	-4.391 [a]	-1.795 [c]	1.636 [c]
CC	4.609	5.215	5.146	4.450	5.235	4.725	-3.474 [a]	-1.326	1.339
resCA	87.202	94.991	25.836	89.020	97.655	22.092	-4.094 [a]	7.179 [a]	8.435 [a]
RFPSDL	64.199	74.157	65.288	66.750	75.445	66.429	-3.927 [a]	-0.791	3.865 [a]
costfund	5.299	5.108	4.309	4.910	4.945	4.230	0.359	2.736 [a]	2.941 [a]
LntoDep	127.395	113.776	107.017	124.910	111.040	100.442	3.437 [a]	4.425 [a]	2.765 [a]

The table provides mean and median values (as defined in Appendix I) for DBS, ROA matched MBS, and ROA matched Banks during the three years before (Panel A), and three (Panel B) and five years (Panel C) after demutualisation in event time. DBS represents demutualized building societies, MBS mutual building societies and Banks commercial banks. It also reports Wilcoxon-Mann-Whitney (WMW) z-stat for equality in median values for DBS vs MBS, DBS vs Banks, and for MBS vs Banks. Superscripts a, b, and c represent significance at 1%, 5%, and 10% levels. The number in parenthesis shows column number.