Looking to tomorrow: The past and future roles of securitisation in residential mortgage funding

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Dr Thomas Wainwright is a Postdoctoral Researcher at the Small Business Research Centre, Kingston University, London. Tom completed his PhD in 2009 at the University of Nottingham, which examined contemporary UK retail banking, the development of securitisation in the UK, and the credit crunch. This report is a summary of the findings from his doctoral dissertation. His current research focuses on the increased integration between small business banking with international finance, and he is especially interested in the social, cultural and regulatory issues that affect the production and consumption of financial products. Tom's previous research has been funded by the ESRC, and he is currently working on a range of privately sponsored projects. His most relevant publication to this study is: Wainwright, T. (2009) 'Laying the foundations for a crisis: Mapping the historico-geographical construction of residential mortgage backed securitisation in the UK', *International Journal of Urban and Regional Research*, 33(2): 372-388.

1.0 Executive Summary

1.1 Since the 1990s the UK mortgage sector has become increasingly reliant on securitisation. The closure of the securitisation market, as a consequence of the US subprime crisis, has created a funding shortfall for the British financial sector. This has had a detrimental effect on consumers and mortgage providers, and the future of the market remains unclear.

1.2 While originally a US innovation, securitisation first appeared in the UK in 1986. Since then, it has evolved and become deeply embedded within the British financial sector.

1.3 The initial growth of residential mortgage-backed securitisation (RMBS) can be attributed to regulatory change, increased industry competition, a shortfall in consumer deposits and innovations in securitisation that enhanced global investor demand.

1.4 Between 2000 and 2007, the funding of residential mortgages through RMBS and covered bonds grew from £13billion to £257 billion,[1] which interlinked British mortgage issuance with the international financial system.

1.5 Centralised lenders and demutualised retail banks became heavy users of securitisation to access capital markets, instead of using deposits for funding, making them more vulnerable to the closure of the RMBS markets.

1.6 The 2007-2008 crisis was not securitisation's first experience of being implicated in financial downturns. RMBS securitisation has been involved in the US subprime market downturn in the late 1990s and in the UK in the early 1990s, as the bonds suffered from high repossession rates, and the withdrawal of investors from the market.

1.7 While there have been some green shoots of activity in the RMBS market, with RMBS note sales by Lloyds and the Nationwide Building Society, the markets remain largely closed. However, risk averse investors may be more likely to purchase RMBS deals off larger, established banks issuing prime assets.

1.8 One of the central challenges to face UK RMBS is that at the peak of the market 70% of the RMBS bonds were sold to foreign investors, which while

[1] CML (2010) The outlook for mortgage funding markets in the UK in 2010-2015, CML: London

providing diversification, has developed problems as these investors have retrenched to their more familiar home markets.[2] It will be necessary to entice these investors back to UK RMBS.

2.0 These included many high-profile US investment banks, but especially leveraged investment vehicles. Subsequently, investor demand for RMBS will not return to 2007 levels for at least the next 5 years, if at all[3]. This demand will also be depressed by investor uncertainty around securitised products in general.

2.1 However, if housing prices are to be sustained, which is likely, due to the UK's limited supply of housing and land, external funding such as RMBS will be needed to fund a lending gap, as deposits in banks are not large enough to meet current demand.

2.2 Centralised lenders will continue to struggle in the short, to medium term as risk averse investors are more likely to avoid subprime and non-conforming residential securitisations, as investor appetite is limited in the light of US subprime securitisation.

2.3 This will also have a sustained impact on consumers, as reduced access to capital by lenders will see continued credit rationing until securitisation markets reopen. This will make it more difficult for first-time buyers to access the housing market in the short term, and it will also make homeownership more expensive for those that cannot afford large deposits. This will also depress demand further, which will slow the recovery of the housing market, also impacting lenders more generally.

2.4 Both prime and subprime consumers will be affected further. Subprime consumers will be excluded from housing finance with the reduction of origination by centralised lenders. However, this may also affect consumers that were prime consumers before the crisis and are now near-prime, but may still be creditworthy. Consumer aspirations for home ownership will be dampened, as will demand for mortgages, as will increases in house prices.

2.5 If the Browne Review recommendations on university funding are implemented, this could also undermine demand in the mortgage market in the future. A reduction in disposable income for graduates, repaying higher

[2] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

[3] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

student debts, would erode their ability to amass the savings required for deposits, removing many of these individuals from housing chains, potentially reducing the demand for mortgage products.

2.6 There may be significant changes for mortgage providers as the composition of the market may change considerably, creating a bifurcation of the market. The ability of larger banks to gain access to RMBS markets with established prime securitisation programmes, may provide them with the ability to develop greater market share earlier on in the recovery, reducing competition in the UK and placing stress upon smaller lenders and building societies. Subsequently, smaller lenders may need to consider new modes of wholesale funding, wider branch networks, and product innovations to increase consumer deposits in order to expand their market share.

2.7 It is more likely that larger banking groups will use securitisation for funding rather than capital adequacy purposes, meaning that covered bonds may become a key competitor to securitisation, although securitisation will provide further funding diversity in the future. It is anticipated that centralised lenders will have to wait until after the prime RMBS market has recovered until investors are attracted to the subprime market again.

2.8 Policy makers need to be aware that there is a risk that a similar financial crisis based on the UK's experience of the 2007 credit crunch could occur in the future, with damaging consequences for consumers and financial institutions. If the market recovers to the volumes of RMBS issued in 2007, or indeed exceed those volumes, then future crises in global liquidity may create a similar impact on the UK financial system, as experienced in the 2007-2008 crisis. Policy makers need to consider the additional risk brought to the financial system by unsustainable house price increases, and the volumes of external money needed to fund the UK property market. Consideration should be made to increasing the provision of affordable housing for private purchase and the development of long-term, quality rental markets, as an alternative to private homeownership.

2.0 Introduction

The global credit crunch emerged as a consequence of the US subprime crisis in 2007. As financial institutions with heavy exposures to US subprime securitisations began to realise their losses, investor panic spread and financial institutions began to hold their available capital to rebuild their balance sheets, or to avoid lending to banks on the brink of collapse.[4] This froze the global interbank markets, severely curtailing the ability of financial institutions to lend to each other, and in some cases effectively cutting off borrowers from the financial markets.

The credit crunch has radically altered the morphology of the British financial sector, mortgage funding in particular. During the 1990s securitisation became a key tool for mortgage lenders, but a near total absence of investor demand for securitised bonds since 2007 has had a substantial impact on financial institutions, households and the wider economy. A lack of access to securitisation increases the cost of credit, and in 2008 it was estimated by the Securities Industry and Financial Markets Association (SIFMA) that approximately $2trillion of global funding demand will not be met due to the crisis.[5]

The Council of Mortgage Lenders (CML) has estimated that this has left a funding gap of £30 billion for UK mortgage lenders.[6] It is argued here that UK lenders were not drawn into the credit crunch by issuing poor quality assets with loose lending criteria, as was the case in the US, but by a more general collapse in investor confidence in the markets for RMBS. Investors took a 'flight-to-quality' away from RMBS, while other investors were forced out of the market, or collapsed altogether, for example Bear Stearns. This cut off mortgage lenders from the necessary wholesale capital needed to issue new assets.

[4] Wainwright, T. (2009) 'Laying the foundations for a crisis: Mapping the historico-geographical construction of RMBS securitization in the UK', International Journal of Urban and Regional Research, 32(2): 372-88

[5] SIFMA (2008) 'Restoring confidence in the securitisation markets', http://www.sifma.org/capital_markets/docs/Survey-Restoring-confidence-securitization-markets.pdf (Accessed: 7/09/2010)

[6] CML (2010) The outlook for mortgage funding markets in the UK in 2010-2015, CML: London

2.1 Report Aims and Objectives

This report seeks to summarise the findings from a project that investigated the British mortgage and securitisation markets, prior to and during the crisis. There are three key objectives:

1. To investigate changes in the UK mortgage market and the implementation of securitisation after Financial Services Act (1986) and the Building Societies Act (1986) were passed.
2. To highlight earlier crises of securitisation, prior to the 2007 global crisis.
3. To examine the effect of the credit crunch on the UK market and what the future market for securitisation could look like. In particular, the report will identify and discuss important implications that will affect financial services providers, policy makers, regulators and consumers, in the future.

2.2 Report Methodology

The report will summarise some of the findings from an ESRC funded research project entitled: 'The geographies of securitisation and credit scoring'. There are two stages to the analysis:

1. The report will draw upon empirical data collected for the ESRC report in the form of semi-structured interviews. A total of 40 interviews were conducted with directors and analysts working within the mortgage and securitisation markets.
2. Data will be drawn from secondary sources including trade bodies and the financial media to support the findings.

2.3 Structure

The remainder of the report is organised as follows: Section 3.0 will provide a brief overview and history of the development of securitisation in the UK. Section 4.0 will discuss earlier crises of securitisation prior to the global credit crunch. Section 5.0 will briefly explore the unravelling of the credit crunch in Britain, and how securitisation was implicated. Based on an analysis of the securitisation market within the UK, section 6.0 will explore the future of securitisation and suggest its future role in funding British residential mortgages in the short to medium term. Section 7.0 will also detail the implications of a smaller and potentially exclusive RMBS market. The final section will summarise the report.

3.0 A brief overview and history of the UK's RMBS market

3.1 What is securitisation?

Securitisation is a complex financial process that takes the revenue streams from a pool of assets and reengineers those streams to produce a new flow of cash to repay the principal and interest on a new range of bonds[7]. The bonds funded by residential mortgage assets are known as residential mortgage-backed securities (RMBS), but have included many other asset classes including commercial mortgages (CMBS) and generically titled asset backed securities (ABS) that securitize auto loans, corporate and personal loans, credit cards, aircraft and infrastructure.

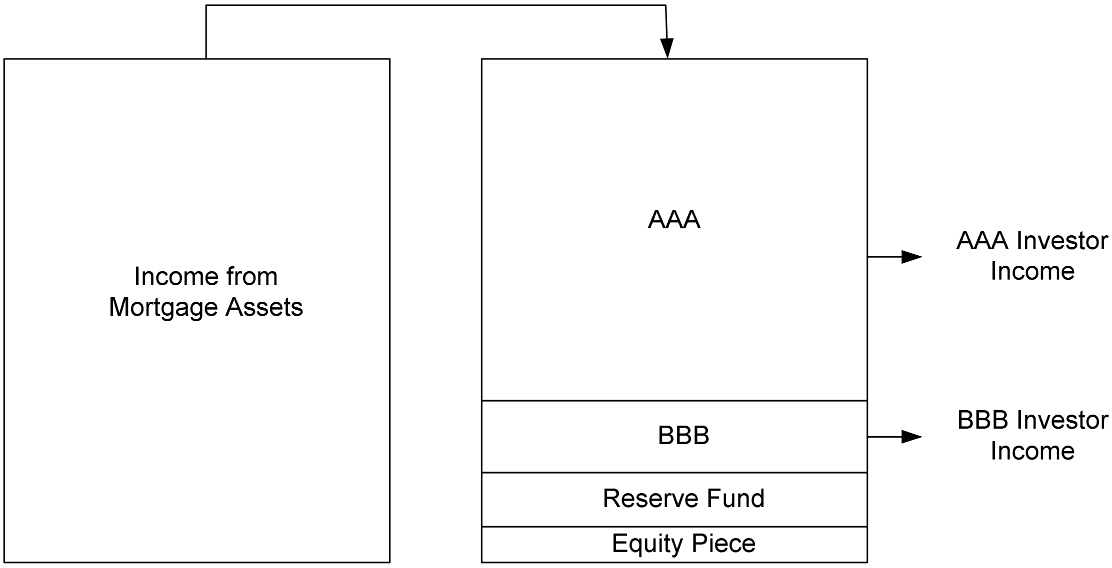
One of the central characteristics of securitisation is the 'waterfall structure' determined by a bespoke mathematical model, which is used to determine which proportion of the revenue from assets flows to particular classes of bond. Instead of spreading the risk of default from consumer mortgages evenly across the bonds, the risk of default is concentrated into particular classes of higher risk – and higher yielding – bonds. Theoretically, for any mortgage backed security this creates a large proportion of low risk bonds and a smaller number of high risk bonds. In an average UK prime mortgage securitisation, at least 90% of the bonds are classified as low risk.[8]

The mortgage repayments flow down through the hypothetical structure of the waterfall structure repaying bonds at the top of the structure first, and so are the lowest risk (known as senior notes – rated AAA) before repaying the riskier bonds last (known as junior notes - BBB). Additional classes of notes are also produced in-between, known as mezzanine notes (for example, AA and A). A reserve fund and 'equity piece', that are repaid last from the mortgage revenues, also protect the junior note investors, from defaults. This process is known as subordination, as illustrated in Figure 1 below:

[7] Langley, P. (2006) 'Securitising suburbia: the transformation of Anglo-American mortgage finance', Competition and Change, 10: 283-299

[8] Wainwright, T. (2010) `It's crunch time': the `lost' geographies of the crisis', Environment & Planning A, 42: 780-784

Figure 1: The waterfall structure



Source: Wainwright, 2009:375.

In theory, the issuance of junior notes should protect the senior note holders from consumer defaults, as any shortfalls in cash are realised by the junior note investors, who are offered higher interest rates, to compensate for the additional risk. In US subprime securitisations, at the heart of the crisis, the number of mortgage defaults were substantially greater than expected, and there was not enough subordination to protect the AAA notes. Even investors that thought they had purchased low risk debt found there were not sufficient mortgage repayments to repay their notes.

Securitisation has enabled mortgage lenders in the UK to convert a range of fixed mortgage assets into bonds that were often rated AAA, which is on a par with sovereign bonds and treasury bills, deemed to be a low risk asset by the international financial community.[9] In addition, this has also enabled lenders to convert higher risk subprime mortgages into investments that could be sold as low risk AAA debt. In turn, this meant that the bonds provided stable returns to investors.

[9] As has been seen recently, the stability of sovereign debt has been called into question by investors and rating agencies within Europe.

There are 3 main advantages to producing securitised notes:[10]

1. **Funding –** Securitisation provides a cost effective mode of funding, enabling a lender to generate immediate returns from long-dated assets, and the ability to secure AAA ratings that reduced the yield required to entice investors in later years.

2. **Meeting Demand –** During the 2000s, decreasing returns in financial markets created demand for higher returns which were provided by securitised products.

3. **Regulatory Capital –** One feature of securitisation, discussed in more detail later, is that the mortgage assets of a lender are moved to a separate company, off-balance-sheet. This has previously enabled lenders to subvert the need to retain regulatory capital reserves under Basel I regulation to cover mortgage losses as they no longer hold the mortgage assets.

Until the breaking of the subprime financial crisis in the US, and the wider global crisis that followed, securitisation was viewed by lenders and many investors as a comparatively effective device for saving regulatory capital, providing cheap funding for mortgage originators, and providing stable returns for investors. Securitisation's link to the crisis through the US subprime markets will be discussed later, but the report will now turn to discuss the roles of several different stakeholders that are involved in the development of securitisation and the associated bonds.

- **Originator –** The originator is the lender that designs, markets, and processes and mortgage assets. Originators then arrange with investment banks and other professional service firms to convert their mortgage assets into RMBS notes.
  - *Centralised lenders* – issue mortgages, but they do not collect deposits to fund mortgage lending through branch networks. Instead, they fund mortgages by raising money through wholesale capital markets.[11] They issue mortgages using warehouse lines, which are overdrafts supplied by investment banks, which they use to issue mortgages, before securitising the assets as bonds. These lenders have used securitisation as a funding tool, but also as it enabled higher risk assets produced by these lenders, including high loan-to-value (LTV), buy-to-let (BTL) and subprime mortgages to be converted into larger proportions of low risk bonds.

[10] Leyshon, A and Thrift, N. (2007) 'The Capitalization of Almost Everything: The Future of Finance and Capitalism', Theory, Culture & Society, 24 (7-8): 97-115

[11] Holmans, A., Karley, N. And Whitehead, C. (2003) 'The mortgage backed securities market in the UK: overview and prospects', CML: London

- *Retail banks* – have used securitisation to reduce their regulatory capital reserves by reducing the capital required to cover mortgage losses under Basel I. Before the recent crisis, larger banks used securitisation as a tool to diversify their funding sources, while smaller demutualised banks with smaller branch networks, used securitisation for funding and growth.

- *Building societies* - have not tended to use securitisation as the process involves transferring their members to another entity, which has not been viewed as an appropriate action, as the members are part of the society structure. However, prior to the credit crunch, building societies have operated subsidiaries that originate smaller volumes of BTL mortgages and subprime mortgages. Securitisation assisted funding these subsidiaries and removed higher-risk mortgages away from the lender and parent building society. This has recently changed as the Nationwide Building Society issued a AAA securitisation in 2009[12].

- **Structurers –** Structurers are usually investment banks that develop the waterfall model, create the notes, market the notes and sell the notes on behalf of the originator. These investment banks also extend warehouse lines to centralised lenders, and create new innovations in securitisation to attract new investors and to reduce transaction costs. However, some larger banks can fulfil certain parts of this process themselves.

- **Legal firms –** Legal firms are responsible for checking that the securitisation structures comply with British law and manage the legal aspects of the transaction. Legal firms are often heavily involved in securitisation innovations to ensure that they comply with tax, property and securities law.

- **Bond-rating agencies** – These organisations produce independent risk metrics for each RMBS transaction that are announced to the market. These organisations check the legal and credit risks, in addition to other factors that may affect the ability of the notes to be repaid. Each class of note conforms to the criteria of each bond-rating agency in order to be awarded a specific rating. These metrics are then used as a brief guide to compare the quality of notes against other notes in the markets by investors. Bonds that have been issued are also continually checked and warnings are issued by the agencies if it is likely that their perceived quality is about to change. In this event, the note's rating is downgraded.

- **Investors** – Investors purchase RMBS notes, and have previously comprised a diverse range of institutions. Investors have included banks, pension and insurance

[12] CML (2010) The outlook for mortgage funding markets in the UK in 2010-2015, CML: London

companies, SIVs, CDOs, asset managers and hedge funds in addition to central banks around the world. The class of note purchased by investors corresponds to their needs and investment aims.

- **Special Purpose Vehicles (SPVs) -** are companies that provide singular roles in the securitisation process, for example, holding the mortgage assets that are transferred from the lender. This is important as the separation of the assets ensure that if the lender goes bankrupt, then the assets repaying the investors cannot be claimed by debtors of the lender.

  This means that low risk ratings can be given to the notes that are to be issued (AAA), as they have no liabilities associated with the lender. The main risks to the securitisation are from the assets but as the revenue streams are reengineered, through the waterfall structures and swaps, AAA notes can be produced. This enables a bank that has an AA rating, for example, to issue AAA notes, which is not possible with other bond issuances, such as Medium term notes (MTNs). This ensures that the cost of the funding is reduced if the bonds are rated as being low risk. Additionally, SPVs use charitable trust ownership structures that reduce the transaction's exposure to certain tax regulations, increasing the efficiency of the transaction. SPVs are also used for issuing the notes too.

- **Corporate servicers/trustees** – provide administrative services for the SPVs. Since SPVs are detached from the lender, and are used as vehicles to complete single tasks such as holding the notes, permanent employees and infrastructure is not required. Trustees provide the administrative and legal services, filing financial records and meeting the legal obligations of these companies.

This group of organisations have contributed to the development of the UK RMBS market. In doing so, they have increased the volume of funding available to lenders, increasing access for many individuals to homeownership, while providing the development of new mortgage products and financial ecologies such as subprime finance, which has also enabled growth within the financial sector.[13] However, the use of securitisation also increased the exposure of the British economy to the externalities of the global financial system, which will be explored later. This report will now turn to explore how securitisation was developed in the US and how it emerged within the UK.

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[13] Burton, D., Knights, D., Leyshon, A., Alferoff, C. and P. Signoretta (2004) 'Making a market: the UK retail financial services industry and the rise of the complex sub-prime credit market', Competition & Change, 8(1): 3-25

3.2 US origins

The history of the UK RMBS market has its roots firmly within the US financial markets and institutions. Modern securitisation can be traced to the US Depression (1929), which witnessed the collapse of many savings and loan associations in the US as homeowners struggled to repay their mortgages. One of the solutions put forward by the government was the development of the Federal National Mortgage Association (Fannie Mae) to use government funds to generate liquidity in the mortgage market.[14] In 1954 Fannie Mae was privatised, but remained a government sponsored entity (GSE), and in 1970 another GSE was created, the Federal Home Loan Mortgage Corporation (Freddie Mac). Both were required by the US government to develop a secondary mortgage market for bonds backed by mortgage assets.[15]

By 1983 Salomon Brothers, a US investment bank, with First Boston, developed a collateralised mortgage obligation (CMO) which, like later RMBS transactions, split the assets from the mortgage pools into different bonds.[16] The US market began to grow, and it was not long before the model moved to the UK. In 1986, the Financial Services Act was passed, which dismantled the monopoly of building societies to issue mortgages in the UK.[17] This enabled established banks to begin issuing mortgages, which they funded using deposits, but it also enabled a new type of lender to emerge in the UK – the centralised lender.

3.4 The rise of the centralised lenders

The centralised lender model was developed earlier in the US, and soon became established in the UK. Centralised lenders do not collect retail deposits to fund mortgages, but use warehouse lines that are refinanced using securitisation. As centralised lenders do not need to establish branch networks, they were able to develop a presence in the UK rapidly, selling their products through estate agents and other intermediaries and later the internet. This

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[14] Gotham, K. (2006). "The secondary circuit of capital reconsidered: globalisation and the US real estate sector," The American Journal of Sociology, 112(1): 231-75

[15] Gatti, J. and Spahr, R. (1996) ‘The value of federal sponsorship: The case of Freddie Mac’, Real Estate Economics, 25(3): 453-85

[16] Lewis, M. (1989) Liar's Poker, London: Coronet

[17] Leyshon, A. and Thrift, N. (1997) Money Space: geographies of monetary transformations, London: Routledge

model was known as the 'originate and distribute model',[18] where mortgages were produced with the intention of disintermediating them after a short period of time.

In 1986, a company called the Mortgage Corporation, a subsidiary of Solomon Brothers' investment bank, was established in the UK.[19] The business used its previous US experience to develop a model of securitising mortgages that worked in the UK that could be disintermediated through the global financial system. In 1987, £1billion of RMBS was issued in the UK, which increased to £3.2 billion in 1988 with the Mortgage Corporation providing most of the origination.[20] The Mortgage Corporation specialised in offering mortgages with looser lending criteria to what borrowers were used to in the UK, including higher LTV products. This was the emergence of a new ecology of subprime finance, where higher risk assets were originated and distributed to investors, where the securitisation process was perceived to have reduced the risks from low risk RMBS bonds.

Prior to the credit crunch, many centralised lenders specialised in producing subprime products including, high LTV mortgages, BTL products, or impaired credit history mortgages. The higher risk was removed from the warehouse lines by securitisation and international investors purchased different ranges of notes.

3.4 Enter the banks

Initially, banks had little initial interest in securitisation in the UK, as they could fund mortgages through their retail and commercial deposits. In 1988 securitisation changed and developed a new role in subverting capital adequacy ratios, when Basel I was introduced.[21] Basel rules stipulated that banks and building societies must retain reserves to protect them from losses on mortgage assets in future financial crises. These reserves were computed by multiplying the mortgage portfolio's value by 8%, and multiplying it by a further 0.5% risk weighting.[22] This meant that banks were forced to increase their reserves substantially to

[18] Dymski, G. (2007) 'From financial exploitation to global banking instability: Two overlooked roots of the subprime crisis', Sacramento: University of California
Center Sacramento

[19] Lewis (1989) Liar's Poker, London: Coronet

[20] Pryke, M. and Whitehead, C. (1994) 'An overview of mortgage-backed securitisation in the UK', Housing Studies, 9(1): 75-101

[21] Holmans, A., Karley, N. And Whitehead, C. (2003) 'The mortgage backed securities market in the UK: overview and prospects', CML: London

[22] Wainwright, T. (2010) `It's crunch time': the `lost' geographies of the crisis', Environment & Planning A, 42: 780-784

protect against losses on their mortgage portfolios. This tied up capital that could be invested elsewhere. This issue was overcome by securitisation, as the process removes the assets from the lender's balance sheet, which negates the need to hold reserves to support those assets. In addition, the banks could continue to service these assets on behalf of the SPV and investors earning them additional fees.

Despite the initial use of securitisation by banks for capital adequacy, securitisation became important for funding too. In 1986, the Building Societies Act enabled building societies to demutualise and to become banks, including Abbey, Bradford & Bingley and Alliance & Leicester.[23] This meant that many building societies could convert their status and use new tools to raise funds and to expand, enabling them to compete with the larger banks that were now offering mortgages. Many of these smaller demutualised banks discovered that they had a limited geographical network of branches, restricting their ability to increase deposit collection, increase their lending, and to generate profits for their new shareholders.[24] With larger volumes of mortgages to fund, growth by expanding the branch network would have been difficult and expensive.[25] Therefore, the demutualised building societies turned to securitisation to fund origination, and intermediaries to sell their mortgages.

As more firms had joined the mortgage market, with the entry of centralised lenders and banks, it became more competitive which required access to larger volumes of mortgage sales using a cost effective mechanism of funding. This was provided by securitisation and the market grew substantially throughout the 2000s.

3.5 Advances in securitisation technology

The growth of RMBS in the 2000s was facilitated by advances in the securitisation structures used by originators. Mastertrust structures were developed to make the transactions more efficient, which also provided reassurance for investors. This expanded and diversified the investment market to include new US investors, which assisted the reduction of yields on the bonds, as higher yields were not needed to attract new investors.

The idea of securitisation was also used to create new products known as structured investment vehicles (SIVs) and collateralised debt obligations (CDOs). These funds would

[23] Martin, R. and Turner, D. (2000) "Demutualisation and the remapping of financial landscapes," Transactions of the Institute of British Geographers, 25: 221-41

[24] Erturk, I. and Solari, S. (2007) 'Banks as continuous reinvention', New Political Economy, 12(3): 369-88

[25] Hallsworth, A. and Skinner, F. (2008) 'Visibly in trouble: Northern Rock, a post-mortem on a financial crisis', Area, 40(2): 278-83.

purchase junior RMBS debt, and other securitised notes, before re-securitising the revenue streams to create new high-rated notes of low risk (AAA). Prior to the crunch these products expanded the market further for UK RMBS, too. As the market grew, currency swaps were used to attract investors from Europe, the US and Canada. By the mid-2000s the UK mortgage market had gone from regionally linked circuits of capital through building societies, to international circuits of capital through securitisation.

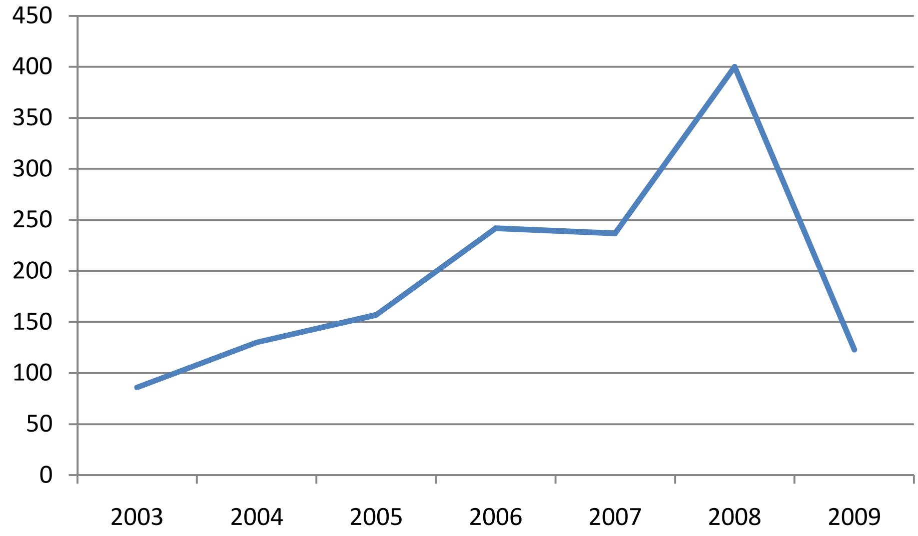
3.6 Securitisation and the UK: Facts and figures

In 2006, shortly before the global crisis, securitisation had grown rapidly in the US and Europe, but also within Asia and Latin America. In 2006 the UK was the largest securitiser in Europe (including all assets) producing $241billion of bonds followed by Germany ($47 billion), Italy ($38billion), Spain ($55billion) and the Netherlands ($36billion). European RMBS issuance accounted for 80 per cent of the total European issuance in 2006.

According to the CML, between 2000 and 2007, the total amount outstanding of UK RMBS and covered bonds rose from £13billion to £257billion, moving their share of funding from 2.5% of mortgage funding to 21.5%.[26] This increased the size of the RMBS market but the emergence of the credit crunch at the end of 2007, reduced issuance dramatically, but not before a substantial increase in 2008 when the market was heavily influenced by the Special Liquidity Scheme (SLS) operated by the Bank of England (Table 1). Once this programme was wound down in 2009, UK securitisation reduced substantially.

[26] CML (2010) The outlook for mortgage funding markets in the UK in 2010-2015, CML: London

Table 1: UK Securitisation Issuance ($Billion)



Source: IFSL 2010.

In 2009, 90% of UK securitisation deals were retained by originators as RMBS investors, broadly speaking, have left the market. The lack of demand for UK RMBS products is reflected in the reduction of transctions and volumes, based on the deals processed by a corporate service provider in 2010, SFM Management (Table 2). When Table 2 (2010) is compared with Table 3 (2007), it illustrates how the RMBS transactions and originators have also changed.

While this data is not representative of the entire market, it provides insight into how the securitisation market and issuers have changed over the past 3 years. Issuance has been reduced substantially; as many investors have deserted the market and notes remain on the originator's own balance sheets, due to the reduced demand.[27] Investment banks have closed warehouse lines, forcing centralised lenders to close or cease origination too.

[27] IFSL (2010) 'Securitisation 2010', http://www.thecityuk.com/media/91183/securitisation_2010.pdf (Accessed: 5/09/2010)

Table 2: SFM Management RMBS securitisations in 2010

Issuance	Transaction	Value	Originator	Type
August	Edgbaston RMBS	£3.70 billion	Bank of Scotland	Bank
July	Fosse Master Issuer Plc 2010-3	£4.00 billion	Santander	Bank
July	Permanent Master Issuer plc, 2010-2	£3.70 billion	Bank of Scotland	Bank
Jun	Fosse Master Issuer Plc 2010-2	£1.70 billion	Santander	Bank
March	Fosse Master Issuer plc	£1.90 billion	Santander	Bank
February	Permanent Master Issuer plc, 2010-1	£2.48 billion	Bank of Scotland	Bank

Source: SFM Management

Table 3: SFM Management RMBS securitisations in 2007

Issuance	Transaction	Value	Originator	Type	Status (2010)
November	Aire Valley Mortgages 2007-2 plc	£1.2billion	Bradford and Bingley	Bank	Purchased
October	Bracken Securities plc	£10.3billion	Alliance and Leicester	Bank	Purchased
August	Eurohome UK Mortgages 2007-2 plc	£500million	DB UK	Centralised	Closed
August	Fosse Master Issuer plc. 2007-1B	£2.5 billion	Alliance and Leicester	Bank	Purchased
July	Uropa Securities plc.	£631million	Topaz Finance	Centralised	Unknown
June	EuroMASTR plc.	£201million	Victoria mortgages	Centralised	Closed
June	Gracechurch Mortgage Financing plc	$12billion	Barclays	Bank	Unchanged
May	Clavis Securities plc - Series 2007-01	£555million	GMAC	Centralised	Closed
April	Aire Valley Mortgages 2007-1 plc	£2.5billion	Bradford and Bingley	Bank	Purchased
March	Pendeford Master Issuer plc	£2.5billion	Halifax	Bank	Purchased
March	Mansard Mortgages 2007-1 plc	£250 million	Rooftop Mortgages	Centralised	Closed
March	Eurohome UK Mortgages 2007-1 plc	£354 million	DB UK	Centralised	Closed
March	Landmark Mortgage Securities No.2 plc.	£358 million	Infinity Mortgages/Unity Homeloans/Amber Mortgages	Centralised	Closed
March	Permanent Master Issuer (No.2) plc.	$4.7billion	Bank of Scotland	Bank	Purchased

Source: SFM Management and author

4.0 Teething Troubles or Problems in the Making?

The history of securitisation is short when compared to more traditional investment products such as shares, government and corporate bonds, beginning in the 1980s. Securitisation has been placed at the centre of debates surrounding the credit crunch, whether it is on the failure of investment banks and bond-rating agencies to identify the true risk of US subprime mortgages and CDOs, or on the importance of securitisation in diverting international capital to fund the UK mortgage market. Although securitisation is undoubtedly implicated in the current crisis, this is not the first time that securitisation has created a financial crisis, or has been drawn into disrepute.

4.1 Case 1: An early subprime market crisis in 1990s Britain?

As discussed earlier, re-regulation in the UK under the Financial Services Act in 1986 enabled the introduction of new mortgage lenders, centralised lenders, based on the US model that utilised wholesale funding to fund mortgages instead of gathered savings from building branch networks. The first centralised lender to operate in the UK, the Mortgage Corporation, offered looser lending criteria, which has much in common with the current subprime market. The Mortgage Corporation was joined by centralised lending subsidiaries from larger institutions including Chemical Bank, Bear Stearns and National Home Loans.[28]

The centralised lender market was disrupted in the 1990s when Britain underwent a recession. High-unemployment, a collapse in the housing market, high repossessions and high-interest rates deeply affected the housing market and the looser lending criteria, witnessed higher than industry average defaults, as highlighted by one interviewee:

> '[T]*he centralised lender-securitised funding model was just not profitable, and it experience higher repossessions, losses, arrears than the industry average. It can be argued that the early 1990s recession killed the idea',* (Interview: Retail Bank Director, 2007).

The Mortgage Corporation was purchased by First National, a building society in Ireland[29], and the centralised lender market went into decline. While the early niche centralised

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[28] Pryke, M. and Whitehead, C. (1994) 'An overview of mortgage-backed securitisation in the UK', Housing Studies, 9(1): 75-101

[29] Cicutti, N. (1996) 'Irish building society buys Mortgage Corp', Independent, http://www.independent.co.uk/news/business/irish-building-society-buys-mortgage-corp-1308728.html (Accessed: 27/08/2010)

lenders had used securitisation to expand rapidly, the 1990s housing downturn curtailed the market, but nevertheless had firmly introduced securitisation to the UK. Despite this earlier crisis, centralised lenders began to reappear in the UK mortgage market in the late 1990s and early 2000s, providing subprime, nonconforming products that were once again financed by securitisation. By 2007 specialised lenders accounted for 7% of UK lending.[30]

4.2 Case 2: An early Subprime crisis – 1990s US

During the 1990s, centralised lenders had become a dominant force in the growing US subprime market. Originators and the structuring investment banks behind the RMBS deals used a combination of methods to protect investors from the defaults that could emerge from these riskier mortgage products:

- **Over-collateralisation** was used, where the value of the pool of mortgage assets is larger than the value of the bonds issued, which provides additional income to repay investors if some of the consumers default on their subprime mortgages.
- **Senior-Subordinate Structures** were used to protect investors, whereby the bonds or tranches of the deal are ordered into varying degrees of risk, through a waterfall structure.
- **Pool Insurance** was purchased to insure losses gained on the mortgage pool, which added more cash to the securitisation structures to protect investors from losses on their bonds.

These techniques reassured investors and satisfied bond-rating agencies that the defaults from US subprime mortgages could be managed, and the subprime market began to grow – financed through securitisation. By 1997, $60 billion of subprime mortgage backed securities were issued, compared to $10 billion, in 1991[31]. This developed an optimistic market of reassured investors who were provided with higher returns compared to other bonds, owing to the higher fees and penalties that were charged on subprime products, while growing volumes of subprime securitisation provided increased servicer fees.[32] As market demand grew, creditworthiness criteria were relaxed to increase origination

[30] CML (2009) 'Largest mortgage lenders, 2008', http://www.cml.org.uk/cml/publications/newsandviews/46/153 (Accessed: 6/09/2010)

[31] Johnson, H., Levy, J. and Temkin, K. (2002) 'Subprime Markets, the Role of GSEs, and Risk-Based Pricing', US Department of Housing and Urban Development, http://www.huduser.org/portal/publications/hsgfin/subprime.html (Accessed: 27/08/2010)

[32] Immergluck, D. (2008). "From the subprime to the exotic: excessive mortgage market risk and foreclosures," Journal of the American Planning Association, 74(1): 59-76

volumes and the securitisation pools began to fill-up with greater numbers of high risk mortgages.

In 1997 default and delinquency rates increased and prepayment rates increased as consumers began to seek new mortgages at lower rates. Originators failed to find investors for the riskier junior bonds, reducing the availability of cash to continue their lending.[33] The investment banks that provided the warehouse lines of funding for centralised lenders, reduced their funding forcing many lenders to file for bankruptcy or to merge with competitors. An additional trigger was the Asian Crisis in 1998 that eroded investor confidence. This reduced liquidity and many institutional investors sought bonds that were perceived to be safer, such as treasury debt, reducing liquidity for subprime lenders. Many of these lenders were purchased by larger financial institutions, whose future subprime lending a decade later would expose these institutions to the credit risk from defaulted mortgages.

[33] Johnson, H., Levy, J. and Temkin, K. (2002) 'Subprime Markets, the Role of GSEs, and Risk-Based Pricing', US Department of Housing and Urban Development, http://www.huduser.org/portal/publications/hsgfin/subprime.html (Accessed: 27/08/2010)

5.0 Crunch Time: From the US to the UK

5.1 The US subprime crisis

After the Asian financial crisis of the late 1990s, the subprime RMBS market in the US had begun to attract new investors and originators began to increase their origination of new mortgage products. Many of the newer mortgage products later contained higher risk mortgages including NINJA mortgages (No Income, Jobs or Assets) and many products were miss-sold, where customers who were eligible for prime products, were sold subprime products and mortgage insurance, at high interest rates.[34] Between 2005 and 2008, delinquencies for all US mortgages increased by 61% while the rate of delinquencies for US subprime mortgages nearly doubled from 12.2% to 23.4%[35].

This model was driven, in part by the originate and distribute model, where brokers were keen to sell products to obtain high commissions, while originators wanted fees and origination volumes to increase their servicing, and to provide investment banks with larger portfolios of assets to securitize. Investors too, were seeking higher returns, due to low yields in traditional markets creating a growing chain of supply and demand. Many Consumers were tempted into homeownership, with low teaser rates, where consumers could refinance their mortgages in the future, having gained a more solid credit rating. Other products known as negatively amortising mortgages, required mortgage repayments that were below the interest repayments required, before the prices increase dramatically. Many consumers did not understand these products, or aimed to remortgage later, using increases in house prices to cover the excess debt that they had accrued.

Increased house building lowered house prices in the US, while increasing financial pressure on subprime homeowners from expensive mortgages caused them to struggle with repayments, increasing defaults and repossessions and dragging the market into a crisis.[36] Decreases in house prices became more problematic as homeowners found themselves in negative equity and repossession auctions failed to recoup costs for investors. Subsequently, the RMBS notes backed by these assets suffered substantial losses, more than was predicted by investment banks and rating agencies, and the junior note subordination was not sufficient to protect senior note, AAA investors. Many investors witnessed substantial write downs on RMBS notes, while the US subprime market was shunned by investors, which later spread to the global RMBS market indiscriminately.

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[34] Aalbers, M. (2009) 'Geographies of the financial crisis', Area, 41(1): 34-42

[35] SIFMA (2008) 'Restoring confidence in the securitisation markets', http://www.sifma.org/capital_markets/docs/Survey-Restoring-confidence-securitization-markets.pdf (Accessed: 7/09/2010)

[36] Johnson, H., Levy, J. and Temkin, K. (2002) 'Subprime Markets, the Role of GSEs, and Risk-Based Pricing', US Department of Housing and Urban Development, http://www.huduser.org/portal/publications/hsgfin/subprime.html (Accessed: 27/08/2010)

Large subprime RMBS bond holders, such as Bear Stearns for example, began to fail and financial institutions reduced their interbank trading, as they were unsure as to which institutions would fail next, but many were also hoarding capital to rebuild their balance sheets from their losses. It was not long before the contagion spread throughout the global financial system.

5.2 The crunch crosses the Atlantic

The dense relationships between New York and London as key global hubs of finance, witnessed the rapid transfer of the crisis to London's financial institutions, and British originators more generally. This had three immediate implications for the UK securitisation stakeholders and mortgage lenders:

1. **US subprime losses:** Many financial institutions located in the UK were exposed to subprime RMBS assets which lost value. Many institutions began to withhold extra cash to shore up their balance sheets. Investments in other troubled financial institutions also placed greater strain upon other British financial institutions.

2. **Interbank Freezing:** As capital markets around the globe began to reduce their lending through the interbank markets, this curtailed their ability to lend to consumers and businesses, providing wider knock-on effects for the economy. This would later reduce consumer confidence and develop credit rationing in consumer credit markets.

3. **RMBS Market closure:** Due to the US subprime crisis, investors moved away from the RMBS market, prime and subprime, in the US, UK and elsewhere. This caused institutions to hoard cash, as opposed to investing, but as investors had grown suspicious over the credit quality of mortgage backed investment products, banks in the UK found themselves unable to issue new securitisations. Centralised lenders had their warehouse lines withdrawn from cash-strapped, risk averse investment banks too, while they were unable to find investors for their RMBS bonds.

5.3 Intervention and a minor boom

In 2008 the Bank of England introduced a the Special Liquidity Scheme (SLS) that enabled banks and building societies to swap AAA mortgage backed securities for government bonds for up to three years. Lenders were only able to securitize assets that were produced in 2007 to prevent new mortgage lending. This accounted for a surge in new issuance in 2008, as banks and building societies attempted to swap mortgage backed assets for government bonds. The intervention sought to stimulate lending between banks, but not to begin new mortgage origination. Lenders were able to use the scheme until the 30th of January 2009, and although the Government anticipated that £50 billion of transfers would occur, £278 billion was adopted by 32 banks and building societies.[37] As centralised lenders are not

[37] BBC (2009) 'Bank of England lent banks 85bn', http://news.bbc.co.uk/1/hi/business/7867355.stm (Accessed 08/09/2010)

deposit taking institutions, they were excluded from this system, as they would not be lending to the financial system. Securitisation markets have remained closed since the closure of this scheme, with a few exceptions, detailed later.

6.0 Future Finance: (Is There) hope for RMBS Securitisation?

This report argues that there is a future for securitisation. After earlier crises, securitisation returned as an important financial instrument and even though the current crisis has called securitisation into question, it will continue to play a key role in British residential finance. However, the role of RMBS and the financial landscape in which it could be used will be transformed after the recovery. While it is difficult to predict the future morphology and scale of the market, some suggestions can be made as to who may use securitisation and how that market will respond.

6.1 Responses: Restoring investor confidence to the markets

SIFMA have stressed that market–led intervention is required for the restoration of investor confidence. They argue that the industry needs to improve the quality of accessible data transaction data; scrutinise securitisation products, and improve disclosure and due diligence for issuers and investors. Reducing information asymmetries are also suggested, as is the need to improve market confidence in bond-rating agencies and their methodologies.[38] The overarching aim is to address deterioration in underwriting standards, overreliance on credit ratings, misjudgements in liquidity risk and shared responsibility of losses.[39]

Despite these suggested improvements, one of the central challenges to face UK RMBS is that at the peak of the market 70% of the RMBS bonds were sold to foreign investors, which while providing diversification, has developed problems as these investors have retrenched to their more familiar home markets.[40] It will be necessary to entice these investors back to UK RMBS. However, SIFMA has argued that this may not be possible until a new investor base has been established, as many leveraged investors such as SIVs and CDOs have left the financial markets[41] and are unlikely to return owing to the inability to gain the necessary funds for leverage. While increased pension fund exposure to RMBS investments could enlarge the market, they seek fixed returns that do not float on LIBOR rates, as do UK RMBS

[38] SIFMA (2008) 'Restoring confidence in the securitisation markets', http://www.sifma.org/capital_markets/docs/Survey-Restoring-confidence-securitization-markets.pdf (Accessed: 7/09/2010)

[39] IFSL (2010) 'Securitisation 2010', http://www.thecityuk.com/media/91183/securitisation_2010.pdf (Accessed: 5/09/2010)

[40] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

[41] SIFMA (2008) 'Restoring confidence in the securitisation markets', http://www.sifma.org/capital_markets/docs/Survey-Restoring-confidence-securitization-markets.pdf (Accessed: 7/09/2010)

notes. Ultimately, investor demand is unlikely to reach 2007 volumes over the next 5 years, creating a significant funding gap[42].

6.2 Return of the centralised lender?

As discussed earlier, the main issuers of UK RMBS have been banks and centralised lenders, and it is suggested that the future use of securitisation centralised lenders will be reduced in the medium term. Currently, many centralised lenders have been forced to cease originating new business as warehouse lines have been cut, and those lenders that have not been dismantled, are currently maintaining their existing portfolios.

The centralised lenders occupied the majority of the non-conforming or subprime market, issuing high LTV mortgages, products aimed at consumers with impaired credit histories and BTL products. These products are perceived to carry additional risk and it is unlikely that investors will develop an appetite for these securitisations in the short term. In 2007, centralised lenders accounted for over 7% of gross lending, but in 2008, this share shrunk to 2% as most had suspended new lending.[43] As centralised lenders require investment banks to offer warehouse lines, to originate mortgages, which were reduced from the crisis, and as the demand for RMB paper remains low, it is unlikely that these mortgage originators will be return to 2007 levels soon.

However, compared to the US subprime market, UK subprime RMBS has been more resilient as products have tended to be near-prime borrowers, in comparison to the US NINJA products. This perhaps explains why Macquarie Bank has offered the BTL firm Paragon a £200m warehouse line, as of late September 2010, to issue BTL mortgages with LTVs of 25%.[44] This could represent green-shoots within the non-conforming market and once the mortgage market recovers, as it did after the 1990s, there may be scope for centralised lenders to increase their originations, especially as there will be demand for non-conforming mortgages from credit impaired, near prime consumers that were affected by the recession.

6.3 In their prime: Banks and funding

Due to the prime mortgages that are securitised by banks, it is most likely that larger retail banks will utilise securitisation in the near future as a mechanism for funding. No prime AAA UK RMBS bonds have failed to repay investors to date. Furthermore, they have not been predicted to make losses unless consumer arrear rates increase beyond the Bank of

[42] CML (2010) CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

[43] CML (2009) 'Largest mortgage lenders, 2008', http://www.cml.org.uk/cml/publications/newsandviews/46/153 (Accessed: 6/09/2010)

[44] http://www.bbc.co.uk/news/business-11426506

England's forecast of 2.8% [45]a rate which is closer to 2.5%, and currently decreasing.[46] Subsequently, investors need to be made aware that securitisation from prime UK originators remain safe investments. After all, the UK's experience of the crisis was not driven by the poor performance of mortgage assets, or securitisation structures, but by the removal of funding from the economy, by the closure of securitisation markets.[47] This explains how Lloyds has managed to partially reopen the UK RMBS market by issuing a securitisation of AAA RMBS in 2009, worth £4billion, as a larger prime lender.[48]

If house prices are set to remain high, which is a distinct possibility due to the scarce supply of property, low stocks of available land and stringent planning rules that limit new house construction,[49] high volumes of capital will be required to fund the high-prices of housing. The CML has argued that deposit funding alone will not meet this demand and that wholesale funding has been driven by a shortfall in deposits[50]. Figure 2 below illustrates how mortgage origination growth has slowed, and also illustrates how deposit growth is fluctuating, which raises questions as to where the large volumes of funding needed to sustain the housing market may originate. The instability of deposits is supported by one of the interviewees:

> *"you need a hell of a lot more in deposits now than you did 30 years ago so...*[securitisation is] *a means of funding just to, you know, for other banks that were richer it guarded against their deposits base...people don't leave their money in banks...*[in the US] *they put it into money market funds, they're playing on capital markets, doing this, doing that, the money that used to hang around bank deposits, just ain't there, there are* [3 leading UK banks] *who are all bloody terrified, and its actually what's happening here too, those deposits aren't nearly as secure as they used to be...if you securitize a bunch of mortgages, you are locking in*

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[45] Total Securitization (2008) `B of E says UK RMBS losses could hit 12 bln' 2(44) 1-12

[46] CML (2009) CML (2009) 'Largest mortgage lenders, 2008', http://www.cml.org.uk/cml/publications/newsandviews/46/153 (Accessed: 6/09/2010)

[47] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

[48] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

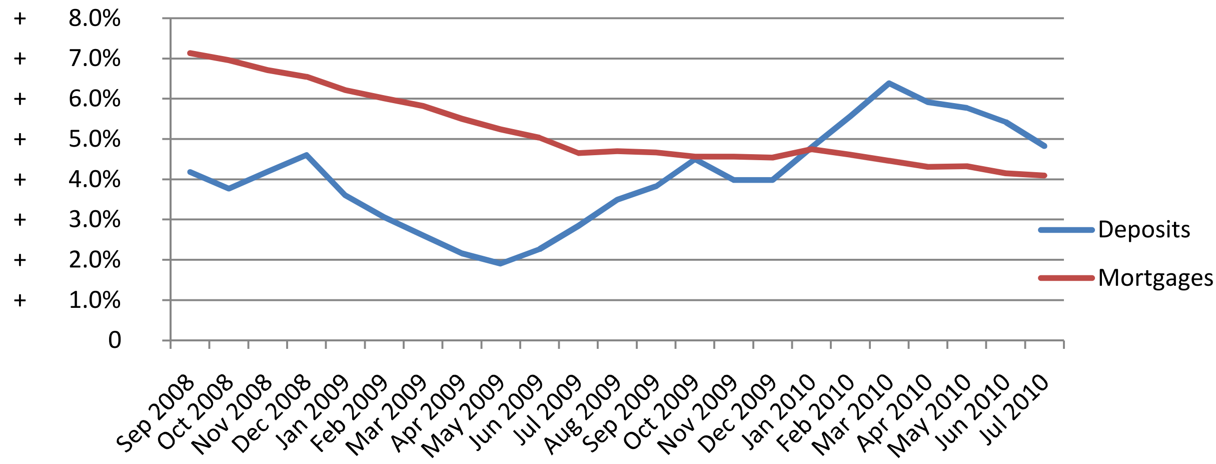
[49] Holmans, A., Karley, N. And Whitehead, C. (2003) 'The mortgage backed securities market in the UK: overview and prospects', CML: London

[50] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

funding and that's attractive," (Interview: Commercial Bank Director, 2007).

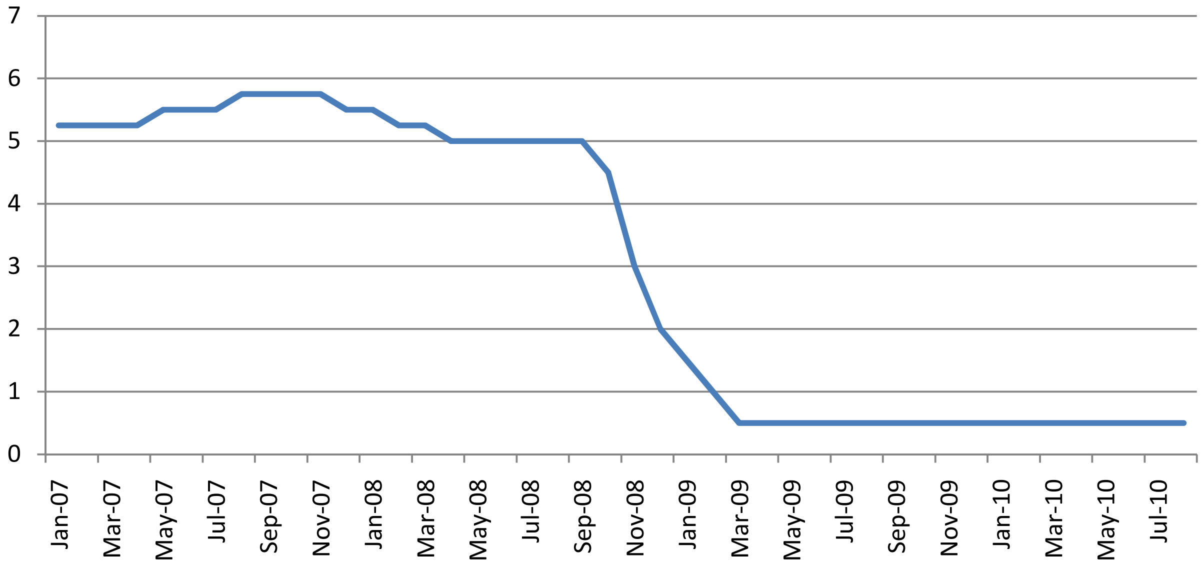
This issue is not assisted by low interest rates which will deter saving either (Figure 3). Further uncertainty in the economy and high unemployment has seen consumers withdrawing savings from banks and building societies and low rates may see consumer investing in non-deposit based products such as shares and unit trusts. Despite this, house prices are beginning to grow (Figure 4), but much of the future origination within the UK mortgage will be centralised by larger financial groups created through the mergers of smaller lenders, such as Alliance & Leicester's acquisition by Santander.

Figure 2: Banks and Building Societies – Deposit and Mortgage Growth



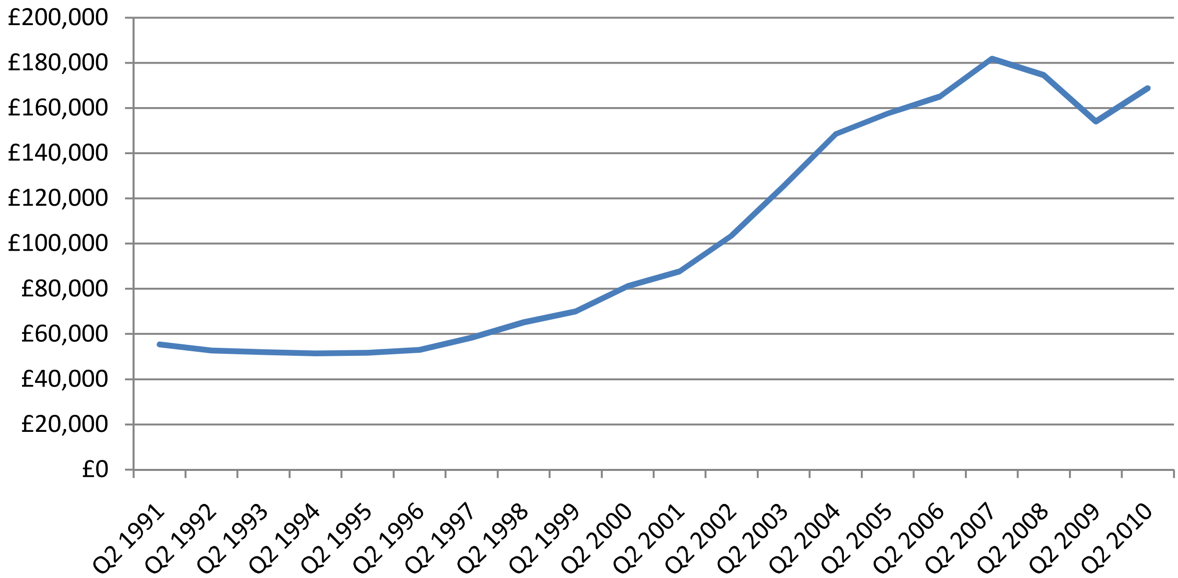
Source: BBA

Figure 3: Bank of England Base Rate (%)



Source: Moneyfacts

Figure 4: Average UK House Prices



Source: Nationwide

The introduction of Basel II after 2004 reduced the incentive to securitize assets for banks, by removing them off-balance sheet. The prime assets originated by large retail banks are viewed as containing less risk under Basel II regulation, although this may change under the new Basel III specifications. Subsequently, the savings made by securitisation to regulatory capital holdings is reduced, and securitisation may become less important in this regard. Despite this issue, larger banks in the UK are also dominant in the mortgage sales sector, and maintaining this position requires large sources of funding to a produce the mortgages and hold onto their market share. Arguably, these lenders will become more dominant as illustrated in Table 4, (between 2007-2008) where origination data shows how HSBC has managed to dramatically increase issuance, and where enlarged lenders such as the Lloyds Group, with HBOS, and Santander, with Alliance & Leicester and Bradford & Bingley, will maintain large shares of the mortgage market.

Table 4: Top 10 Gross Lending in 2007

Lender	Rank 2007	Rank 2008	£bn 2007	£bn 2008
Lloyds Banking Group	1	1	102.5	78
Santander	2	2	48.6	35.2
Nationwide	3	3	35.2	29
Northern Rock	4	11	29.5	2.9
Barclays	5	4	23	22.9
RBS	6	5	22.6	18.7
Bradford & Bingley	7	8	14	5.8
HSBC	8	6	10.1	17.2
GMAC RFC	9	25	9.4	0.4
Bank of Ireland	10	7	8.2	7.2

Source: CML

The established brands and relationships that the larger banks that created before the crisis may assist them in developing new securitisations by securing investor trust, especially if these lenders continue to originate high-quality mortgage assets. The research found that many investors in prime AAA RMBS were repeat customers that had an existing relationship with the banks. The strong position of these banks and trust with investors may enable them to continue to use funding through securitisation in the medium to long-term. Their dominant position and their ability to raise new securitisation capital in the recovery may assist these banks gaining the majority of the market share in the UK mortgage market, by benefitting from the economies of scale of large scale origination.

This factor is important as larger lenders such as Santander may reduce the numbers of individual securitisations, but may increase the volumes and size of transactions, with larger pools of mortgages. This may reduce opportunities for the financial services sector in producing new securitisations, in particular legal firms and investment banks, but which may provide higher fees for the investment banks that will be required to distribute the paper of these larger transactions to a wider range of investors.[51]

6.4 Competition between funding products

Since its original introduction in the 1980s, and its growth in the 1990s, securitisation has been joined by another financial product - covered bonds. Covered bonds have arguably gone further in reducing the role of securitisation as they have been used by a more diverse range of lenders in the UK and investors in Europe are familiar with this type of product. Covered bond have been adopted by building societies, enabling them to produce, high rated AAA bonds, facilitating long term borrowing, and enabling them to raise finance from the SLS in 2009. Larger residential mortgage lenders, including HSBC and Barclays have also launched covered bond programmes. HBOS issued the first covered bond in the UK in 2003, but it was not until 2008 when the UK introduced the Regulated Covered Bond Regulations that regulate the issuance of covered bonds.[52] Unlike securitisation, covered bonds keep the assets on balance sheet, and the assets and lender must meet strict criteria on asset quality by the FSA, which provides additional investor protection.[53]

Another difference to securitisation is that assets in default must be switched from the mortgage pool, and the originator is compelled to share the losses on the transaction[54]. Unlike RMBS bonds where the assets are isolated, if covered bonds, fail to repay the investor, recourse can also be sought from the originator, as the assets in the portfolio remain on balance sheet.[55] Initially commentators viewed covered bonds with ambivalence, providing less flexibility than securitisation, especially as mortgage originators became more

[51] Hall, S., Beaverstock, J. and Wainwright, T. (2010) 'The wholesale-retail interface: Identifying linkages, opportunities and threats for the UK financial sector', Financial Services Research Forum: Nottingham

[52] FSA (2010) 'UK Regulated Covered Bonds: Assuring and monitoring quality and confidence', http://www.fsa.gov.uk/pubs/international/uk_rcb.pdf (Accessed: 6/09/2010)

[53] Rosen R. (2008) 'What are covered bonds?' http://www.chicagofed.org/digital_assets/publications/chicago_fed_letter/2008/cfldecember2008_257.pdf

[54] http://ecbc.hypo.org/Content/default.asp?PageID=503 (Accessed 15/9/10)

[55] http://ecbc.hypo.org/Content/default.asp?PageID=503 (Accessed 15/9/10)

diverse, particularly centralised lenders.[56] However, as confidence in securitisation has been reduced, covered bonds may become more popular, especially as their reputation has not been tarnished by US subprime securitisation. Covered bond issuers regulated by the FSA currently include the originators that will be most likely to securitize, which may reduce the importance of securitisation (Table 5).

Table 5: Regulated covered bond issuers in the UK

Regulated Issuers 2010
Abbey National Treasury Services plc
Barclays Bank plc
Bank of Scotland plc
HSBC Bank plc
Leeds Building Society
Lloyds TSB Bank plc
Nationwide Building Society
Yorkshire Building Society

Source: FSA

Despite this, the FSA has been keen to constrain covered bond issuance as depositors theoretically, would lose out in the event of an originator insolvency as the mortgages are ring fenced for covered bond holders, limiting their recourse.[57] This may provide a role for securitisation after the recovery as part of a diversified funding strategy where banks issue covered bonds and RMBS. As centralised lenders do not use covered bonds as their higher-risk assets will not be covered by strict regulations, but also as they do not seek to keep their assets on balance sheet, they are likely to continue to use securitisation if the market recovers and investors regain an appetite for UK subprime RMBS.

6.5 New kids on the block?

While the number of originators that used securitisation have departed from the market, a small number of new banks have been established, or that are planned, to offer new consumer products across the UK. These include Metro Bank, Virgin Bank and NBNK. It is currently unclear how the business models of these banks will evolve, but it is unlikely that they will utilise securitisation in the short-term, to achieve Basel II savings, or to use securitisation as a funding tool, until they have significant volumes of mortgages with which

[56] Holmans, A., Karley, N. And Whitehead, C. (2003) 'The mortgage backed securities market in the UK: overview and prospects', CML: London

[57] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

to securitize. An associated problem with new originations is that investors that purchase UK RMBS notes, are often repeat customers who do not rely heavily on bond ratings, but have undertaken previous due diligence. Establishing a reputation for these newer lenders to attract investors in the medium term may be more difficult. This is problematic as newer lenders especially, centralised lenders, often have difficulties in attracting new investors, requiring higher yields on their RMBS notes, making them a more expensive funding tool.

6.6 Summary: Who, when and why

It is argued that the UK RMBS market will not return to ‘normal’ until investors are reassured, international investors develop cash surpluses, and the returns on other assets decline, where RMBS bonds become competitive. Due to restructuring within the mortgage industry, it is more likely that larger banking groups, containing demutualised lenders, will remain at the forefront of securitisation issuance when the market recovers, in the medium term. Their use of securitisation will be for funding rather than capital adequacy purposes, meaning that covered bonds may become a key competitor to securitisation, although securitisation will provide funding diversity. It is anticipated that centralised lenders will have to wait until after the prime RMBS market has recovered until investors are attracted to the subprime market again. The recovery in the prime RMBS market will lower yields in the market, that will make it cheaper to issue subprime, high LTV securitisations are purchased by investors. Currently, the high yields required by investors in prime RMBS would be higher for subprime RMBS that could possibly make the pricing for consumer mortgages through the centralised model uneconomical in the short term.

7.0 Implications

There are five main implications that can be deduced from the research findings which will affect different stakeholders within the financial sector, which in turn, will have wider ramifications for British society:

7.1 Originators may continue to raise capital by issuing RMBS bonds, especially larger banking groups that have merged, which may increase the size of the transactions but that may lower their frequency. This may lead to a reduction in the volume of business for professional service and financial firms that provide essential input into the securitisation process, curtailing demand more widely in this niche industry.

7.2 Consumers will continue to be affected by the disappearance of a UK securitisation market. A reduction in available capital for originators from the loss of securitisation as a funding mechanism has reduced the volumes of money available for lending which has created credit rationing. This will create further problems for first-time buyers who, while benefitting for lower Bank of England Base rates, will continue to struggle to afford the higher deposits required to access the most affordable interest rates. If the Browne Review recommendations are implemented on university funding, increasing student debt, this could also undermine demand in the mortgage market in the future. A reduction in disposable income for graduates, servicing debt, would reduce savings required for deposits, removing these individuals from housing chains, potentially reducing demand for mortgage products. Overall, credit rationing will reduce the numbers of originations and will lower loan to value ratios, reducing the profitability of mortgage lending to financial institutions. Reduced demand for mortgages will also decrease the fees paid to mortgage providers.

7.3 Subprime consumers in particular will struggle in the medium term. The closure, or reduction, of warehouse lines and a reduced interest by investors into UK subprime RMBS has reduced the number of subprime mortgage products for consumers with adverse credit histories. This will reduce the ability of individuals with adverse credit histories to access mortgages at affordable rates, if at all. Individuals with impaired credit histories could also find it difficult to obtain financing, which may be problematic for homeowners who want to move, but are unable to obtain finance for a new mortgage. This could become a larger issue for responsible consumers who cultivated strong, low-risk credit records before the crunch, but have struggle during the downturn. While these individuals may perform well in the recovery, and may be low risk consumers, they will be marred with impaired credit records, as a legacy from the credit crunch. This will also reduce the profitability and ability of lenders to operate in this market, although this may change sooner in the BTL market.

7.4 For mortgage issuers, the mortgage market will potentially change and bifurcate, creating a smaller number of mortgage issuers who originate the majority of mortgage products. Larger originators that have access to securitisation, either as markets improve or through private placements, will be able to raise larger volumes of funds at potentially lower rates than their smaller competitors. This may reduce competition within the UK mortgage market and may place further funding pressure on building societies and smaller retail banks which may be reliant on different sources of more expensive short-term funding, or by using more expensive branch networks to obtain savings to fund mortgage origination. These lenders may have to consider seeking new modes of funding. Large banks by comparison may be able to grow their shares of the UK mortgage market, increasing profitability, and enabling cross-selling of other products to their mortgage customers. Overall, this may strengthen larger banking groups further, driving returns from economies of scale. Increased opportunities for cross-selling other financial products to mortgage-holders could also be created, which may affect other financial institutions that do not issue mortgages.

7.5 Arguably, consumers and financial institutions remain at risk from a future recession that could be triggered by a similar set of circumstances to the 2007 credit crunch. Policy makers need to be aware that there is a risk that a similar financial crisis based on the UK's experience of the 2007 credit crunch could occur in the future, with damaging consequences for consumers and financial institutions. If the market recovers to the volumes of RMBS issued in 2007, or indeed exceed those volumes, then future crises in global liquidity may create a similar impact on the UK financial system, as experienced in the 2007-2008 crisis. Policy makers need to consider the additional risk brought to the financial system by unsustainable house price increases, and the volumes of external money needed to fund the UK property market. Consideration should be made to increasing the provision of affordable housing for private purchase and the development of long-term, quality rental markets as an alternative to private homeownership.

8.0 Summary of Findings and Implications

This report has responded to the initial aims and objectives by reviewing the findings of an earlier project which investigated the development and operation of RMBS securitisation in the UK and the emergence of the credit crunch in 2007. The research findings in this report relate to:

1. How securitisation emerged as a consequence of new regulation in the UK financial sector

2. How securitisation has experienced previous crises

3. What the future market for securitisation may look like

8.1 New modes of funding

- The research discussed how securitisation was developed in the US and transferred to the UK, by foreign financial institutions.

- Their ability to do so was a response to deregulation in the financial services industry in the 1980s.

- The originate and distribute model of mortgage origination was used by new organisations, who borrowed money directly from capital markets which disintermediated securitised bonds to mainly UK investors.

- Banks later began to use securitisation to reduce capital adequacy ratios.

- Innovations including the Mastertrust enabled new types of RMBS bonds to be issued that were attractive to international investors, which increased the size of the market for UK RMBS.

- These innovations were used aggressively by demutualised lenders to increase their market share and increase origination, while overcoming limited branch networks.

- The additional funding enabled new products to be developed, such as subprime mortgages, and developed more competition within the UK mortgage market.

8.2 Earlier crises and recovery in securitisation

- Securitisation has been implicated in previous financial crises in the US and the UK.

- Despite these setbacks, securitisation became central to mortgages lending in the US and UK, becoming more important, prior to the latest crisis.

- During the 1990s, US centralised lenders had grown their subprime lending dramatically, using over-collateralisation, senior-subordinate structures and pool insurance to reassure investors into purchasing these riskier transactions.

- In 1997, US default and delinquency rates increased, and originators failed to find investors for the junior notes, which saw warehouse providers reduce, or shut funding lines.

- The Asian Crisis in 1998 witnessed a 'flight to quality' by investors, fleeing US subprime RMBS, but later returned in the 2000s, seeking high yields.

- During the early 1990s, centralised lenders operating in Britain experienced large numbers of defaults, based on rising unemployment, a collapse in the housing market and high-interest rates.

- Lenders, such as the Mortgage Corporation were placed under stress and sold, but in the late 1990s and early 2000s, centralised lenders began to appear, as standalone organisations, or as subsidiaries of investment banks, and building societies, specialising in subprime and buy-to-let products began to emerge.

- As the UK securitisation market developed, international investors began to channel money into UK real estate.

- While this assisted growth in mortgage origination, the British mortgage market became dependent on international investors and liquid capital markets.

8.3 Securitisation for the future?

- The UK's financial problems did not emerge from poor lending quality in the UK, but from the closure of the credit markets and an over reliance on external funding for mortgage lending. As such, UK prime RMBS AAA notes have not failed to repay investors in their entire history.

- Investor demand for RMBS will not return to 2007 levels for at least the next 5 years, if at all[58]. This will be compounded by the disappearance of leveraged investors that purchased RMBS notes, but demand will also be depressed by investor uncertainty around securitised products in general.

- If housing prices are to be sustained, which is likely, due to the UK's limited supply of housing and land, external funding such as RMBS will be needed to fund lending as deposits in banks are not large enough to meet the funding gap.

[58] CML (2010) The outlook for mortgage funding markets in the UK in 2010 -2015, CML: London

- This issue is compounded by lower consumer deposits, owing to investments in other assets, rather than cash, low interest rates and unemployment.

- Larger lenders have been active in private AAA placements, due to their prime origination and to maximise relationships with investors through trust. However, these transactions are small and limited, but do suggest a renewed interest in securitisation.

- Covered bonds have become more popular and may displace securitisation's important as Basel II does not require them to hold larger regulatory capital reserves, but also as they provide greater recourse to investors.

- Centralised lenders will struggle in the immediate future to begin issuing securitisation as the increased spreads would increase the costs to consumers. Investors are also risk averse and seeking a flight to quality, which may exclude AAA bonds, backed by non-conforming assets.

- New banks are unlikely to utilise securitisation as they may struggle to find investors willing to purchase RMBS from an originator with a short track record, when established securitisers are seeking to issue tested RMBS programmes to a constrained market.

- The need to fund the UK residential mortgage market through securitisation may place the economy at risk of a similar 'credit crunch' event occurring in the future. Policy makers need to investigate interventions to manage house price increases and to diversify housing provision away from private ownership, to reduce the pressure on the securitisation market.

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10.0 Appendix: Methodology

This section of the report will outline:

- Why semi-structured interviews were chosen
- Information on the interviews
- How the data was analysed

10.1 Why semi-structured interviews?

While it is recognised that quantitative research methodologies can be used to provide robust theories, modelling and theory construction through the rejection of hypotheses, the collection of quantitative data was not viewed as a practical research strategy in this project.

Obtaining commercially sensitive data would have been difficult and questionnaire surveys of financiers would have been problematic as the different roles, job experience and companies would not have generated a comparable or robust dataset. This problem of obtaining a satisfactory number of respondents of analysis is also problematic, as identifying the correct respondents in a relatively small niche industry is difficult, a problem that became more apparent, as many institutions were adversely affected by the unfolding of the crisis, making it more difficult to obtain sufficient responses for analysis.

The development of case studies through semi-structured interviews was deemed appropriate, as it provided detailed insight into the workings of the UK RMBS market. These interviews enabled the researcher to develop understandings of how securitisations were created and sold from the perspectives of originators to investors, which included the views of newer, junior analysts, but also senior and experienced financiers. This research strategy enabled the project to develop regulatory, social, and cultural insights into the history of securitisation, and perhaps more importantly, the market's future.

10.2 Information on the interviews

The fieldwork and interviews were undertaken in 2007, as the effects of the credit crunch began to unfold in the UK. A total of forty semi-structured interviews were conducted in the UK, with building societies, retail banks, centralised lenders, legal firms, investment banks, bond rating agencies, trustee firms, corporate service providers, credit referencing agencies and investors. The interviews were conducted with directors and associates, who worked on the different aspects concerning mortgage production and securitisation. These roles include the development of mortgage products, through to structuring, sales, and the purchase of RMBS notes.

Participants were selected by choosing originators that featured in the Council of Mortgage Lender tables, to gather a range of originators, while industry publications through the financial media were used to trace other key individuals involved in legal issues and structuring. This included reviewing the documentations and prospectuses that were available for RMBS transactions that were issued from different lenders.

The majority of the interviews were undertaken in London, with others in Edinburgh, and the rest around the UK. It is not possible to detail the exact locations and numbers as this could risk revealing the organisations and individuals that were interviewed which would breach the confidentiality extended to participants. The average interview lasted for 1 hour but also included interviews of up to 2 hours, complete with telephone and emails to answer additional questions.

10.3 How the data was analysed

The interviews were transcribed and details of the respondents, their organisation and product names were removed to protect their identities. These transcripts were then coded and abstracted for analysis to develop an understanding of the development of mortgages for securitisation, the structuring and sales processes. Data from different respondents was then compared and contrasted to develop insight into the market, which was combined with existing academic theories which were built upon, or challenged.

This report contains additional data from publically available reports that include more recent data and statistics, available through the financial media and trade bodies with which to support the findings.