An evidence-based review of MMR proposals on responsible lending

Introduction

1. This article presents the results of internal CML research, to simulate the potential effects of the FSA’s proposals on responsible lending as set out in its Mortgage Market Review Consultation Paper, CP10/16.

2. The proposed requirements we look at in this analysis are:

   (a) that lenders assess affordability, by looking at mortgage applicants’ expenditure and income, to gauge whether the consumer can afford to repay the loan;

   (b) that lenders assess applicants’ ability to repay the loan on a full capital-plus-interest repayment basis, even if some or all of the loan is to be on an interest-only basis;

   (c) to assess applicants’ ability to repay the loan over the course of a maximum of 25 years, even if the actual term is to be longer than this;

   (d) to apply a “buffer” to the affordability test for applicants with impaired credit history – the FSA’s initial proposal is to reduce the disposable income by 20%;

   (e) to apply an interest rate stress test (above initial rate) to the applicants’ ability to repay, to assess whether the loan is affordable not just at the outset, but over a range of plausible interest rate environments.

3. We do not attempt to look at other proposals in the CP, including:

   (a) requiring lenders to verify income in all cases;

   (b) requiring lenders to check plausibility of income for mortgage terms stretching beyond the applicants’ state retirement age;

   (c) requirements specifically for the non-bank sector;

   (d) other intangible impacts, for example the requirement to take into account foreseeable changes in borrower circumstances.

Executive summary

4. The following high level results can be identified from this analysis:

   - Taking the FSA’s 35% illustrative payment to income (PTI) ratio as a baseline threshold for an affordable mortgage debt burden, 16% of the loans that were completed between Q2 2005 and Q1 2009 might not have been granted had a detailed income versus affordability assessment been required;

   - In its own simulation work, set out in CP 10/16, the FSA indicates that 17% of borrowers would have been affected by the proposals over this period, tallying fairly closely with our own base finding above. But FSA has since confirmed that its analysis simulates the impact solely of lenders undertaking an affordability assessment (using a methodology largely comparable with our own), and not of any additional proposed requirements it sets out in the paper;

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¹ Our assumption is that the requirement for borrowers to provide verifiable evidence of income would exclude only a very small cohort of borrowers from obtaining credit. Most would be able to provide this evidence, albeit at greater time and cost than they would have were income-non-verified lending permitted. Further, the data does not allow us to identify with any precision that cohort of borrowers that would be unable to provide such evidence and would therefore be excluded.
• We estimate that the additional requirements of assessing affordability on a maximum 25 year term, on a capital-plus-interest basis and adding a 20% income buffer for those applications where the borrower had impaired credit history would mean instead of 16%, this would rise to around 32% of the total;
• Building on top of this a 2% interest rate stress test (above initial rate), this proportion rises to 51% of the total - around 4 million loans - that might not have been granted;
• Our own analysis therefore indicates that the total number of borrowers potentially affected by the FSA’s proposals looks to be significantly higher than the figures set out in CP 10/16;
• Although the proposals would make significant impact during the peak of the market cycle, it appears that pronounced effects on lending volumes would be felt even at the most depressed periods in the cycle, resulting in an unintended obstacle to housing market recovery;
• The FSA proposals disproportionately affect specific groups of borrowers – in particular first-time buyers and borrowers with impaired credit history, and these findings will have specific implications for mortgage and housing market dynamics;
• We have also modelled the effects of the FSA proposals, in terms preventing payment problems weighed against preventing lending to borrowers who are good credit risks. This analysis looks at loan payment problems at one point in time (August 2009) and so needs to be interpreted with caution, as loans may have a different performance profile both before and after this point. Nonetheless it allows us to go further into detail on performance than has hitherto been possible, and is the same performance data set used by the FSA in its own analysis;
• Each additional element of the FSA’s proposals on affordability assessment would result in greater volumes of arrears and possessions cases prevented, but at the same time ever greater numbers of borrowers denied credit without evidence that they then encountered payment problems. Under the FSA’s proposals (in combination) 151,000 arrears cases and 38,000 possessions might not have occurred, but under the same assumptions 3.8 million “good” loans (those with no evidence of payment problems) would not have been granted;
• The relative costs and benefits of the proposals differ significantly across borrower types. Modelling all of the FSA proposals in combination, the FSA’s proposals might have affected over 80% of all loans to borrowers with impaired credit history, but over 20% of these loans were in payment difficulties in 2009. But in stark contrast to this only 5% of the first-time buyer loans that would have been affected had any recorded payment problems. This means 95% of affected first time buyer loans – around 730,000 over the period – would have been affected but had no recorded payment problems;
• In considering appropriate restrictions on lending activity, a key factor must be the balance between restricting unaffordable borrowing and minimising unnecessary market exclusion – and its associated negative impacts on market liquidity and dynamics. Doing so will help provide a stable mortgage market which is able to respond effectively to UK consumers’ housing needs without undue risk to borrowers.

Results

5. The methodological framework for the analysis presented here is set out in Appendix 1. Our base data set – the RMS - comprises around 95% of all regulated loans taken out since April 2005. For this analysis we use the time period Q2 2005 to Q1 2009, in order to replicate the FSA’s approach as far as possible. Within this we exclude lifetime mortgages (which would not be affected by these proposals on affordability), and a small number of records which contained spurious data on relevant fields (loan amount, gross income or mortgage term). This gives a total of 7.8 million new regulated loans completed in that period.

6. As a first step we simulated the effect of lenders having been required to undertake an income vs. expenditure assessment for each loan taken out over the period for which we have data. Like the FSA in its own analysis, our proxy measure for the affordability assessment is to use a payment-to-income ratio (PTI) threshold, above which loan applications are likely to have been rejected under such an assessment. We have used the FSA’s two illustrative thresholds - 30% and 35% as plausible illustrations of the PTI threshold.

7. It should be stressed, as the FSA have in the CP, that the use of any particular PTI threshold does not indicate a statement of policy by FSA. Our baseline case is that 35% PTI (the more “lenient” of the two thresholds) is the more appropriate proxy of the two. We have chosen this so that our
findings, as far as possible, are based on the same assumptions as the FSA’s. However we, like the FSA, recognise that this proxy measure can only be used to generate plausible, but illustrative, figures to measure the effects of the proposals.

8. In practice an income vs. expenditure assessment will translate to a different PTI affordability threshold for each borrower, depending on their other (non-mortgage) commitments, spending behaviour and credit history. Additionally, 35% PTI may not be the appropriate threshold level for the borrowing community on average, although it is based on academic literature review conducted by the FSA, as to plausible ranges of mortgage debt burden. And because this threshold concurs with FSA methodology and the basis on which it presented its own findings, it allows us to simulate effects using the same working assumptions as the FSA has done.

9. Using 35% as our calibrating PTI threshold our analysis indicates that, had each loan application over the period undergone such an affordability assessment, some 16% of the volume of loans that were taken out between Q2 2005 and Q1 2009 might have not been granted. Note that this figure is naturally very sensitive to the threshold level used. If we took 30% PTI as the appropriate calibrating threshold, this proportion would rise to 32% of mortgages that might not have been granted. But if we take 40% as the appropriate PTI threshold proxy, the figure falls to 8% of loans affected.

10. If, as well as formally assessing affordability on this basis, lenders had assessed all loans on a capital-plus-interest basis (regardless of the actual repayment basis of the application), we estimate that the proportion of loans that would have not been granted would have risen from 16% to 29% of the total.

11. The incremental effects of the proposed requirements that lenders assess affordability for each loan on a maximum term of 25 years (again regardless of the actual term) and build in a net income buffer in the affordability assessment of 20% for applicants with impaired credit history are more modest – the proportion of loans that might not have been granted rises from 29% to 32%. The modest effect of the disposable income buffer is unsurprising, given the low proportion of mortgages that are to borrowers with impaired credit (well under 5% of all mortgages in the period).

12. Our approach to modelling an interest rate stress test is based on the FSA’s initial proposals. For each loan we simulate the effects on mortgage payments of a fixed rate rise above the initial rate charged or a flat overall 6% interest rate (the average of lender SVRs over the period covered by our data), whichever is the higher. The results from our basic interest rate stress test modelling indicate that even a modest stress test has a quite significant effect on the number of loans that might not have been granted.

13. Starting with the assumption that all the FSA’s proposed requirements as modelled above were in place too (giving 32% of loans in that period that would have been affected), an interest rate stress test of the maximum of a 1% rise above initial rate and a 6% overall rate would translate to an additional 11% of loans (43% in total) that might not have been granted. A 2% stress test would translate to a total 51% of loans that would have been affected. Grossing this up would translate to a total of around 4 million of the regulated loans that were advanced over the period 2005 Q1 through to 2009 Q1.

14. The range of potentially excluded borrowers is set out in full in Table 1. It is important to note that our analysis is not expected to tally precisely with that of the FSA. However in Annex A of CP 10/16, Table 6 indicates a figure of 17% of borrowers that would have been affected by its proposals, had they been in place over the period (using 35% PTI as their calibrating threshold).

15. Although it is unclear from the wording within the CP, subsequent conversations with the FSA indicate that the figures presented in Table 6 of Annex A do not attempt to quantify the effects of any additional measures (requirements of assessment on a capital-plus-interest, maximum 25 year term basis with a 20% net income buffer for borrowers with impaired credit history and an interest rate stress test). Rather FSA is merely simulating the proportion of loans that would have failed a 30%/35% PTI test. So it is comforting that our base results tally broadly with this. But more important is the finding that the total number of affected borrowers looks to be substantially higher than the number set out in the FSA’s analysis, because it has only looked at one element of its proposals.
<table>
<thead>
<tr>
<th>No additional requirements (above affordability assessment)</th>
<th>max. 50% affected Loans</th>
<th>max. 45% affected Loans</th>
<th>max. 40% affected Loans</th>
<th>max. 35% affected Loans</th>
<th>max. 30% affected Loans</th>
<th>max. 25% affected Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Then if all loans were assessed on:</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>capital-plus-interest basis</td>
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<tr>
<td>max 25 year term</td>
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<tr>
<td>Impaired credit buffer applied</td>
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<td>10%</td>
<td>67%</td>
<td>75%</td>
<td>81%</td>
<td>86%</td>
<td>90%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Source: CML Research, augmented by historic Regulated Mortgage Survey (CML/BankSearch)

Notes:
1. Simulation based on loans taken out between Q2 2005 and Q1 2009.
2. Interest rate stress test is calculated as the maximum of 6% annual rate and x% on top of initial interest rate charged. The 6% element of this is factored in so as to mitigate particularly low initial "teaser" rates and becomes entirely redundant at all stress test levels of 6% of more.
3. Impaired credit history as defined by FSA.
4. Affected loans are those for which, when affordability is assessed on the basis of the FSA's proposals would have a PTI ratio of over the stated threshold.

16. As the FSA highlights in the CP, the fact that some mortgages that were granted fell above a certain PTI threshold (a proxy for failing an affordability assessment) does not necessarily mean the applicant would not have been able to get a mortgage at all. Such borrowers could potentially have taken out smaller mortgages such as would have allowed the application to pass the affordability assessment. The FSA makes the assumption that any loan which initially fails the 30%/35% PTI threshold test, but could pass this test given a "haircut" in the loan size of not more than 30% would have been granted, but at this lower level. Loans for which even a 30% haircut would not bring PTI down to under 30%/35% were deemed “unaffordable” by the FSA. That is, these loans would not have been granted on any basis.

17. There are a number of problems associated with this approach. Firstly, the 30% at which the haircut is set is arbitrary. The specific percentage used has a direct bearing on the resulting split within the total number of affected borrowers, between borrowers that would have obtained a smaller mortgage and those who would have obtained no mortgage at all. The FSA’s analysis, using this 30% haircut, indicated that virtually all borrowers falling over the 35% PTI threshold (16.7% of all mortgages) would have been able to obtain a reduced mortgage with up to a 30% reduction in loan size. Only 0.1% of all borrowers would have been prevented from getting a mortgage at all. But if the haircut were set lower than this arbitrary 30%, the proportion that would have been denied mortgage credit entirely would rise significantly.
18. Following on from this, it is not necessarily the case that with a reduction in loan size of up to 30% (or in fact any given reduction) all these borrowers would be able to obtain a mortgage that they needed. There is an important difference here - between mortgage want (the actual loan applied for, or in the case of our data the mortgage actually granted) and mortgage need (a loan of a lower value that is still of use to the borrower). And the extent of the gap between these, if there is one, is the level of possible haircut.

19. The factors affecting mortgage need are different for different types of borrower. In the case of homebuyers, consider an example of a borrower with two children needing to buy a two bedroom property in commuting distance from their place of work. This borrower might not be able to buy such a house with a 30% haircut to the loan that they had originally applied for. The same could be true for a 20% haircut, or a 10% haircut. So the determination of what such a haircut could be and still serve a homebuyer’s mortgage needs is a very important consideration.

20. For remortgagors, the considerations are different. Taking first the example where a borrower simply needs to refinance the loan without taking out any additional money. If such a borrower would not qualify for a remortgage loan on the basis of an affordability assessment, they are stuck with their current mortgage, which should logically be on a higher rate or otherwise have higher costs than the one applied for (or else why would the borrower look to refinance)? A smaller loan would not serve such a borrower’s mortgage needs, however small the haircut, unless the borrower had additional funds they could use to pay off the remainder of the value of the existing loan.

21. For remortgagors looking to draw additional money, the implications of needing a haircut on the loan size may be different. In addition to the possibility the haircut would take them below the level of their current loan (in which case they have the same problem as simple refinance mortgagors as set out above), their mortgage needs may also not be served if they were seeking to use the additional money to consolidate unsecured (and more expensive debt), or if they were seeking money for home improvement, for example to build/convert additional space in their property to accommodate additional family members. If the haircut would remove these additional funds, then their mortgage needs would not be served.

22. Because we cannot accurately identify the value of mortgage needs in this way using the data available, we cannot meaningfully differentiate between borrowers who would have been denied credit and those that might have obtained a mortgage which was smaller, but still of use to them given their circumstances. So we have not attempted to model this in the same way as FSA has. However Chart 1 below shows the proportion of different types of borrowers that would be affected by the FSA’s proposals, taking the 35% PTI threshold as the appropriate proxy for an affordability test, and incorporating all of the additional proposals (assessment on a 25 year, capital-plus-interest basis, income buffer for borrowers with impaired credit and a 2% interest rate stress test).
Chart 1: Proportion of borrowers affected by FSA proposals on affordability

Source: CML Research, augmented by historic Regulated Mortgage Survey (CML/BankSearch)

Notes:
1. Definitions as for Table 1.
2. Proportions shown are based on a 35% PTI threshold, and all loans assessed on a basis of capital-plus-interest, maximum 25 year term, income buffer for borrowers with impaired credit and a 2% interest rate stress.

23. Chart 1 demonstrates that although our simulation suggests 51% of transactions overall would have been affected, there are considerable differences in the impact on different types of borrower. In particular, four fifths of borrowers with impaired credit history would have been affected. Whilst the credit-impaired market is small – under 5% of total regulated transactions even at the peak, and less than 1% currently, it plays an important niche role, not least in helping consumers repair previous credit problems and remain in home ownership. And although this sector has naturally higher default rates (and so one might expect the FSA’s proposals would be particularly effective in preventing defaults in this sector), the modelling here indicates that the FSA’s proposals could potentially have a dramatic effect on the ability of the market to cater for such borrowers.

24. More significantly for market prospects – not least in terms of housing market liquidity - the proposals would affect almost two thirds of first-time buyers – equating to around 780,000 first-time buyer loans advanced in the period 2005 Q1 to 2009 Q1.

25. As stated above, these figures are illustrative, however they are based on the FSA’s suggested appropriate proxy PTI threshold for an affordability test. So if the FSA’s proxy is a workable one then these figures ought to be a reasonable indication of the orders of magnitude of the effects of FSA’s proposals. And they indicate that the impact on borrowers’ capacity to access mortgage credit going forward is significantly higher than set out in the FSA’s paper.

Fewer defaults vs. fewer performing loans

26. There are several questions that follow on from these findings. One of the most important is whether those borrowers that would have been affected (had these proposals been in place over the past 5 years) would have been better off without the loan or not. The FSA has looked at the benefit to consumers in terms of lower arrears and possessions charges, as well as the “human” benefit of those borrowers not having to experience arrears or possession. To do this it has used the “PSD arrears” dataset, which CML collected on behalf of the FSA in 2009. This dataset is described in Appendix 1 of this paper.

27. Using our own copy of these data we have also simulated the effect on arrears and possessions. For technical reasons our data set for the purposes of this exercise is around 10% smaller than that used by the FSA. However it still covers some 250,000 arrears and possessions cases and is a representative sample of all sectors of the market. As such, whilst we would not expect our results to tally precisely with those from the FSA, we assume they can be grossed up to broadly estimate total market impacts in the same way as the FSA’s.

28. Using the PSD arrears dataset, FSA estimates that, if 35% is the appropriate PTI proxy threshold (over which a loan would be likely to fail an affordability test) 55,300 mortgages that were in arrears as at August 2009, and 16,900 possessions that occurred between April 2005 and August
2009 would have been prevented. It is important to remember that the FSA has modelled only the effect of the affordability assessment itself, and not any of its additional proposed requirements beyond this.

29. Although the FSA has estimated the reduction in arrears and possessions it has not (to date) directly compared this against the volume of borrowers who would have been affected by the proposals but did not experience arrears or possessions.

30. Using our own version of the PSD arrears data we have looked at this question. Table 2 below demonstrates the proportion of affected borrowers, split by their performance (as measured in the data set). Looking at the base case - that is, the reduction in arrears and possessions, had the affordability test been in place throughout the sample period but none of the additional requirements – our results differ from the FSA’s somewhat – we estimate that 45,000 arrears cases would have been prevented and 9,000 possessions compared to the FSA’s estimates of 55,300 and 16,900 respectively.

31. The disparity between CML and FSA figures for absolute numbers of affected borrowers may be in part due to a difference in simulation methodology. FSA used a repeat sample method - taking multiple small samples of the wider data set and grossing these up to estimate total market volumes. In contrast we applied our model to the entire available dataset. But a more significant reason for the divergence appears to relate to the types of transaction excluded from the modelling. We understand from conversations with the FSA that it has excluded from its analysis any loans which could be identified as having been replaced by a newer mortgage during the period. That is, those loans which were taken out in the period but where FSA could identify, through patterns in the data, that the borrower had subsequently remortgaged (and so the first mortgage was no longer active).

32. Removing repeat transactions is an appropriate methodology for some purposes – for example estimating the volume of loans taken out that are still active at a certain point. However when used for this application it understates the estimated total volume of loans that were taken out in the period, which is what we are seeking to model. And even more importantly it excludes loans that, for the vast majority, would have been performing (otherwise these borrowers would have found it difficult to refinance away as the data indicates that they did). So the FSA’s methodology here will overestimate the proportion of affected loans in the period that were in arrears or possession, because it understates the volume of affected loans which had experienced no payment problems. Accordingly when such a methodology is used to estimate grossed-up market impacts, the total numbers of affected transactions in arrears or possession will be skewed, because the base number used is not the most relevant one. When we repeated our own simulation, but removing repeat transactions from the dataset (as we understand the FSA have done) we arrive on a very similar base number for arrears and possessions cases that would not have occurred.

33. But regardless of debates as to the most appropriate set of loans to use for this analysis, or any other limitations of the dataset (see Appendix 1), it is important to reiterate that such modelling, whether undertaken by CML or FSA, can only give an indication of the likely orders of magnitude of the impact of the FSA’s proposals.
### Table 2: Borrowers affected, by performance status

<table>
<thead>
<tr>
<th>Performance status</th>
<th>Volume of borrowers affected</th>
<th>Percent of borrowers affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Performing loans</td>
<td>Loans in arrears</td>
</tr>
<tr>
<td>No additional requirements (above affordability assessment)</td>
<td>1,178,000</td>
<td>45,000</td>
</tr>
<tr>
<td>Then if all loans were assessed on:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K+I basis</td>
<td>2,136,000</td>
<td>81,000</td>
</tr>
<tr>
<td>AND max 25 year term</td>
<td>2,292,000</td>
<td>87,000</td>
</tr>
<tr>
<td>AND impaired credit buffer applied</td>
<td>2,354,000</td>
<td>97,000</td>
</tr>
<tr>
<td>AND interest rate stress test applied at:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1%</td>
<td>3,141,000</td>
<td>126,000</td>
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<td>2%</td>
<td>3,804,000</td>
<td>151,000</td>
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<td>3%</td>
<td>4,418,000</td>
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<td>9%</td>
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<td>223,000</td>
</tr>
<tr>
<td>10%</td>
<td>6,420,000</td>
<td>226,000</td>
</tr>
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</table>

Source: CML Research, augmented by historic Regulated Mortgage Survey (CML/BankSearch)

Notes:
1. Affected borrowers calculated as per Table 1.
2. Results are based on a smaller sample than for Table 1 – around 5.3 million loans. Results presented are grossed up to estimate total market impact.
3. Arrears cases denote all material arrears over 1 month in arrear, as set out in Appendix 1.
4. Possession cases includes any cases for which there is a court order for possession but physical possession had not been recorded (as at 1 August 2009).

34. A final cautionary note is that the data measures performance only at one point in time (August 1 2009). Loans performing at that time may have since fallen into arrears, and equally loans in arrears at that point may either have deteriorated further or improved their position back to performing status. So we need to view our findings, as well as those of the FSA, in the context of a static snapshot, and be aware that performance for each loan may change status from one point in time to the next.

35. Whilst keeping in mind these caveats, we can now look at the relative benefit of arrears and possessions cases prevented, versus borrowers who would have been prevented from obtaining their mortgage but who did not encounter payment problems on that loan. We can see from Table 2 that, under the base case, an estimated 45,000 arrears cases and 9,000 possessions cases would have not occurred. This equates to around 19% of all the arrears cases in the dataset, and 17% of the possessions cases. But this needs to be weighed against an estimated 1.2 million transactions that would not have taken place, but suffered no measurable payment problems as at August 2009.

36. Under a scenario whereby all the FSA proposals had been in force, including a modelled 2% interest rate stress test, some 151,000 arrears cases (64% of the total in the dataset) and 38,000 possessions (69% of the total) would have been prevented. But at the same time 3.8 million loans that were in no payment difficulties at the time of measurement would have not taken place.
37. It is important to view these proposals in the context of the current unprecedentedly lower interest rate environment. For many borrowers on variable rates, this helped massively in helping borrowers meet loan payments, even when they experience an interruption in income. If bank rate were higher we would doubtless be seeing more borrowers in payment problems, and so there would be proportionately more non-performing borrowers within any given group of affected borrowers.

38. We can further disaggregate the modelled effects of the FSA proposals by different borrower types. Table 3 and Chart 2 below show the effects on some key borrower types, as well as those with characteristics directly targeted by the FSA proposals. It is clear that, as well as the proposals affecting different borrower types to different extents, the relative benefits (through prevented defaults) and dis-benefits (performing loans prevented) vary significantly too.

39. Whilst four-fifths of borrowers with impaired credit history would have been affected, 20% of these affected cases were either in arrears or possession by August 2009. But for borrowers with no impaired credit history, the proportion of affected borrowers that were in fact those that subsequently encountered payment difficulties is much lower. Of the 60.1% of first-time buyers loans affected almost 95% - some 730,000 mortgages - were to borrowers that had no recorded payment problems as at August 2009.

40. For interest-only borrowers we can see a significant divergence between employed and self-employed. Amongst the 60.8% of self-employed borrowers (a group that has a known higher probability of payment problems associated with less certain income) affected by the proposals, around 8% of the affected transactions are those that encountered payment difficulties. But for employed borrowers on interest-only, although even more borrowers (63.8%) would have been affected by the proposals, only around 4% of these were arrears or possessions cases.

41. For mortgages with over 25 year terms, we can see a similarly pronounced impact. Again, nearly two thirds of borrowers would have been affected by the FSA’s proposals, but 95% of these experienced no payment problems.

Chart 2: Affected borrower types, by performance

Source: Source: CML Research, augmented by historic Regulated Mortgage Survey (CML/BankSearch)
Notes:
1. Affected borrowers and performance calculated as per Table 2.
Table 3: Types of borrowers affected, by performance status

<table>
<thead>
<tr>
<th></th>
<th>% of Transactions affected</th>
<th>% Performing</th>
<th>% In arrears</th>
<th>% Possession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impaired credit history</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(all)</td>
<td>80.1%</td>
<td>80.0%</td>
<td>13.5%</td>
<td>6.5%</td>
</tr>
<tr>
<td>No impaired credit history:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-time buyers:</td>
<td>60.1%</td>
<td>94.8%</td>
<td>3.9%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Home movers:</td>
<td>55.5%</td>
<td>97.1%</td>
<td>2.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Remortgagors:</td>
<td>44.2%</td>
<td>95.9%</td>
<td>3.6%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Interest-only:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>self-employed</td>
<td>60.8%</td>
<td>91.8%</td>
<td>6.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>employed</td>
<td>63.7%</td>
<td>95.8%</td>
<td>3.3%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Mortgages with over 25 year term</td>
<td>65.0%</td>
<td>95.1%</td>
<td>4.0%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Source: Source: CML Research, augmented by historic Regulated Mortgage Survey (CML/BankSearch)

Notes:
1. Affected borrowers and performance calculated as per Table 2.

42. There is a further consideration, relating to cycles in the mortgage market. If these proposals perform their intended function, the expectation would be that they would achieve their greatest impact when the market is at its peak, when prices are high and lenders’ and borrowers’ appetite for risk are equally buoyant. That is, the greatest proportion of excessive borrowing would be prevented in those years, with a commensurate benefit on preventing mortgage defaults. Then in downturn conditions, with lending and/or borrowing appetites constrained, it could reasonably be expected that the proposals would have a much lesser impact. In the current cycle the peak would be the years 2006 and 2007, with the period since then categorized by extremely constrained market activity.

43. Table 4 below demonstrates the impact on lending, year by year, had the proposals been in place since 2005. Surprisingly, this indicates that the proposals would have made the greatest impact not at the peak in 2006/2007, but one year after in 2008, when the tightening of lending criteria was already being seen. In that year 58% of loans would have been affected, compared to 56% in 2007 and 48% in 2006. But even in 2009, when mortgage underwriting criteria had become extremely conservative by any historic comparison, the proposals would still have affected 45% of the small volume of transactions that did take place.

44. Table 4 indicates that in the period 2005-2007, the proposals would have had a fairly constant impact, in terms of the “success rate” in preventing transactions which would then have experienced payment problems. Around 5% of the affected loans taken out in those years were in arrears or possession in August 2009 – the other 95% having no recorded payment problems at that point. For 2008 and 2009, little can be inferred from the lower “success rate,” because loans originated in those years have had in existence for a short space of time. So as at August 2009, the volume of defaults recorded from loans originated in those years would be lower than those from previous years, regardless of any other factors.

45. What this does demonstrate is that these proposals could have a pronounced dampening effect on the market, not just in the years when lending would be at its most buoyant, but also in the years when the market is in a depressed state. So whilst the proposals could make a significant impact, preventing unaffordable loans being taken out at the peak of the market cycle, it appears they would also have a significant effect in times such as the post-crunch period, when lending is already very conservative and even consumers who represent the smallest credit risk find it more difficult to obtain mortgages.
Table 4: Borrowers affected, by year of origination

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Transactions Affected</th>
<th>% Performing</th>
<th>% In arrears</th>
<th>% In possession</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>44%</td>
<td>95%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>2006</td>
<td>48%</td>
<td>95%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>2007</td>
<td>56%</td>
<td>94%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>2008</td>
<td>58%</td>
<td>97%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>2009</td>
<td>45%</td>
<td>99%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>All years</td>
<td>51%</td>
<td>95%</td>
<td>4%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: CML Research, augmented by historic Regulated Mortgage Survey (CML/BankSearch)

Notes:
1. Affected borrowers and performance calculated as per Table 2.

46. In this analysis we do not seek to make a judgement as to what might be an appropriate balance between preventing payment problems and minimising unnecessary restriction of lending to borrowers unlikely to experience problems. However the research does demonstrate clearly that this latter group should be a key consideration. The FSA’s proposals look to have a significant impact on transaction volumes, and this is likely to have wider market implications, including reduced housing market liquidity and potential house price declines.

47. Our research also demonstrates that, as well as preventing over-exuberant lending when the market is at its peak, the proposals would make a significant market impact even at the trough of the cycle, providing an obstacle to recovery. The benefits of a lower-risk mortgage market are clear, but if this is not brought about in a measured and targeted way there is a demonstrable danger of unintended negative consequences, both for the market and for consumer choice.

James Tatch
CML Research
30 September 2010
Appendix 1: analytical framework

Data used in analysis

1. The data set underpinning this analysis is the CML’s Regulated Mortgage Survey (RMS). The RMS is, in essence, a copy of the same data as is available to the FSA in its Product Sales Data. The period used for our analysis is Q2 2005 to Q1 2009, echoing that used by the FSA.

2. PSD/RMS data comprises individual transaction-level information on each new regulated mortgage taken out since 2005. Whilst a small handful of lenders do not submit data to the CML, our RMS sample covers approximately 95% of the regulated market, and so is materially the same data set as the FSA’s 100% sample.

3. Despite this level of granular data there are a number of areas where PSD/RMS is limited in how effectively it can be used to model a full expenditure vs. income assessment for mortgages. Specifically, it contains information only on gross income, not net, and no data whatever on borrowers’ actual (or reported) expenditure. So in order to carry out the modelling effectively, it is necessary to simulate both of these variables at the borrower level.

Estimating net income

4. FSA has estimated net income from the gross income figure reported in PSD. It applies to this figure the income tax and National Insurance rates effective in the period the mortgage was taken out, augmented by what limited information PSD contains on borrower characteristics that affect taxation. Specifically, the only relevant variables are whether the mortgage is on a single or joint basis, and whether the main borrower is employed or self-employed (but nothing as to the employment status of the second borrower, if there is one). Using this information the FSA arrives on an estimated net income figure. We have replicated the FSA’s methodology to estimate net income.

5. This approach is necessarily limited, because substantial amount of data needed to fully assess individual tax rates cannot be derived from PSD, and so its net income imputation is necessarily not fully accurate, although it will be a closer approximation than could be derived from applying a simple average tax rate to each gross income figure.

Proxying an income vs. expenditure affordability assessment

6. Because it does not have an accurate way of assessing borrowers’ expenditure within PSD, FSA has looked at borrowers' payment to income (PTI) ratio as a proxy. PTI is calculated as the proportion of net income needed to meet mortgage payments. In its analysis, FSA uses two PTI thresholds, 30% and 35% driven by “discussions with academics indicating conventional thresholds of affordability using DSRs have tended to lie between 25% and 40%.” The rationale then for using this as a proxy measure is that loans that have a PTI above this threshold would be likely to fail an affordability assessment.

7. In our analysis we have used the same proxy measure, PTI, and looked at a range of PTI thresholds between 25% and 50%, to which the affordability assessment might plausibly translate, in order to assess the potential impact of the proposals. We have used 35% PTI as our working calibration (above which rate mortgage applications would be likely to fail an affordability assessment).

8. Note that we use the term payment to income ratio (PTI) for clarity, instead of the FSA’s use of the term Debt Servicing Ratio (DSR), although the two are equivalent in their derivation. The reason for this is that DSR is taken by many to mean the proportion of income needed to service the debt (i.e. meet interest payments) but not to repay the capital. And in this modelling we are looking at full capital-plus-interest payments, so full repayment, rather than debt servicing.

Modelling an interest rate stress test

9. Application of an interest rate stress test can be modelled in a number of ways, and the FSA has not confirmed its intended methodology to provide the stress figures in each period. It has made an initial suggestion that it might publish a reference stress rate based on forward swap rates, but
there are difficulties in modelling this, not only because the FSA has not yet been specific about how
this might be calculated, but also because swap rates can experience significant volatility on a daily
basis, and so the modelling would be subject to significant instability.

10. As a proxy for a more stable stress test we have applied a range of interest rate stresses of
either a fixed percentage rise (ranging from 1% to 10%) from the initial rate, or a 6% flat annual
interest rate, whichever is the greater. The 6% minimum criteria has been factored in so as to
mitigate the effects of any particularly low “teaser” initial rates, for example a rate that tracks bank rate
plus, say, 0.5% - in which case even a relatively high hike on top of the initial rate might still be an
historically low rate overall. In Table 1, this 6% minimum comes into force less for the higher interest
rate stress scenarios, and for rate hikes of 6% and above, becomes entirely redundant. The rationale
for the 6% flat rate is that, over the last decade, quoted SVRs have averaged around 6% (Source,

Arrears and possessions data

11. A sample of 26 firms provided their data on regulated loans advanced since April 2005 (when
Product Sales Data was first reportable) that, as at 1 August 2009, were either in arrear or had been
repossessed at any time. This sample accounted for 5.8 million regulated mortgage transactions, that
is around 73% of the total volume of such loans. By matching the performance data to the original
PSD, we are able to look in detail at the performance of loans with any given combination of
characteristics reported under PSD (these are set out in Appendix 1).

12. The FSA’s principal aim in collecting this data was to look at the outcomes associated with
perceived higher-risk areas of lending, and in particular income non-verified lending and risk layering.
Its analysis of this data was used to support the proposals in the Consultation Paper that follows on
from its Mortgage Market Review.

Data composition and limitations

13. The firms providing performance data represent a good coverage of the mainstream and
specialist sectors, and so should support a robust analysis of default drivers.

14. However, the dataset cannot be used to produce grossed-up estimates of industry defaults,
because:

- Non-performing mortgages are somewhat over-represented, with the sample of participating
  lenders representing about 78% of industry arrears and 84% of possessions in the reporting
  period;
- The dataset excludes non-regulated loans, such as BTL, regulated loans originated before
  April 2005 and pre-October 2004 first charge loans;
- Regulated loans that have formed part of a portfolio sale or acquisition following origination
  have largely been excluded, as it is not generally possible to match such cases within the
  original PSD;
- Defaults, where arrears were not more than £100 in value and/or the outstanding mortgage
  balance was not more than £1,000, have with FSA agreement been regarded as being
  technical in nature and therefore excluded.

15. When interpreting results derived from these data it is important to bear in mind that it
captures non-performing loans at one point in time only – so loans that were either in arrears on 1
August 2009 or had been taken into possession (at any point between origination and 1 August
2009). Loans identified as non-performing at that point may subsequently have deteriorated further,
or improved such that they once again were performing. Equally, it does not capture any loans that
were in arrears before 1 August 2009 but subsequently repaired their position back to performing by
the reporting date, or other loans that were performing on 1 August 2009 may have since fallen into
payment difficulties.

16. The full transactional arrears and possessions dataset contains around 280,000 usable
default records. However for logistic reasons we were unable to match around 10% of these records
for the purposes of the analysis presented in this paper. However without even these records the
sample covers a substantial and representative majority of the regulated market and is fit for the purposes of this analysis.

17. Throughout this paper we define default to mean any mortgage that is over one month in arrear or been subject to possession. Whilst this covers substantially more cases than the common industry definitions (for example the ratings agencies use a 3 month threshold in all their published research), it conforms to the FSA’s criteria used in their analysis.