# AmTrust response to Central Bank of Ireland consultation on the LTV/LTI Regulation

## 1. Context

AmTrust International Mortgage & Special Risks (AmTrust MSR) welcomes the opportunity to respond to the Central Bank of Ireland's Consultation on LTV and LTI Regulations.

Now a part of the AmTrust Financial Services Group, we have operated in the European mortgage market for over 20 years as Genworth Financial Mortgage Insurance Europe.

AmTrust MSR is a UK regulated, well capitalised insurer, part of an 'A' rated group of companies, with clients in 9 countries in Europe – UK, Italy, Germany, Finland, Sweden, Portugal, Spain, Ireland & Netherlands. We have partnerships with banks and building societies across all of these jurisdictions including some of the largest mortgage lenders in Europe. Our current in force book totals 110,000 European mortgage loans, and to date we have insured more than 700,000 loans for over 100 lenders.

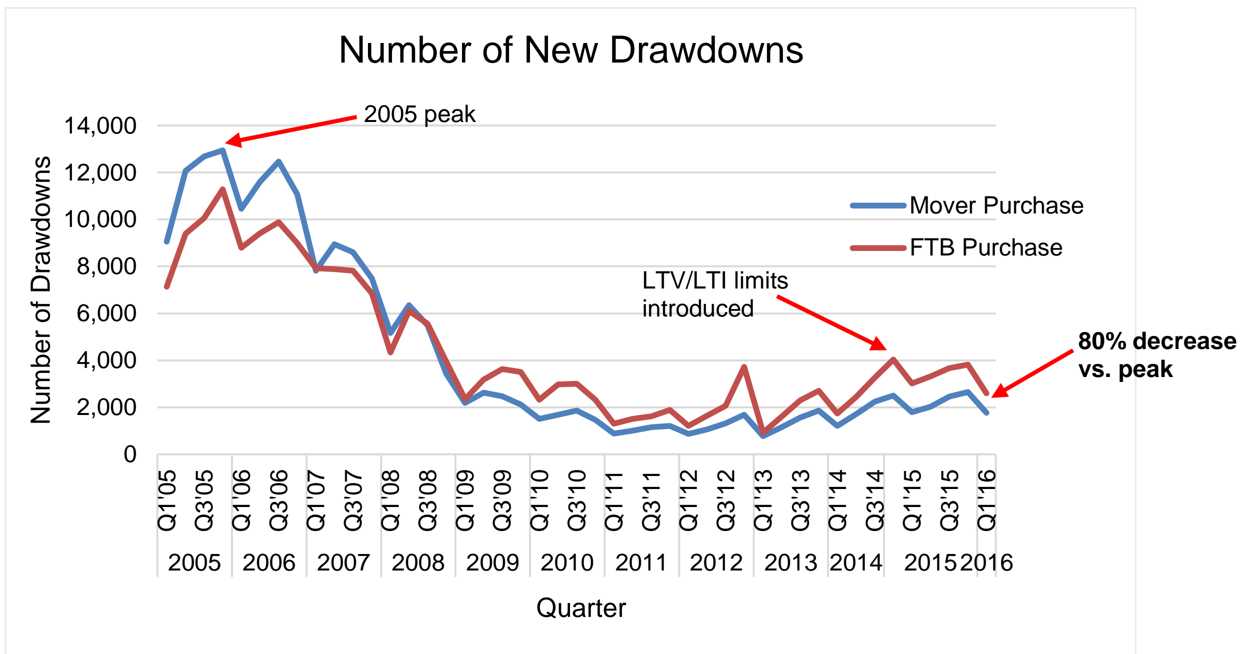
We started to underwrite mortgage insurance (MI) in Ireland in 2001 and since, we have insured over 70,000 mortgage loans with an origination value of €15,916 million. We have paid claims and early claim settlements (where lenders could not repossess property and also over and above the T&Cs of our insurance agreements) of more than €108 million which is more than 140% of the premiums we received.

As an expert in the housing market with a high level of financial commitment to the Irish market, we would like to share our views on the operation of the LTV/LTI limits since their introduction and how they might be adjusted and refined in light of experiences since they were first introduced.

## 2. The Current Housing Situation in Ireland in the context of the LTV/LTI Limits

In the second quarter of 2016, year-on-year mortgage lending (€) increased by 22.4%[1]. However, on a year-to-date basis, mortgage lending for purchases are down 5.7% versus last year in terms of number of drawdowns. Longer term, since the financial and property crisis in Ireland in 2007/2008, new mortgage drawdowns have decreased considerably – by up to 80% - for both home movers and first-time buyers, as the graph below suggests.

[1] Daft.ie House Price Report, Q2'16




*Banking & Payments Federation Ireland*

The impact of the increased deposit levels required under the Central Bank rules on maximum LTV/LTI limits has impacted on new home acquisitions. According to figures from the Banking & Payments Federation Ireland (BPFI), the average deposit needed to buy a property in Dublin has more than doubled to €51,000 as of the end of 2015. This is a level of savings which may be out of the reach of many, especially given the incidence of soaring rents[2] caused by the reduction in drawdowns, which in turn increases pressure on the private rental sector and increases rents. There are indications that some putative purchasers are stuck in this "rental trap," having to service high rents and being unable to save the funds required for a deposit for a house purchase.

The increase in rental levels is well illustrated[3]. In the 12 months from July 2015 to July 2016, the average nationwide rent increased by 11%, and shows no signs of slowing. Since bottoming out in late 2011, national rents have increased by 39.7%.

The problem is most severe in cities, specifically Dublin, where average rents are 51.3% higher than their lowest point in late 2010, and as of July 2016, are 5.2% higher than their previous peak.

The graph below shows how much national residential rental levels have increased since January 2015. The graph also shows that national rents are significantly higher than the 2012 average.

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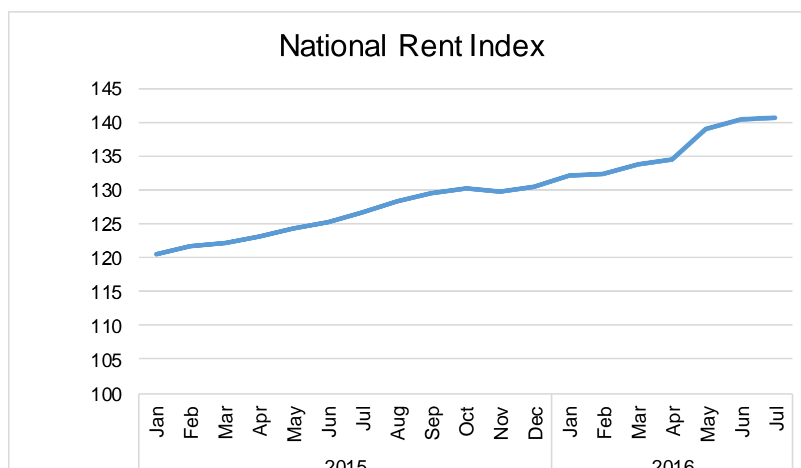
[2] (Irish Independent 21 September 2015 – Rent trap tenants pay out €2,400 more than homebuyers)

[3] The Daft.ie Rental Report, Q1'16



*The Daft.ie Rental Report, Q2'16*

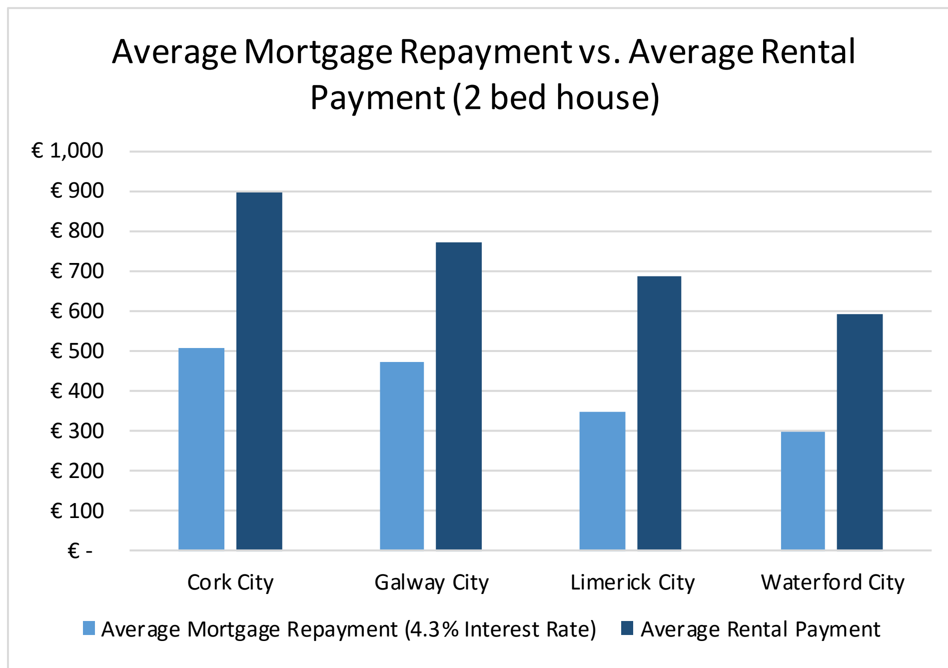
As a result of the increasing rents, young families are often being forced to live in remote outskirts of town centres and contend with an arduous commute to work, especially in Dublin where the problem is most severe. This raises significant social and lifestyle issues for the families involved.

The shortage of housing supply vs. demand is also a major contributor to the problem and the Government has initiated an Action Plan on Housing to help address these challenges.

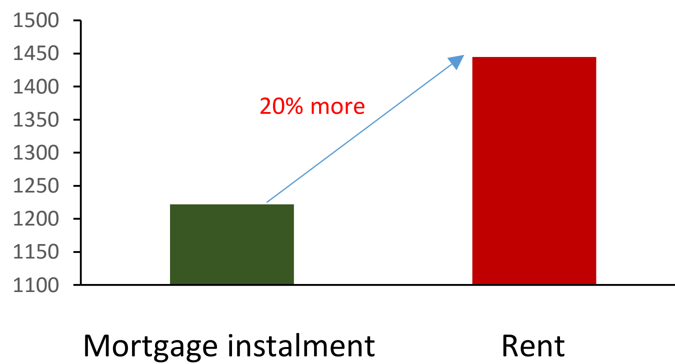
Some commentators have contended that the LTV limits are preventing willing banks with lending capacity (most lenders have exhausted their 15% allowance above the LTV limit for FTB's[4]) to extend mortgages to creditworthy borrowers who can otherwise afford the mortgage repayments. These mortgage repayments are significantly cheaper than the rents they are currently paying[5], but putative borrowers have not yet been able to save a large enough deposit, as their saving capacity continues to be limited by the escalating cost of rent.

[4] Central Bank of Ireland, Macro prudential Measures and Irish Mortgage Lending: A Review of Recent Data, Vol 2016, No. 3

[5] Daft.ie Rental Report, Q1'16



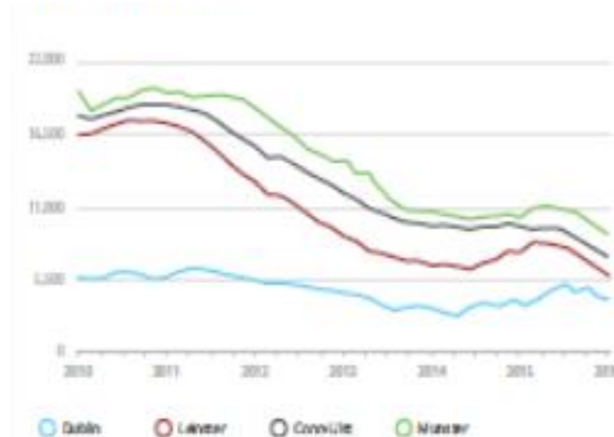

*Daft.ie Rental Report Q2 '16*




*Daft.ie Rental Report Q2 '16*

Furthermore, stalled property transactions are putting a downward pressure on the economy, which is still recovering from the recent economic and housing crisis.

Total number of properties for sale, 2010-2016



*The Daft.ie House Price Report, Q2'16*

This raises an issue as to whether the macro prudential objectives that the LTI/LTV limits are seeking to address can be achieved in a way that facilitates prudent lending, while permitting some measured adjustment to allow banks with lending capacity to extend mortgages to borrowers who can service mortgage repayments but do not have the required deposit to facilitate new home ownership, typically FTB's.

It is important that any initiative takes account of the imperative to reduce and contain risk, rather than contribute to house price inflation, as a tax based measure or some borrower grant aid might do. Given the focus on the Central Bank limits, any such adjustment or refinement would need to be achieved in a way that addresses prudential risk adequately and does not contribute to rising price levels.

The Economic Letter published by the Central Bank on 22 July 2016[6] suggests that even in the context of the current operation of the LTV/LTI limits, it would appear that some lenders are facilitating borrowers with both a LTV and LTI allowance, all within the overall limit on such allowances. Clearly there is a demand for good credit at high LTV's, but the risk associated with these HLTV's has been addressed by the Central Bank with limits which prevent high quality borrowers from accessing credit. As a result, prospective borrowers are paying high rents which pushes the rental costs higher than a typical mortgage repayment, resulting in permanent exclusion from the mortgage market as they struggle to save for a deposit.

National house price appreciation has continued notwithstanding the LTV/LTI limits - national house prices increased by 6.3%, in the 12 months to June 2016. There has been some moderation in housing prices in Dublin, which fell by 1.1% between June 2015 and June 2016. However, this has been accompanied by unsustainable levels of house price appreciation in surrounding areas where year on year growth has been in double digits. The limits have only

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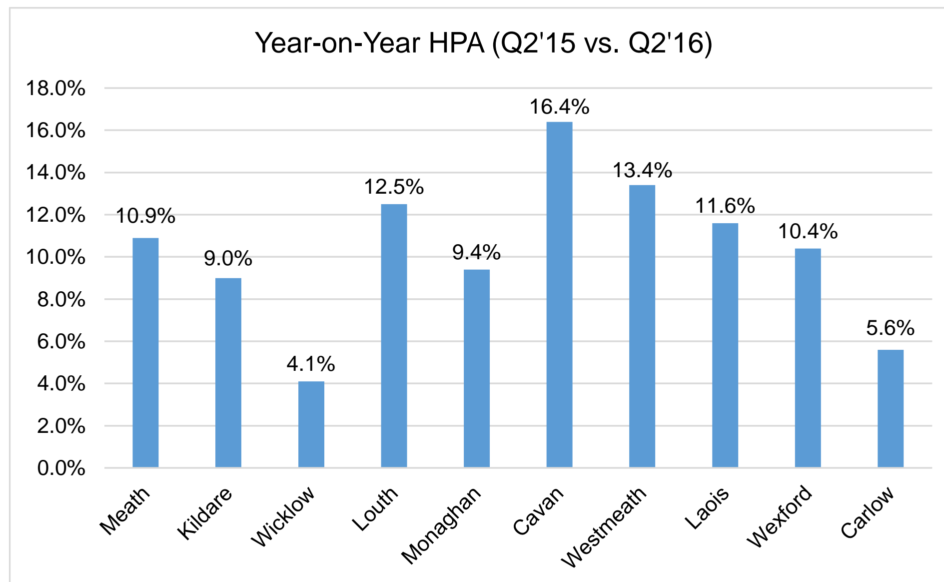
[6] Economic Letter: Macro prudential Measures and Irish Mortgage Lending: A Review of Recent Data

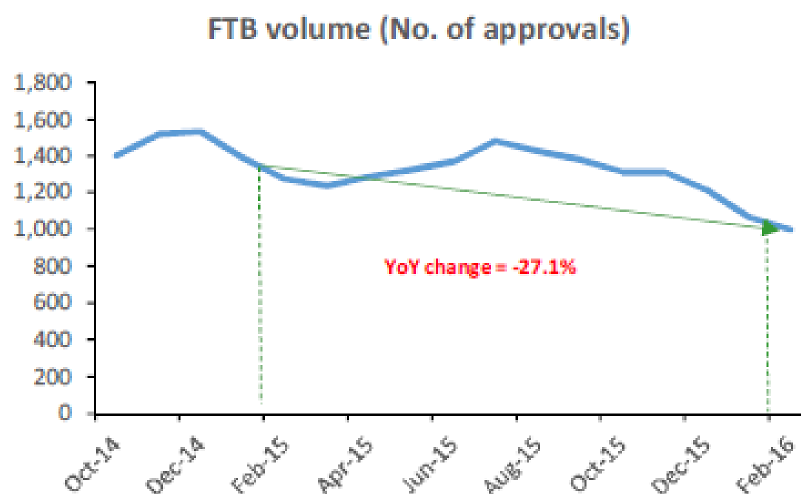
moved the problem of unsustainable house price appreciation to surrounding areas, where year-on-year growth has been in double digits.



*The Daft.ie House Price Report, Q2'16*

These house price movements are consistent with the position in other jurisdictions where prices increased notwithstanding the presence of similar limits. This is because house prices are determined by several factors in addition to the availability of mortgages, e.g. cash purchases, supply shortage etc.

The category of purchaser that has seen a most severe decline over the last 12 months has been the First Time Buyer (FTB). From February 2015, to February 2016, the number of mortgage approvals for FTB's decreased by 27.1%. While the latest figures from the BPFI show that there has been an increase in the number of mortgage approvals for FTB applicants' year on year, the BPFI notes that on a year to date basis purchase mortgage approvals decreased in both volume and value during the first half of 2016.



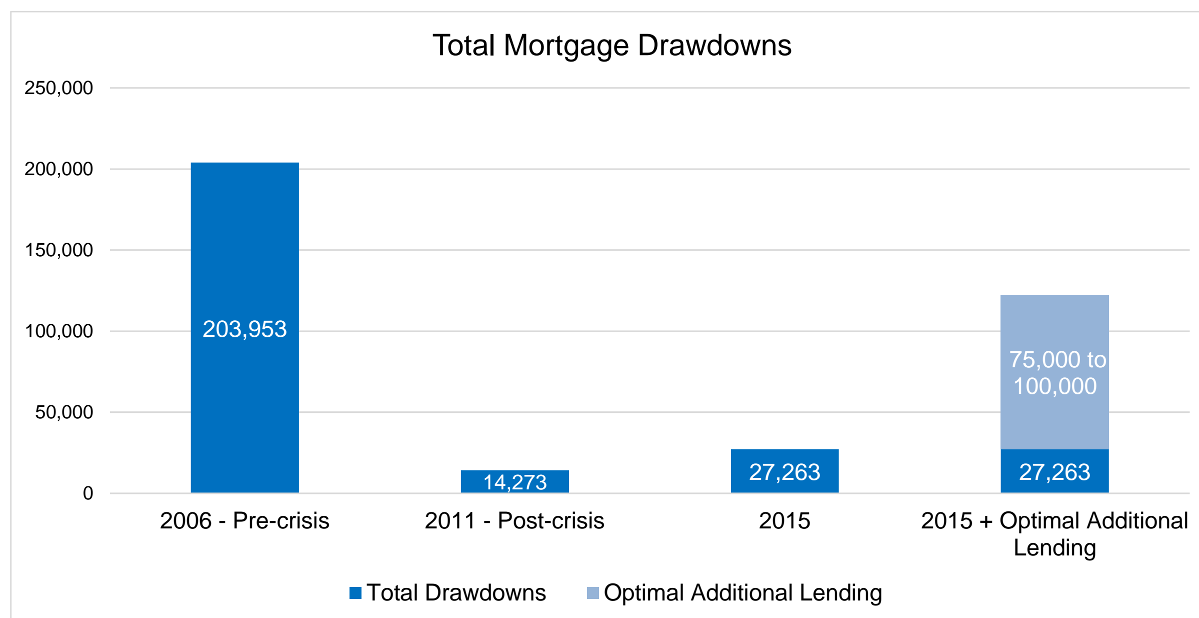
*Banking & Payments Federation Ireland*

## 3. Achieving a sustainable level of mortgage lending in Ireland

In any assessment of measures impacting on the residential mortgage market in Ireland it is important to take account of the levels of activity that a normally functioning market should generate in Ireland. This assessment is required not just from the context of assessing the macro prudential risks involved but also in the context of any measures which the Government might introduce to facilitate new home ownership or a regeneration in housing construction.

In Ireland, new lending practically ceased by 2011, falling to a mere 7% of the pre-crisis peak. Whilst, it has slightly picked up since, 2015 volumes were only 13% of the peak. Given the characteristics of the housing market in Ireland, we believe, based on our experience in other jurisdictions and based on the mortgage market life cycle in Ireland over the last 10 years, that a healthy sustainable level of credit flow should be 50%-60% of the peak, implying additional capacity for c. 75-100K more mortgages per annum. For this level of mortgage lending to occur, a significant number of good quality high LTV loans will be required, certainly at a level that exceeds the allowance of 15% in the LTV Regulations.

Ireland – Lending volumes pre and post crisis




*Actual volumes: Banking & Payments Federation Ireland; Optimal Additional Lending: AmTrust estimate*

How can such a level of mortgage provision be sustained in a way that recognises the macro prudential requirements underpinning the Central Bank LTV/LTI limits? In other words, how can new loans be advanced in a way that facilitates home ownership, reduces systemic risk and promotes prudent lending. AmTrust believes that MI has a role to play in addressing these challenges and notes the comments by the Minister for Finance on a possible role for MI in a future mortgage lending environment;

> *"In terms of the future development of mortgage insurance, this is a matter that will have to be considered in the context of the Government's overall policy on housing and also in the context of the Central Bank's macro prudential framework for residential mortgage lending. In that context, in the Programme for a Partnership Government the Government has committed itself to work with the Central Bank, as part of its upcoming review of its mortgage lending limits, to develop a new "Help to Buy" scheme to ensure availability of adequate, affordable mortgage finance or mortgage insurance for first time buyers as new housing output comes on stream."* [7]

One option would be to facilitate a significant portion of the additional 75-100k of new mortgage loans by prudent higher LTV lending through combining the LTV limit with a MI requirement on high LTVs, a scheme similar to U.K.'s 'Help to Buy', which contributed almost 80,000 completions between Oct 2013 to March 2016.

An increased prevalence of high LTV lending carrying MI does not lead to an increased concern on financial stability or risk. In fact, research from the US demonstrates that high LTV mortgages result in lower losses for lenders than uninsured low LTV ones, due to improved underwriting standards associated with 'a second pair of eyes' and 'skin in the game' of the insurer. [8] Consequently, a changed regulatory landscape which facilitates high LTV lending with the benefits of MI is consistent with the macro prudential objectives of the Central Bank limits.

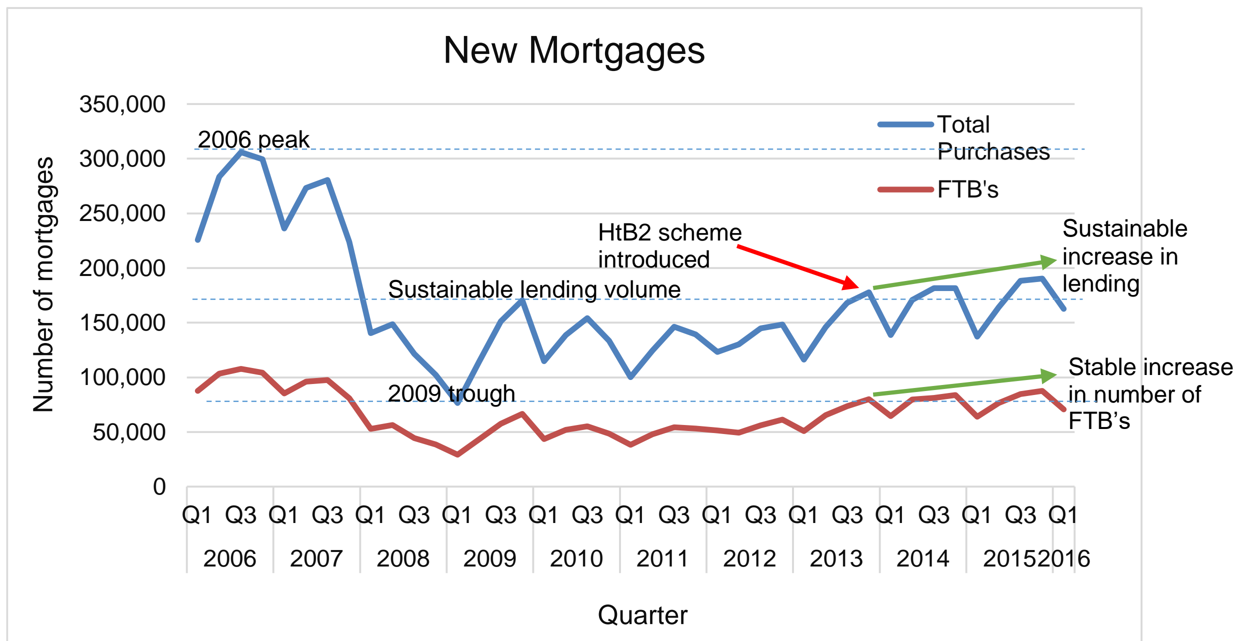
An examination of the position with Help to Buy in the UK is helpful to an analysis of the Irish mortgage market. While the UK Help to Buy Scheme did succeed in increasing the level of completions, it did not achieve its optimum success rate, in part due to inadequate capital relief for lenders availing of MI.

As noted above, the U.K. previously went through a similar experience as the one we are seeing in Ireland, with access to homeownership for both home movers and FTB's particularly challenging.

The problem became so severe that the U.K. Government had to launch the Help to Buy Mortgage Guarantee (HtB) scheme in 2013. The scheme helps home buyers with good credit records who can afford mortgage repayments but lack the deposit needed to secure a mortgage.

The mortgage lending volume, which had fallen to c. 25% of the 2006 peak in 2009, is now at a sustainable c. 60% of the peak.

[7] Minister Michael Noonan, Reply to Parliamentary Question 234, 31 May 2016.
[8] See Appendix 1




*Council of Mortgage Lenders*

While HtB has achieved its aim so far by increasing new loans for house purchases, the increase of approximately 10,000 new mortgages per month since its launch is significantly lower than the expected volume when the Scheme was launched.

When the Scheme was launched in 2013, the U.K. Government made available up to £12bn worth of mortgage guarantees which it had hoped would support the lending of up to £120bn of mortgage loans. The latest figures, released in June 2016 and which include data up to and including March 2016, show that only £1.6bn of the available guarantees have been utilised with only 9 months of the scheme remaining. Therefore, the scheme is running at just 13.3% of its total capacity.

Furthermore, there are many aspects of the scheme which could be enhanced if a similar scheme was to be introduced in Ireland. These are set out further below.

## 4. Macro prudential rules and a Help to Buy Scheme in Ireland

The Programme for Government committed the new Irish Government to review schemes that could facilitate new home ownership and specifically referenced Help to Buy and Help to Build Schemes. Following the announcement of the recent Action Plan for Housing, it is expected that measures will be introduced in Budget 2017 to give effect to these commitments. Given the experience of such Schemes in the UK and their potential interaction with the Central Bank Guidelines it may be instructive to assess how increased home ownership facilitated through the Schemes can be achieved in a way that is consistent with the macro prudential objectives outlined in the LTV/LTI Regulations. In this context the operation of the Help to Buy Scheme in the UK is instructive as it enhances the risk management of the lenders and encourages macro-prudential stability.

- A State Guarantee or Private insurers

Whilst the U.K. Government provided a direct 'State Guarantee' to lenders, the Minister for Finance has made it clear that any Irish HTB scheme would not involve Irish taxpayers having to bear the risk of mortgage insurance. Specifically, the Minister said;

*"..., an overriding primary policy objective in the area of housing is to deliver affordable and sustainable housing and credit markets over the course of the economic cycle and to avoid the boom and bust cycles which we have experienced in the past. The macro prudential policy framework put in place by the Central Bank is intended to help achieve that objective. From a financial stability perspective, mortgage insurance needs to effectively transfer risk away from the banking system and from the State in a cost effective way (and to do so without giving rise to stability concerns elsewhere in the financial system) while also operating in the best interest of consumers. Due to this imperative to effectively transfer risk, I would not see a role for the State in underwriting, or guaranteeing the provision of, mortgage default insurance in relation to high LTV residential mortgages."*[9]

Prudentially regulated international insurers with access to the global reinsurance market can fully support an Irish HTB scheme.

The State, through the Central Bank can maintain oversight of the scheme by requiring that the insurance product be adapted to suit the Irish market and comply with consumer information disclosure levels on pricing and cover. Furthermore, under traditional MI policies, a claim is not payable until after the borrower has defaulted on their mortgage and the property has been foreclosed and sold. This feature of MI has already been adapted by AmTrust MSR for Irish market circumstances and early claim settlements were agreed to keep people in their homes. This is a feature of AmTrust MSR's MI product in Ireland.

Furthermore, the Central Bank could consider imposing some minimum requirements on MI firms operating in Ireland to further enhance their micro prudential supervision tools:

- Pre-authorise firms wishing to underwrite MI in Ireland by undertaking due diligence on the firm, including their capital position, minimum rating, governance processes, risk & compliance procedures, as well as ensuring that their host regulator has sufficiently robust processes in place to effectively supervise such firm;
- Firms should provide the Central Bank with the quarterly returns submitted to their host regulator;
- Firms should agree to notify the CB if the firm's available capital falls below a certain percentage (for example, 120%) of the firms' required regulatory capital imposed by the firms' host regulator.

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[9] Minister Michael Noonan, Reply to Parliamentary Question 250, 31 May 2016

- Appropriate risk mitigation measures secured through reinsurance should be confirmed

## 5. Mandatory limits, incentivising prudence and facilitating home ownership

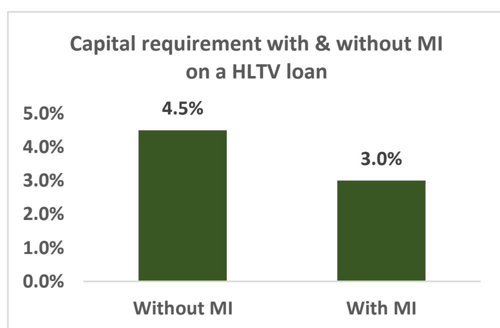
For lenders, capital provisioning associated with high LTV mortgages is significantly higher than for low LTV mortgages to reflect the higher perceived risk that these loans present to the system. MI does provide a mitigant to lenders but lenders may still be reluctant to lend if they are not getting any meaningful capital relief, to reflect the risk transfer. Essentially, MI provides a well-tested mechanism to facilitate prudent lending, within the parameters of macro prudential rules of the Central Bank. Although capital remains in the "system", it stays on balance sheets better designed for the risks they take, and furthermore, relieves banks of some of the more onerous capital provisioning requirements associated with high LTV loans.

In the UK, the failure to provide an adequate mechanism for capital relief for loans guaranteed under the Help to Buy Scheme contributed heavily to the scheme being under utilised by lenders – the PRA did not provide meaningful or predictable capital relief so few lenders applied for it. Consequently, the Help to Buy scheme remains heavily under utilised – Only £11 BN mortgages completed by March 2016 out of the desired volume of £130 BN envisioned under the scheme.

Therefore, for the scheme to underwrite the necessary volumes which are required to facilitate meeting housing demand in Ireland, meaningful capital and provisioning benefits need to be provided to lenders. Some indications on how this might be achieved are set out below:

- Pillar 1 Capital relief

The CRR recognises guarantees provided by prudentially regulated insurers as a valid form of credit risk mitigation (ref. CRR Articles 202 & 203). The Credit Risk Mitigation framework lays out the methodologies for both RSA and IRB lenders to incorporate the benefit of guarantees such as MI in their Pillar 1 capital requirements. As illustrated in the table below, several countries such as Netherlands, Germany, Finland and Italy in Europe and Canada, U.S.A, Mexico and Hong Kong internationally have a clear well defined regulatory framework whereby lenders can avail of such benefit. It is open to the Central Bank in Ireland to adopt a similar approach.




**Implications:** For a £200K mortgage @ 95% LTV and @ 4% interest rate, c. £8,550 capital is required. However, with insurance, this can be reduced to c. £5,700 (a reduction of 33%)

- Assume original Return on Equity (ROE) of 10% and capital equal to 100% equity
- With MI, due to reduction in capital requirement, the equity requirement reduces by 33%
- All else being equal, with insurance, the ROE improves to 15% (=10%/(100%-33%))
- **Hence, insurance can result in up to a 50% increase in ROE**

**Table 1 – Predictable capital relief achievable in various jurisdictions with MI**

| Country | Explicit regulatory treatment criteria for high LTV mortgages |
|---|---|
| Canada | MI mandatory on all loans > 80% LTV |
| U.S.A | Capital reduced from 8% of loan (RW = 100%) to 4% (RW = 50%) with MI |
| Hong Kong | Capital reduced from 4% of loan (RW = 50%) to 2% (RW = 20%) with MI |
| Mexico | Capital reduced from 8% of loan (RW = 100%) to 4% (RW = 50%) with MI |
| Germany | IRB Banks allowed to reduce internally modelled capital with MI (via LGD reduction method) |
| Italy | Incentivised via Credito Fondiaro. High LTVs treated as low LTVs with MI. Capital reduced from 4.5% (RW = 43%) to 3.8% (RW = 35%) |
| Netherlands | MI mandatory on all loans > 80% LTV. |
| Finland | IRB Banks allowed to reduce internally modelled capital with MI (via LGD reduction method) |

- Pillar 2 Capital relief

Pillar 2B requirements call for additional capital buffers subject to stress tests should the local regulator deem Pillar 1 capital insufficient. Many regulators, give credit for MI to lenders for sound risk management practices in setting Pillar 2B buffers.

- Provisioning benefit

In all jurisdictions, lenders avail of provisioning relief if they have MI in place. As the new IFRS 9 accounting rules get implemented, the provisions required by banks on uninsured loans would be much larger, as the new rules are based on 'lifetime' expected loss basis rather than existing 'accrued' loss methodology. Hence the provisioning relief provided by mortgage insurance would also significantly increase.

## 6. Concluding observations

We recognise that the macro prudential rules on LTV/LTI limits are likely to be a permanent feature of the mortgage lending landscape in Ireland and note the regulatory objectives that they are aimed at securing. We also recognise the need to ensure that Ireland has a functioning housing market which meets the demand for housing. We contend that the objectives behind both the regulatory imperatives to manage credit risk and provide systemic financial stability can be reconciled with national housing policy objectives on FTB

marginalisation and rising rents through some restatement of the current LTV/LTI limits. AmTrust MSR believe this could be assured through:

- Base LTV limits continuing to exist as they currently are, i.e.
    - 80% LTV limit for non-first time buyers; and
    - 90% LTV limit up to €220,000 and 80% for the remaining value of the property
- The existing 15% allowance on new lending outside of the above limits should be raised to 30% provided the excess lending – where the additional 15% above the existing 15% allowance - carries MI. Lenders should also be allowed to free up capacity on existing books by seeking MI and use it towards new lending.
- The existing LTI and LTI allowance limits remaining in place – this would assure consistency on issues relating to affordability.

The positive impact of this small change would be:

- Increased access to homeownership for First Time Buyers;
- Potential slowing of escalating rents;
- Transferring risk from the Irish banking sector to the global specialised insurance industry; and
- Recognising prudent lending and incentivising lenders to take steps to mitigate risk.

Whilst other challenges such as increased supply of the housing stock and heightened construction activity would require additional policy measures, in the absence of an elusive silver bullet, MI can certainly ease the pressure off the FTB problem while facilitating prudence and maintaining financial stability. MI could achieve this objective within the context of the existing regulatory framework established by the LTV/LTI Regulations.

# Appendix 1

## Analysis of loss severity of high LTV loans carrying MI and comparison with low LTV loans without MI

A recent study examining the first ever publicly disclosed actual loan level losses in a pool of 17 million US residential mortgage loans by Freddie Mac (Freddie), one of the Government Sponsored Enterprises (GSEs), through the recent cycle demonstrates MI's benefit was maintained even through the stress in the United States. Goodman and Zhu find:

> *"Loans with higher LTVs and mortgage insurance have a significantly lower loss severity than loans with lower LTVs and no mortgage insurance."*[10]

The authors go on to detail that the loss severities for loans with over 80% LTV are lower in the actually observed pool than the loss severities for loans with 80% to 60% LTV in all years and remarkably, except for the deepest three crisis years, were lower than the sub-60% LTV pool.

> *"The relationship between loss severities and LTV categories is particularly interesting. Severities for loans with LTVs over 80 are much lower than for loans with LTVs between 60 and 80. In fact, the severities for the over-80% LTV loans are even lower than severities for the 60-or-under-LTV loans. The reason is simple. Loans with LTVs over 80 are required to have mortgage insurance, which covers the first loss; this coverage is usually deep enough that Freddie is not exposed unless the market value of the home drops far more than 20 percent. For example, standard practice is to bring down an 85 LTV mortgage to 73 LTV, a 90 or 95 LTV mortgage to 65 LTV, and a 97 LTV mortgage to 63 LTV. These results would indicate that mortgage insurance is more effective at protecting the GSEs against losses than is commonly assumed."*[11]

The data table follows. In the United States, the GSEs require mortgage insurance for all loans they buy with a greater than 80 LTV, so the entire pool of greater than 80 LTV loans in this sample was covered by mortgage insurance.

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[10] (Goodman and Zhu 2015, 15)

[11] (Goodman and Zhu 2015, 7).

Severity at Liquidation by Origination Year, FICO, and LTV (percent)

| Year | FICO | ≤ 60 | 60–80 | > 80 | Total |
|---|---|---|---|---|---|
| 1999–2004 | ≤ 700 | 20.4 | 31.0 | 14.9 | 22.3 |
| | 700–750 | 17.1 | 29.3 | 17.8 | 24.3 |
| | > 750 | 19.0 | 29.8 | 20.8 | 26.3 |
| | Total | 19.3 | 30.4 | 15.9 | 23.2 |
| 2005 | ≤ 700 | 28.8 | 40.6 | 25.2 | 35.8 |
| | 700–750 | 26.6 | 39.4 | 26.8 | 36.2 |
| | > 750 | 26.2 | 39.0 | 27.9 | 36.2 |
| | Total | 27.7 | 39.9 | 26.0 | 36.0 |
| 2006 | ≤ 700 | 35.2 | 45.3 | 27.0 | 39.7 |
| | 700–750 | 32.3 | 43.6 | 30.1 | 40.7 |
| | > 750 | 30.6 | 42.2 | 29.1 | 39.6 |
| | Total | 33.5 | 44.1 | 28.0 | 40.0 |
| 2007 | ≤ 700 | 38.8 | 46.1 | 28.6 | 38.7 |
| | 700–750 | 33.6 | 43.4 | 29.3 | 38.9 |
| | > 750 | 31.7 | 41.2 | 27.8 | 37.3 |
| | Total | 35.9 | 44.2 | 28.7 | 38.5 |
| 2008 | ≤ 700 | 31.9 | 43.6 | 27.5 | 36.5 |
| | 700–750 | 27.2 | 40.1 | 25.3 | 34.1 |
| | > 750 | 23.1 | 37.5 | 23.3 | 31.9 |
| | Total | 28.6 | 40.9 | 25.8 | 34.6 |
| 2009–10 | ≤ 700 | 21.9 | 34.4 | 16.1 | 30.2 |
| | 700–750 | 20.5 | 30.7 | 13.6 | 26.3 |
| | > 750 | 18.5 | 28.4 | 13.8 | 24.5 |
| | Total | 20.5 | 30.7 | 14.1 | 26.5 |
| 2011–13 | ≤ 700 | 0.0 | 23.7 | 6.5 | 17.0 |
| | 700–750 | 10.4 | 26.1 | 8.1 | 15.5 |
| | > 750 | 0.0 | 22.1 | 9.2 | 15.6 |
| | Total | 8.2 | 23.8 | 8.3 | 15.9% |
| **Total** | | **29.2** | **39.9** | **23.1** | **33.9** |

Source: (Goodman and Zhu 2015, 7)

Therefore, the evidence from the United States clearly supports reducing the capital required for credit risk for loans using MI from the categories above 80 LTV to the 60% ≤ LTV < 80% category.[12] Except for the loans originated from 2011-2013, the LGDs for over 80 LTV loans were actually less than the lower than 60 LTV, and throughout the cycle experienced a 6% smaller LGD than the lower than 60 LTV cohort. Thus, the through the cycle evidence from the US would support moving the loans to the 40% ≤ LTV < 60% categories.

This recommendation would also be consistent with the guidance from the Joint Forum in the *Review of the Differentiated Nature and Scope of Financial Regulation* to use MI in conjunction with LTV requirements and take steps to require adequate mortgage insurance in instances of lending above 80 percent LTV:

> *"Mortgage insurance provides additional financing flexibility for lenders and consumers, and supervisors should consider how to use such coverage effectively in conjunction with LTV requirements to meet housing goals and needs in their respective markets. Supervisors should explore both public and private options (including creditworthiness and reserve requirements), and should take steps to require adequate mortgage insurance in instances of high LTV lending (e.g. greater than 80 percent LTV)."* (The Joint Forum 2010, 17)

Stress tests by the International Monetary Fund (IMF) confirms the role that MI can play in ensuring the resiliency of the banking system. In the most recent IMF Article IV staff report for Canada, the IMF noted:

"*Financial stability risks appear contained. Given Canadian banks' strong capital position and stable funding sources as well as extensive government-guaranteed mortgage insurance, the impact on financial stability of a tail risk shock characterized by the worst three-year recession in the last 35 years would be limited, as reported in stress tests conducted for the 2013 FSAP Update*." (International Monetary Fund 2015, 21)