Addendum to the FMP Final Report:

Irish Nationwide Building Society and Anglo Irish Bank

Chapter

1. Background

Objectives of this addendum report

This report is an addendum to the Financial Measures Programme ("FMP") report published on March 31, 2011. In that report, the Central Bank of Ireland ("Central Bank") described how the FMP was executed for four of the Irish domestic banks, namely Allied Irish Banks, Bank of Ireland, EBS Building Society and Irish Life & Permanent ("the Core Banks"). This report covers two banks not part of that exercise: Anglo Irish Bank ("Anglo") and Irish Nationwide Building Society ("INBS"). Because these two banks are no longer deposit-seeking, nor are they actively conducting new lending, it was agreed with the EC, the ECB and the IMF (collectively referred to as "External Partners") that Anglo and INBS would undergo separate work on a different timeline.

The work done for Anglo and INBS by Blackrock Solutions ("BlackRock"), and assessed by The Boston Consulting Group, has sought to develop an independent view on the loss estimates that were used in the last capital estimation exercises (described in Appendix 1 of the main Financial Measures document). These were the key drivers of the requirement for additional capital. In doing so, each bank has been assessed as an individual entity.

The approach for INBS is similar to the process used for the Core Banks. This is because an independent review of INBS's portfolio had not been performed for over a year.

For Anglo, the Central Bank decided, with the agreement of the External Partners, that a recent (Q3 2010) set of reviews[1] was current enough to deem a full Blackrock exercise unnecessary. The Central Bank oversaw these reviews at the time.

This addendum details the basis for those conclusions; it also describes the additional analysis BlackRock has performed in recent months.

The future of Anglo and INBS

In November 2010, the Memorandum of Understanding agreed between Ireland and the External Partners (the "MoU") mandated swift and decisive action to resolve the position of Anglo and INBS in a way that protected depositors and strengthened the banking system. To this end, a joint restructuring plan for the two institutions was submitted to the European Commission by the Irish authorities in January 2011.

In 2011, Anglo and INBS will be merged into a single Government-owned banking group which will not be active in new lending or deposit markets. The merged bank will continue to operate independently as a regulated entity with its own Board, governance functions and group management team. The objective of this proposed model is to avoid risk of further losses from new lending and concentrate expertise in managing the workout of loans over a period of years. Both credit institutions are bound by the Capital Requirements Directive and thus are subject to a minimum 8% regulatory capital requirement.

Implications for a capital assessment of Anglo and INBS

The Central Bank remains satisfied that lifetime base losses provide a sufficiently conservative basis for determining these banks' capital needs.[2] It is noted, however, that as the actual results will only be known over time, as there is always potential downside.

[1] The earlier reviews were conducted by PwC for the Department of Finance and Financial Regulator, and by Anglo management (with material assistance from an outside consultancy firm).

[2] The losses forecast under the adverse scenario are seen as severe particularly given that significant collateral is domiciled within the UK and US. Notably, the six months following the previous assessment of Anglo have seen realised losses within the base loss estimate.

2. Executive Summary

Approach: structure of analysis on Anglo and INBS

This addendum describes in detail how the FMP has been executed for Anglo and INBS, and the results of three workstreams undertaken with respect to these institutions:

- BlackRock's loan loss assessment exercise on INBS;
- BlackRock's reasonableness review of previously performed loan loss estimates on Anglo; and
- The Central Bank's verification of the capital requirements for Anglo and INBS.

Unlike the capital assessment for the Core Banks, no deleveraging plans were developed for Anglo and INBS. Furthermore, it is worth noting that both institutions have had a significant volume of land and development related assets transferred to NAMA. As was the case for the Core Banks, these assets were not in scope for the analysis conducted for this addendum.

Results: BlackRock's loan loss assessment exercise on INBS

The Blackrock bottom-up loss forecasting analysis of INBS loan books has formed the basis for lifetime loss rates. BlackRock's loan loss assessment approach used on INBS was similar to that carried out on the Core Banks, and details of this approach can be found in the FMP report.[3]

The summary of the projected losses for INBS derived from BlackRock is detailed in Table 1, below:

Table 1: Projected lifetime losses for INBS used for capital purposes (€m and % of nominal portfolio loan balance)

	INBS			
Product	**Used in Capital Assessment Sept 2010**	**Base case Lifetime (BlackRock)**	**Adverse case Lifetime (BlackRock)**	**If we used 3 year Adverse as we did for Core Banks**
Residential Mortgages	411 (18.1%)	434 *(21.5%)*	592 *(29.3%)*	430 *(21%)*
CRE	308 (52.4%)	182 *(36.8%)*	199 *(40.3%)*	199 *(40.2%)*
Non-mortgage Consumer and Other	0	2 (35.2%)	2 (44.0%)	0
Total	***719 25.1%***	**618** ***24.6%***	**793** ***31.5%***	**629** ***25%***

Results: BlackRock's reasonableness review of previously performed loan loss estimates on Anglo

BlackRock assessed asset quality and loan loss projections prepared by previous advisors who worked with Anglo management, including PwC and another consultancy firm ("the Consultants"), and formed an opinion on the reasonableness of the approach and the results. As a starting point, BlackRock performed a critical read of the previous reports and models to understand the various approaches to developing loan loss projections. To support these readings, BlackRock mapped hypothetical loss projections to sub-portfolios of Anglo loan books using the worst-case loss rates

[3] As INBS is no longer an active lending institution , BlackRock's loss forecast for Residential Mortgages and Commercial Real Estate assumed that loan balances amortised over the stress horizon.

per sub-portfolio from the Core Banks. This loss mapping exercise resulted in a series of indicative loss ranges. On top of these hypothetical loss rate ranges, BlackRock considered it prudent to add judgmental overlays given their findings from the data validation exercise and other sources of information. The overall results from the loss mapping exercise were then compared to those projected by the external consultants.

The overall conclusion is that the previous analytical results provided by the Consultants were reasonable and that the loss rates were within the range of the worst case loss rates mapped from BlackRock's previous experience with the Core Banks, after adjusting for overlays as described above.

The summary of the projected losses derived for Anglo is detailed in Table 2, below:

Table 2: Projected losses for Anglo used for capital purposes (% of nominal portfolio loan balance)

Anglo					
	PwC May 2010 3 Year Estimate		**Anglo (supported by consultants) Sept 2010 10 Year Estimate**		**Central Bank additional conservatism to stress Sept 2010**
Product	**Base**	**Stress**	**Base**	**Stress**	**Stress**
Corporate and SME	*35.7%*	*50.0%*	*42.5%*	*52.5%*	*52.5%*
CRE	*18.3%*	*35.3%*	*30.0%*	*42.6%*	*44.2%*
Non-mortgage Consumer and Other	*49.9%*	*85.2%*	*49.0%*	*59.0%*	*59.0%*
Total	***23.4%***	***40.6%***	***33.6%***	***45.6%***	***46.7%***

The loss rate used by CBI in the capital assessment in September 2010 was 33.6%. The provision amount involved was €13.34bn and the stock of Provisions at 31 December 2010 was €10bn.

These are the loss rate forecasts that BlackRock compared its own reasonableness assessment against. Details below.

3. Detailed results

3.1 Loan loss assessment of INBS

Overview

The loan loss assessment models for INBS cover the following portfolios:

- Residential mortgages;
- CRE (commercial real estate) lending; and
- Non-mortgage consumer and other lending.

BlackRock loan loss forecasting models, as described in the FMP report, were used to analyse the INBS loan portfolios as of 31 December 2010. The primary data sources for these models were the data tapes from INBS and supplemental information sources. The forecasts assume that the portfolios run-off naturally through losses, amortisation, and prepayment.

The models were informed by the data integrity and verification, and asset quality reviews that were conducted in parallel. The sections in this chapter entitled Data Integrity and Verification and Asset Quality Review contain summaries of these activities and findings. Additionally, the analyses were further informed by information gleaned from interviews with bank management, documentation provided by the bank, and professional judgement.

Current loan balances

The current loan balances for INBS as provided to BlackRock are set out in Table 4 below.

Table 4: Notional loan balances as at 31 December 2010 (€m)[4]

Product	INBS
Residential mortgages	2,021
OO[5] Buy-to-Let	1,465 556
CRE	494
Non-mortgage consumer and other	5
Total	**2,520**

Outputs of the loan loss assessment exercise

Table 5 sets out the BlackRock lifetime loan losses, defined as principal loss projections, not accounting for net income or provisioning, in the base and stress macroeconomic scenarios. Percentages in this category reflect the BlackRock lifetime losses divided by the starting balances laid out in Table 4.

[4] Volumes quoted are based on BlackRock derived Exposure at Default volumes as of 31 Dec 2010 for the purposes of the BlackRock loan loss assessment work.

[5] "OO" refers to Owner-Occupied properties.

Table 5: Summary loan loss and provision results (€m)

Product	**INBS**		
	2010 stock of provisions	**Base Lifetime**	**Stress Lifetime**
Residential Mortgages	*374 (18.5%)*	434 *21.5%*	592 *29.3%*
OO	*217 (14.8%)*	234 *16.0%*	347 *23.7%*
BTL	*158 (28.4%)*	200 *36.0%*	245 *44.1%*
CRE	*202 (40.9%)*	182 *36.8%*	199 *40.3%*
Non-mortgage consumer and other	*0 (0%)*	2 *35.2%*	2 *44%*
Total	*576 (22.9%)*	**618** ***24.5%***	**793** ***31.5%***

The loss figure used in the capital assessment last September was €719m.

Securities and derivatives

Similar to the exercise carried out for the Core Banks, BlackRock examined INBS securities and derivatives portfolios.

BlackRock analysed a portfolio of €3.7bn (BlackRock market value) in securities across 19 individual positions. The majority of the securities at the institutions are confirmed to be used as liquidity instruments for cash management purposes. Pricing discrepancies for all positions spot-checked were determined to be immaterial.

BlackRock also performed a high-level review of individual derivatives positions. These instruments are almost exclusively of the type generally used to support hedging and funding programmes, consistent with the institution's stated objectives. In the time available, the objective was not to conduct a full review of positions. Instead the intent was to provide comfort on the nature of the portfolios by assessing their size and shape and conducting non-statistical spot checks, which revealed no material differences.

Data integrity and verification

As inputs into the loan loss assessment exercise for INBS, BlackRock oversaw, on behalf of the Central Bank, a data integrity and verification exercise to ensure robust outputs. Mazars, an accountancy firm, was retained to support this work (see Appendix B of the FMP report for details).

Mazars carried out four specific activities, as summarized below, with process issues and outcomes as noted:

1. Loan file sampling and testing: the aim was to assess how accurate the data provided by the banks was in comparison to their source systems. If data was missing or inaccurate, BlackRock incorporated this into its view of overall data validity. The key findings are:
   - Error rates for the loan portfolios were low which are comparable to the error rates of the Core banks.
   - Exception rates occurred in fields that were not necessarily relevant for loan loss assessment.

2. Review of IT systems: this provided insight into how effectively and appropriately the banks' loan systems were operating. The key findings are:
   - Many processes were not supported by a particular application and in some cases are manually driven, however workarounds are in place.
   - Systems are stable and no material gaps or weaknesses were identified.

3. Review of credit risk monitoring: the objective was to determine if the banks' internal credit risk monitoring systems and processes – including internal credit rating systems and income recognition policies – are in line with expectations outlined by the Central Bank. As an output of this exercise, the contracted accounting firms provided a high level review and summary of processes in place. The review did not uncover any material issues.

4. Data tape to balance sheet reconciliation: this exercise reconciled the gross loan balances from data tapes provided by the banks against the gross loan balances contained in the banks' financial statements. The review found that data tapes for INBS reconciled to unaudited statutory accounts within a negligible proportion of notional value.

Asset quality review

BlackRock conducted in-depth assessments of loan portfolios by reviewing and re-underwriting loan files. A more detailed description of this exercise can be found in the FMP report.

As part of the exercise, a number of loan file reviews were carried out. From these loan file reviews, BlackRock elicited qualitative and quantitative findings that were subsequently incorporated into their loan loss assessments.

Additionally INBS were included in the legal assessment of collateral enforcement issues and a more detailed description of this exercise can be found in the FMP report.

3.2 Loan loss review of Anglo Irish Bank

Overview

For Anglo, BlackRock was engaged to conduct a reasonableness review of previously performed work. This scope of work was deemed to be sufficient by the Central Bank because Anglo has recently been the subject of numerous extensive reports by third-parties which have included asset quality reviews and projections of future credit losses. This approach was agreed with the External Partners.

The loan loss review for Anglo covered the following portfolios:

- CRE (commercial real estate) lending;
- Corporate and SME (small and medium enterprise) lending; and
- Non-mortgage consumer and other lending.

BlackRock focused on two specific loan loss and provisioning analyses conducted during 2010:

1. In May 2010, PwC examined the top 100 loan exposures of Anglo (54% of loans by volume) and projected three-year losses (2010-2012) on the entire book based upon its findings; the firm returned in September 2010 to revise its analysis based on Anglo portfolio reclassification.
2. In September 2010, another consultancy, serving as advisors to Anglo, developed a top-down loss forecasting model for the entire book to valuate "high quality" and "low quality" loans based upon its clients' view of assets considered core and non-core. It is worth noting that this model incorporated discounts due to the fact that these assets were planned to be disposed of over a defined time period. In contrast to the PwC model, the other consultancy performed a 10-year forecast of losses (2010-2020).

Additional commentary was provided in reports from the Central Bank and other third parties.

The reasonableness review was further informed by the data integrity and verification exercise conducted in parallel. The section in this chapter entitled 'Data integrity and verification' contains a summary of this workstream activities and findings.

Current loan balances

The current loan balances for Anglo as provided to BlackRock are set out in Table 6 below.

Table 6: Notional loan balances as at 31 December 2010 (€bn)

Product	Anglo
Corporate and SME	3.5
CRE	29.7
Non-mortgage Consumer and Other	2.6
Total	**35.8**

Review of loss assessments

Review process

BlackRock's overall assessment consisted of the following steps:

Step One: Balance Sheet Review
To contextualise the prior analyses, and to raise any material gaps caused by timing differences, BlackRock studied the 31st December 2010 balance sheet position of the Anglo portfolios. Several sources were used including the Anglo Irish Annual Report and year-end financial statements, internal Anglo risk systems, the regulatory submissions, and loan tapes collected by Mazars during its data integrity and verification work.

Step Two: Commentary and Assessment
To ensure a thorough understanding of the external analyses, BlackRock developed "Critical Reading Summaries" of each report reviewed; these synopses were used to distill the key elements on which BlackRock could opine and created a process roadmap.

Step Three: Hypothetical Loss Mapping Exercise and Suggested Qualitative Overlay
As a benchmarking exercise, and to support its commentary and assessment, BlackRock conducted a hypothetical mapping of the stress case loan loss rates from the work pertaining to the Core Banks to the loans held on the Anglo Irish balance sheet. BlackRock endeavoured to map loss rates at a granular level, as allowed by the level of detail on the Anglo balance sheet that was provided. BlackRock's professionals, after having read the Critical Reading Summaries and assessed the relevant portions of the respective analyses, performed a review of the Bank's balance sheet and loan loss projection results. These overlays were subsequently superimposed on the loss mapping.

Key findings

PwC approach
Having examined the PwC analysis in-depth and benchmarked the losses against those derived for the previous four banks, BlackRock's view is that the approach taken by PwC to project loss on the Anglo balance sheet exposures is reasonable. In addition, the projected stress loan loss rates, especially when taking into account the limited time horizon and additional layer of conservatism from the September review, compare reasonably with comparable results for the Core Banks.

Other consultancy approach
While the loss rates projected by the other consultancy's model are more severe than those derived by PwC's Top 100 loan loss analysis and are higher than those derived by BlackRock for the Core Banks, they also appear reasonable given the approach and inputs.

Hypothetical Loss Mapping
The BlackRock loss mapping exercise entailed a "read across" from the most severe of the previous four banks' loss rates for each sub-portfolio for which loan balance data was available.

For the CRE portfolio, BlackRock considered three approaches[6] to modelling loss rates. Beyond this, BlackRock superimposed a series of judgmental adjustments. Details regarding these adjustments are discussed below:

- Higher concentration risk (i.e., a greater proportion of loans are associated with the same borrowers) at Anglo versus other banks in CRE loans resulted in an increase to BlackRock's estimated loss mapping.
- The uncertainty inherent in not fully modelling each loan in the Anglo book resulted in an increase to BlackRock's estimated loss mapping.
- Some inaccuracy with regards to the status of loans as identified in a KPMG report resulted in an increase to BlackRock's estimated loss mapping.
- Weaker credit control functions as identified in a Central Bank report resulted in an increase to BlackRock's estimated loss mapping.
- The data integrity and verification findings (see subsequent section) resulted in an increase to BlackRock's estimated loss mapping due to the prevalence of errors and inaccuracies in the data tapes.

After applying these overlays, BlackRock was able to benchmark the rates derived from the external consultancies and to confirm that these loss rates appeared reasonable. BlackRock itself did not independently calculate a specific loan loss projection with respect to loans held by Anglo.

Box 1: BlackRock approach for reasonableness

BlackRock's approach was to map worst-case loss rates at as granular a level as possible from the Core Banks' results. A series of loss-mapping approaches was taken for Anglo's Commercial Real Estate (CRE) portfolio and this was then overlaid with a range of additional judgemental estimates. A range of loss rates was produced corresponding to the series of CRE approaches. BlackRock compared the outcome of the previous work and found the loss forecasts to be reasonable within the ranges they had benchmarked.

Data integrity and verification

As inputs into the loan loss assessment exercise for Anglo, BlackRock oversaw, on behalf of the Central Bank, a data integrity and verification exercise to ensure robust outputs. Mazars, an accountancy firm, was retained to support this work (see Appendix B of the FMP report for details).

Mazars carried out four specific activities, as summarised below, with process issues and outcomes as noted:

1. Loan file sampling and testing: the aim was to assess the accuracy of the data provided by the banks compared to their source systems. It is worth noting that Mazars extracted data and sampled files at a customer, and not account, level. The key findings are:
    - Error rates for the loan portfolios were significantly higher compared to those of the other institutions.
    - The errors resulted in part from the form of the data request and in part from the manner in which the data is held on the Anglo systems. Anglo has a data improvement project underway with a scheduled completion date of September 2011.

2. Review of IT systems: this provided insight into how effectively and appropriately the banks' loan systems were operating. The key findings are:
    - In some cases the IT systems are not the primary data record, therefore many key variables are found only on paper versions.
    - There is no single comprehensive data structure.

[6] The approaches were: (1) using the CRE loss rates on the sector labelled "leisure"; (2) using the SME loss rates for the sector labelled "leisure"; and (3) stratifying the CRE portfolio by LTV band and applying loss rates accordingly, based upon the experience in the previous four banks.

- These issues are the underlying reason for many of the errors identified in the data testing exercise.
- Systems are standard out of the box applications which have been configured for the specific requirements of Anglo with the exception of the credit grading system which was developed to support Basel II compliance.
- The systems were considered to be consistent with the systems operating in retail banking institutions, however the data on a number of systems was not considered to be up to date and this now being addressed by way of the data improvement project.
- IT controls have been significantly improved in the recent past.

3. Review of credit risk monitoring: the objective was to determine if the banks' internal credit risk monitoring systems and processes – including internal credit rating systems and income recognition policies – are in line with expectations outlined by the Central Bank. As an output of this exercise, the contracted accounting firms provided a high level review and summary of processes in place. The review did not uncover any material issues. It is worth noting that much of the Anglo management has been changed in the recent past, therefore credit practices have improved and policies are being followed.

4. Data tape to balance sheet reconciliation: this exercise reconciled the gross loan balances from data tapes provided by the banks against the gross loan balances contained in the banks' financial statements. The review found that data tapes for Anglo reconciled to unaudited statutory accounts within 0.2% of notional value. The residual amounts were deemed negligible.

Securities and derivatives

Similar to the exercise carried out for the other institutions, BlackRock examined Anglo's securities and derivatives portfolios.

BlackRock analysed a portfolio of €14.7bn (BlackRock market value) in securities across 105 individual positions. The majority of the securities at the institutions are confirmed to be used as liquidity instruments for cash management purposes.

BlackRock also performed a high-level review of individual derivatives positions. These instruments are almost exclusively of the type generally used to support hedging and funding programmes, consistent with the institutions' stated objectives. In the time available, the objective was not to conduct a full review of positions. Instead the intent was to provide comfort on the nature of the portfolios by assessing their size and shape and conducting non-statistical spot checks, which revealed no material differences.

3.3 Capital requirements of Anglo and INBS

Box 2: Verifying capital requirements

As outlined in Appendix I of the FMP report, the capital requirements of Anglo and INBS were assessed by the Central Bank in September 2010. The Central Bank was satisfied with the projected income, operating expenses, and capital needs forecast of that exercise and so these elements have not been revisited here. This assessment focuses on verifying that the loan loss forecasts, which were estimated by Anglo and INBS in the previous exercise, are sufficiently conservative and consistent with those forecast for other banks by BlackRock as part of the 2011 PCAR.

As a result of the September 2010 assessment, new capital of €6.4bn for Anglo and €2.7bn for INBS was injected by the Government in December 2010, bringing the total amount of State capital the two institutions have received since 2009 to €29.3bn and €5.4bn respectively. Since these capital injections were made on the basis of loss estimates that have been found to be reasonable by BlackRock this analysis does not indicate that an additional capital requirement is required.

4. Independent assessment of BlackRock's work

In line with the terms of the MOU, the Central Bank appointed The Boston Consulting Group ("BCG"), an international consultancy firm, to provide an independent assessment on the work performed by BlackRock and its sub-contractors. The assessment covered all aspects of the BlackRock work including loan loss assessments, data integrity and validation, and asset quality review. Based on its experience and expertise, BCG assessed BlackRock's work along four dimensions:

- Scope and methodology: prior to Central Bank sign-off, BCG reviewed and challenged the proposed scope and methodology documents from BlackRock and its sub-contractors to ensure adequate data sources, rigorous analysis, and consistency of approach across banks and sub-contractors.
- People: BCG screened, met, conducted in-depth discussions with, and worked alongside all principal individuals at BlackRock and each of the sub-contractors to assess their capabilities and experience with respect to their appointed tasks.
- Processes: throughout the project BCG met with BlackRock and the sub-contractors regularly (weekly or daily, as appropriate) to determine the depth and rigour of analyses being performed, identify, track and escalate issues and concerns to the Central Bank, and suggest and monitor appropriate remedies.
- Results: as results emerged, BCG conducted in-depth evaluations of outcomes, assumptions, inferences, and judgements to ensure delivery in line with agreed terms. While BCG did not perform full data or model audits, it did provide robust challenge to the methodologies, approaches, and assumptions employed.

In addition, BlackRock hosted numerous sessions for the Central Bank and other government agencies, the External Partners, and INBS itself to explain its methodologies, assumptions, and results.

Following this detailed assessment BCG believes that the approaches taken by BlackRock were satisfactory, and that the results are appropriately conservative, in line with BlackRock's terms of reference.

BCG believes that the approaches taken by BlackRock in analysing the approaches and results of previous work conducted on Anglo were sound and appropriate. The loss rate mapping exercise identified crucial areas where judgmental overlay would be necessary, and BlackRock applied these layers of conservatism appropriately.