2. Executive Summary

Background

The Financial Measures Programme ("FMP") implements the Central Bank of Ireland's obligations under the agreement between Ireland and the European Commission ("EC"), European Central Bank ("ECB") and International Monetary Fund ("IMF") (together referred to as the "External Partners").

The Programme aims to place the Irish banking system in a position where it can fund itself and generate capital without undue further reliance on the Irish or European public sectors. The FMP comprises:

- **An independent loan loss assessment exercise** performed by BlackRock Solutions ("BlackRock"), the results of which have informed the calculation of capital requirements under the PCAR.

- **The Prudential Capital Assessment Review ("PCAR") 2011,** an annual stress test of the capital resources of the domestic banks under a given stress scenario, undertaken in order to calculate the cost of recapitalisation required to meet Central Bank-imposed requirements.

- **The Prudential Liquidity Assessment Review ("PLAR") 2011**, which establishes funding targets for banks participating in the PCAR in order to reduce the leverage of the banking system, reduce banks' reliance on short-term, largely central bank funding, and ensure convergence to Basel III liquidity standards over time.

This report describes in detail how the FMP has been executed, and the results of this part of the Programme. The report refers to actions carried out in respect to Allied Irish Banks ("AIB"), Bank of Ireland ("BOI"), EBS Building Society ("EBS") and Irish Life & Permanent ("ILP"). The FMP is a conservative, transparent, and validated approach to assessing the capital needs of the banks while developing effective deleveraging plans.

The basis for assessing capital requirements

The PCAR capital requirements are derived from three exercises:

- The results of BlackRock's independent loan loss assessment exercise;
- The results of the PCAR 2011 stress test; and
- The outputs of the PLAR, in particular banks' plans for deleveraging.

The three are complementary but separate.

The loan loss exercise measures the nominal losses banks might experience under the base and adverse scenarios, over both a three-year and a loan-lifetime horizon, stretching out to 2040. The base scenario is in line with EU forecasts for the Irish economy and the adverse (inter-changeably referred to as the 'stress') scenario represents an unlikely further economic contraction.

These losses are estimated from a bottom-up analysis of loan data. By definition the results of this exercise are severe as they do not take account of banks' existing or future provisions, or future operating profit, and should therefore not be considered in isolation. The BlackRock-derived figures in this report should be read in this context.

The PCAR stress test is a top-down exercise which requires banks to model the impact of certain assumptions on their balance sheets and profit and loss accounts. While distinct from the EBA stress test, the PCAR incorporates much of the methodology and parameters used by the EBA. It is designed to be closely in line with the EBA stress test ensuring that required capital amounts under PCAR will satisfy EBA standards. Results of the separate EBA stress test of Irish banks will be published in June along with results from other European banks.

The PCAR stress test relies heavily on BlackRock's assessment of forecast losses through to the end of 2013. For elements of the income and expenditure accounts, it relies, in part, on the banks' own forecasts

based on Central Bank-specified parameters. Additional buffers to ensure sufficient capital to cover post-2013 events and other contingencies have also been included.

The PLAR is also a top-down exercise and requires banks to meet a range of target funding ratios. The central target is the Loan to Deposit Ratio ("LDR"), which has the explicit purpose of shrinking the balance sheets of the domestic banks. To achieve this target banks will be required to sell assets in a controlled manner between 2011 and the end of 2013. In doing so, they are likely to incur losses relative to book value. An estimate of these losses has been included in the overall assessment of the capital needs of each bank.

A conservative approach to bank capitalisation

Completing these exercises in combination has allowed the Central Bank to model both balance sheet and profit and loss dynamics in a transparent and conservative manner, offering robust reassurance to the market that the resulting capital requirements are based on credible stress modelling. Notably, the incorporation of incremental three-year provisions based on BlackRock-identified lifetime stress loan losses has resulted in a total recapitalisation requirement materially in excess of the stand-alone application of EBA minimum parameters.

The selection of capital targets further adds to the conservatism of the exercise, with the banks participating in PCAR 2011 collectively required to raise €24.0bn in capital in order to remain above a minimum capital target of 10.5% Core Tier 1 in the base scenario and 6% Core Tier 1 in the stress scenario, plus an additional protective buffer. This compares favourably with many banking systems in developed jurisdictions.

This Executive Summary describes: the process used to calculate the final capital requirements; how this requirement was impacted by three-year loan loss projections based on BlackRock forecast loan-life losses; how the exercise was conducted using conservative assumptions and parameters; the inclusion of an additional capital buffer; and, as a result, the final capital requirements calculated under the FMP. In addition, this section details plans agreed with the four institutions to deleverage their balance sheets, thereby beginning to 'right-size' the domestic banking sector.

The calculation method for the capital requirements

The final capital requirements are derived from a series of calculations which, at a high level, have required the following steps:

- The estimation of loan-life and three-year losses under the base and adverse scenarios – the BlackRock exercise;
- The modelling of the impact of these losses on balance sheets and profit and loss accounts; and
- The combination of these two steps to produce a capital requirement for each of the four banks.

The relationship between the first and second steps is essential to understanding why the ‘raw’ BlackRock loan loss estimates do not automatically translate into a capital number – in other words, there is not, nor could there be, a euro for euro translation of BlackRock’s estimates into capital. This is because:

- Losses take no account of existing or future provisions or future bank earnings;
- Losses are calculated over both a three-year and a loan-lifetime basis and have not been discounted back to a present value; and
- The model reports losses in the period in which they are realised.

The link between the BlackRock loan loss assessments and the final capital requirement is made through a calculation of three-year projected losses, inter-changeably referred to as three-year forecast provisions. Provisions are the liabilities banks hold to meet losses. The translation of provisions into capital is a complex process, and although there are long established accounting standards to govern this process, it ultimately turns on judgements about the likelihood and size of losses. In interpreting the BlackRock loan loss estimates, the Central Bank has been careful to apply such judgements in a conservative manner, and have drawn on expert accountants to inform and validate these judgements.

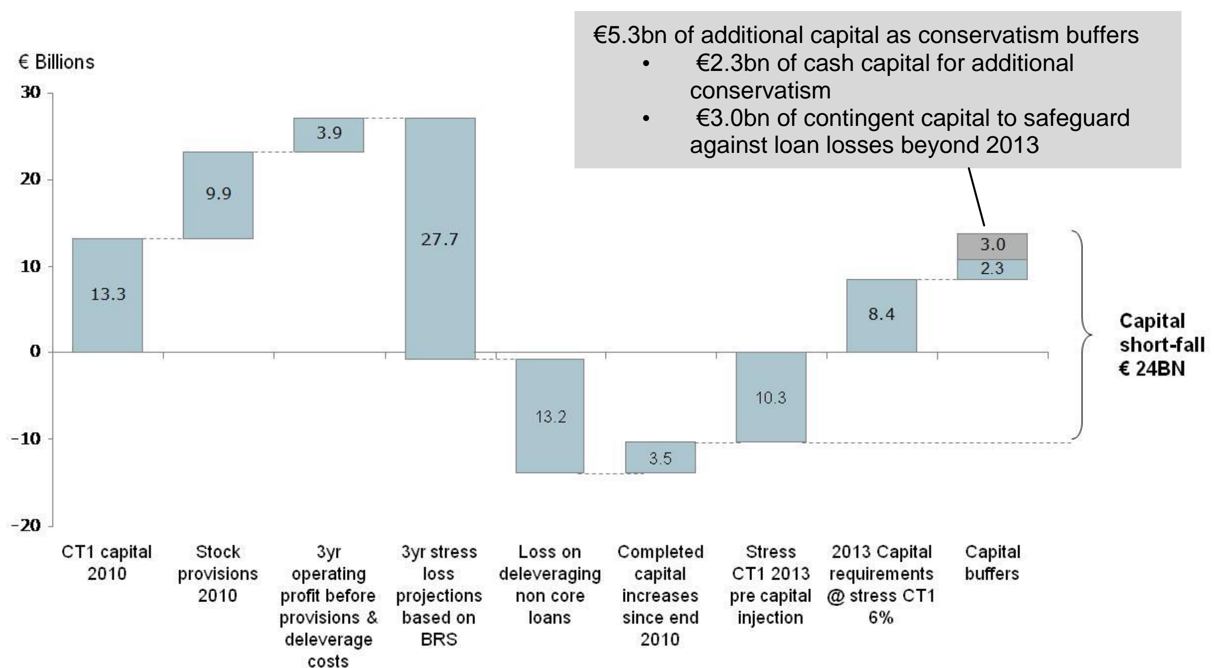
The principal driver of these three-year projected loss calculations in the PCAR is the output of BlackRock’s work. These three-year projected losses comprise:

- Losses from loans that both default and crystallise in 2011-2013;
- Losses from loans that default in 2011-2013 but crystallise after 2013.

The BlackRock-derived three-year projected losses in the stress scenario are significantly more conservative than the banks' own forecast provisions. In part, they are an early recognition of potential losses and serve to add conservatism to the PCAR capital calculations.

Once revised forecast three-year projected losses have been calculated based on BlackRock loan-lifetime loss forecasts, these are combined with forecast operating profit or loss and the losses on asset disposals under deleveraging plans. Once the forecast capital level is calculated, this is compared to Central Bank capital requirements and the deficit or surplus is derived. Chart 1, below, illustrates this relationship.

Chart 1: Process for calculating capital requirements



The calculation illustrated above consists of the following components:

- Calculating existing Core Tier 1 capital (€13.3bn);
- Adding the existing stock of loan loss provisions held by the banks in their accounts at end-2010 (€9.9bn);
- Adding cumulative projected operating profit or loss during 2011-2013 under the adverse scenario (€3.9bn);
- Subtracting the conservative three-year, deleveraging-adjusted projected stress losses calculated by the Central Bank based on BlackRock loan-lifetime loss assessment (€27.7bn);
- Subtracting the book losses associated with disposals under deleveraging (€13.2bn);
- Making other capital adjustments (€3.5bn); and
- Calculating the difference between the Core Tier 1 capital 2013 in the adverse scenario and the requirement of 6% in the adverse scenario

Provisioning for potential future loan losses

The Central Bank's calculation of projected losses under the stress case ensures that banks will hold capital to meet potential future losses (even if they are to occur only in a severely stressed macroeconomic context) at an early stage. This goes well beyond provisions required under existing accounting standards.

The summary of the Central Bank three-year projected losses derived from BlackRock, equalling €27.7bn across the four banks, is detailed in Table 1, below:

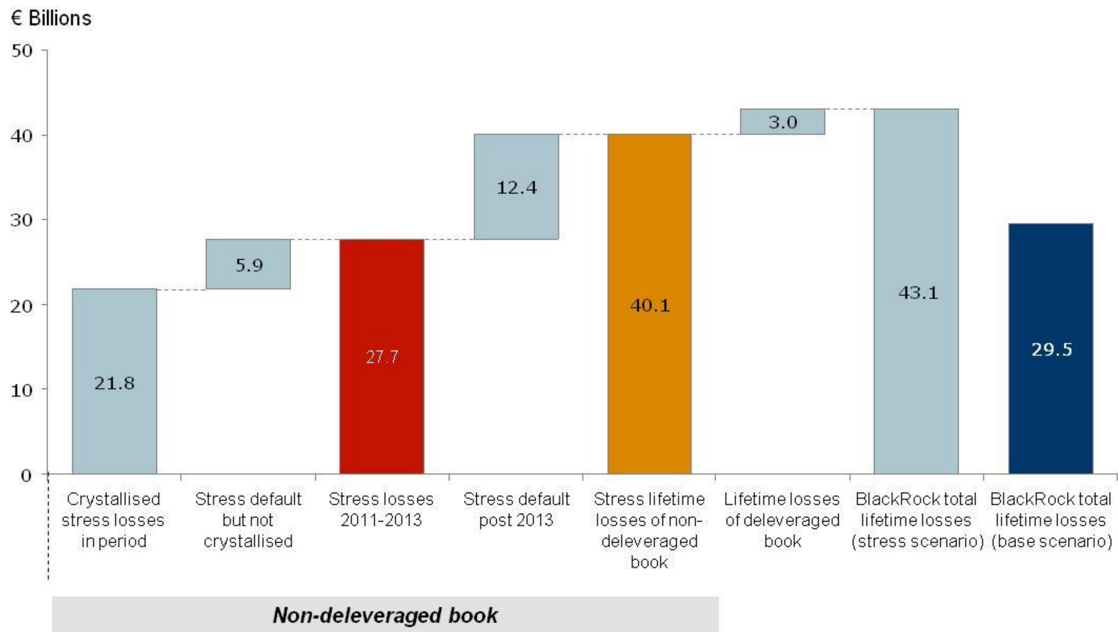
Table 1: Central Bank 2011-2013 projected losses derived from BlackRock and used for capital purposes (€m) - % of nominal portfolio loan balance

	AIB		BOI		ILP		EBS		**Total**	
Product	**Base**	**Stress**	**Base**	**Stress**	**Base**	**Stress**	**Base**	**Stress**	**Base**	**Stress**
Residential Mortgages	2,005 *(6.5%)*	3,066 *(9.9%)*	1,361 *(2.3%)*	2,366 *(3.9%)*	1,624 *(4.8%)*	2,679 *(7.9%)*	848 *(5.3%)*	1,380 *(8.7%)*	5,838 *(4.1%)*	9,491 *(6.7%)*
Corporate	564 *(2.7%)*	972 *(4.7%)*	799 *(3.5%)*	1,179 *(5.2%)*	0 *(0%)*	0 *(0%)*	0 *(0%)*	0 *(0%)*	1,362 *(3.1%)*	2,151 *(4.9%)*
SME	2,157 *(11.2%)*	2,674 *(13.9%)*	1,445 *(8.4%)*	1,837 *(10.6%)*	0 *(0%)*	0 *(0%)*	0 *(0%)*	0 *(0%)*	3,603 *(9.9%)*	4,511 *(12.3%)*
CRE	3,653 *(21.3%)*	4,490 *(26.2%)*	3,148 *(15.4%)*	3,847 *(18.8%)*	231 *(11.3%)*	400 *(19.5%)*	127 *(15.1%)*	197 *(23.4%)*	7,159 *(17.7%)*	8,934 *(22.1%)*
Non-mortgage Consumer and Other	1,167 *(20.8%)*	1,403 *(25%)*	627 *(11.5%)*	891 *(16.4%)*	259 *(15.6%)*	342 *(20.7%)*	0 *(0%)*	0 *(0%)*	2,052 *(16.1%)*	2,635 *(20.7%)*
Total	9,545 *(10.2%)*	12,604 *(13.4%)*	7,380 *(5.9%)*	10,119 *(8%)*	2,114 *(5.6%)*	3,421 *(9.1%)*	975 *(5.8%)*	1,577 *(9.4%)*	20,014 *(7.3%)*	27,722 *(10.1%)*

The diagram below explains how the Central Bank used the adverse (stress) macroeconomic loan loss assessments from BlackRock to build appropriately conservative projected provisions for the banks. The Central Bank has, in total, taken 69% of BlackRock lifetime stress losses (after the impact of deleveraging) into the three-year period for the purpose of capital calculation.

There is no expectation that capital requirements should be set to cover remote lifetime stress losses (which may have offsetting income). However the capital buffers that are in place have been designed to provide comfort concerning post 2013 losses in the years immediately following the assessment period, as an additional layer of conservatism.

Chart 2: Process for calculating three-year projected losses derived from BlackRock projections used for capital purposes; and differences between three-year provisions and crystallised lifetime loan losses[1]



Macroeconomic assumptions in the adverse scenario

The macroeconomic assumptions for the stress case are chosen in agreement with the External Partners.

Table 2: Summary of stress scenario macroeconomic parameters – Ireland (year-on-year figures)

	2010[e]	2011	2012	2013
GDP	-0.2	-1.6	0.3	1.4
GNP	-3.0	-2.6	-0.2	1.2
Consumption	-1.4	-3.9	-1.3	0.1
Investment	-21.1	-11.3	-1.7	-0.3
Government consumption	-2.2	-5.5	-4.3	-2.4
Exports	5.7	2	2.1	2.5
Imports	2.3	-1.1	0.5	1.7
Balance of payments (% of GDP)	-0.9	1.6	3.1	4.3
Employment	-4.0	-2.5	-1.1	0.1
Unemployment rate	13.6	14.9	15.8	15.6
Inflation				
HICP	-1.5	0.1	0.6	1
CPI	-1.0	0.7	0.9	1
House prices	-15.5	-17.4	-18.8	0.5
Commercial property	-13	-22	1.5	1.5
Personal disposable income	-3.2	-3.9	-1.2	0.2

The adverse macroeconomic scenario applied in the Financial Measures Programme and summarised above is not a forecast. The actual macroeconomic outcome is expected to be more favourable than the stress case. In fact, given uncertainties in the current climate, it is improbable that either the base or the

[1] The projected losses for loans defaulting post 2013 are, in part, included within the additional buffer detailed below. It should also be noted that the lifetime economic losses of the disposed books are accounted for as part of projected book losses on asset disposal.

stress scenario will prove to be accurate across the macroeconomic indicators, but using the unlikely adverse scenario ensures that the capital basis of the institutions is appropriately stringent.

To ensure both clarity and consistency, the PCAR scenarios are to a large degree in line with the 2011 EBA stress tests on European banks.

The capital requirements

The consequence of applying conservative assumptions, and of setting demanding capital targets, is to require Irish banks to raise a significant amount of additional capital.

The table below presents the minimum amount of capital the banks will be required to raise, a total of **€18.7bn**, in order to meet the new ongoing target of 10.5% Core Tier 1 ("CT1") in the base and 6% CT1 in the adverse scenario, on the basis of the combined results of the three-year projected stress losses derived from BlackRock and the PCAR analysis, before the addition of a conservative capital 'buffer'. The detailed results of the PCAR are set out later in this report.

Table 3: Gross total capital requirements resulting from PCAR 2011 pre-buffer (€bn)

	AIB	BOI	EBS	ILP	Total
Total capital required 2011-2013 (gross) before 'buffer'	10.5	3.7	1.2	3.3	18.7

An additional capital buffer

In addition to these capital requirements, themselves based on cumulative stress three-year projected losses derived from BlackRock, the Central Bank has added a further capital 'buffer' of €5.3bn across the four banks. This introduces an extra layer of resilience, and recognises the possible, albeit unlikely, emergence of large losses after 2013. The buffer represents a further protective capital layer over and above already conservative provisions, which are themselves based on an even more stressed macroeconomic environment than currently prevails.

Box 1 – Capital Buffer

While the stress test is intended to cover net losses arising up to the end of 2013, it is also reasonable (due to a large legacy of problem loans) to plan that the banks have sufficient capital at end-2013 to meet further losses which, though not evident even then, could be embryonic in the legacy loan portfolio. The BlackRock calculations covering the full lifetime of loans can throw some light on what additional buffer, if any, would be appropriate for this consideration.

In this context, the lifetime loan losses calculated by the BlackRock model on the base case macroeconomic scenario come out close to the same number as the three-year loan losses used in the stress PCAR calculations. A first approximation could be to assume that it is the weakest loans that go into loss status first in the stress scenario, and that these are the same loans as create losses in the base case.

If so, it would be reasonable not to include any additional buffer for remaining embryonic losses in the legacy portfolio after three years of stress. A contrasting extreme case – clearly greatly overstating the situation – would be to assume that all of the losses calculated for post-2013 in the base case need to be added to the 3-year stress losses; a total of €7.5bn.

Besides, any such losses are spread over a quarter century, allowing a lot of time for provisions to be set aside out of normal profits in what would then be a recovered and downsized banking system operating in a non-stressed situation. The proposed cash buffer together with the deferred contingent buffer amounts are therefore ample to deal with this prospect. The capital injection for the buffer will be met partly through equity and partly through contingent capital instruments.

Table 4: Impact of additional buffer on bank capital requirements (€bn)

	AIB	BOI	EBS	ILP	Total
Capital required 2011-2013 pre-buffer	10.5	3.7	1.2	3.3	18.7
Additional capital buffer (equity) imposed by the Central Bank	1.4	0.5	0.1	0.3	2.3
Additional capital buffer (contingent capital) imposed by the Central Bank	1.4	1.0	0.2	0.4	3.0
Total capital required 2011-2013	**13.3**	**5.2**	**1.5**	**4.0**	**24.0**

Table 5: Central Bank estimate of impact of proposed capitalisation on current capital ratios

	AIB	BOI	EBS	ILP
CT1 Ratio (Dec 2010)	3.7%	9.0%	8.0%	10.6%
Pro forma CT1 ratio (assuming immediate capital injection)[2]	21.9%	16.1%	22.6%	32.4%

A transparent approach to 'right-sizing' the Irish banks

A key component of the Financial Measures Programme is the establishment of transparent plans to reduce the Irish banking system to a manageable size and to stabilise its funding base. As of 31 Dec 2010, there were €255.6bn loans in AIB, BOI, EBS and ILP, and €142.1bn deposits – meaning an unsustainable Loan to Deposit Ratio ("LDR")[3] of 180%.

In the past, the gap between loans and deposits was met with wholesale funding. The loss of confidence in the Irish banks by wholesale lenders and corporate depositors resulted in a shortage of liquidity to re-finance maturing obligations and corporate deposit outflows. This precipitated the Irish banking crisis.

The Central Bank has agreed with the External Partners that a sustainable Loan to Deposit Ratio for the aggregate domestic banking system is 122.5%, meaning a surplus of some €70bn of loans. Deleveraging these loans will reduce dependence on wholesale funding and set the foundation for a sustainable banking sector. It will help to create smaller, cleaner banks that are capable of providing the new lending necessary to support economic activity in Ireland.

Consequently, the Central Bank has established target LDRs for each institution to achieve over time. The target ratios for 2013, and the amount of assets consequently designated for deleveraging (the run-off and disposal of non-core loans), is detailed in the following table.

[2] Capital injection includes equity buffer but does not include the contingency capital buffer. These figures include the impact of capital increases to date in 2011

[3] The ratio of a bank's loans to customers, net of provisions, to its customer deposits.

Table 6: Total net loans; and deleveraging plans Dec 2010 – Dec 2013 (€bn)

Bank	Dec 2010	Dec 2013 target	Deleveraging 2010 - 2013[4]
AIB	86.9	67.5	19.4
BOI	115.3	82.7	32.6
EBS	16.4	11.5	4.9
ILP	37.0	21.3	15.7
Total	**255.6**	**185.2**	**72.6**

Banks will implement deleveraging plans agreed with the Central Bank in order to transition to smaller balance sheets and a more stable funding base. They will do this through the separation of assets into 'core' and 'non-core' divisions, and the gradual run-off and disposal, avoiding a fire-sale, of their non-core assets. There is no requirement on the State or the banks to aggressively achieve deleveraging to the point of creating fire-sale situations, as this would result in a significant unnecessary transfer of value to third parties, funded via State capital injections.

The deleveraging of the banking system will give rise to losses which will create a need for further capital. These amounts are included in the overall capital requirement figures (see Chart 1).

The Irish public authorities will collectively oversee the banks' implementation of these plans.

Providing transparency around costs and underlying assumptions

The total additional capital requirement (gross) for the four banks is €24.0bn. This is well within the €35bn provided for this purpose in the Programme agreement. There are measures to reduce the cost to the Government including planned asset sales and Liability Management Exercises ("LME"). These are dealt with separately in the Minister's statement today.

The Central Bank's policy of transparency and the detailed results of the Programme contained within this report seek to begin to re-establish confidence in the Irish banks and set out an appropriate path towards future sustainability.

A validated programme of reform

The validation of the Financial Measures Programme is important in this process of re-establishing confidence in the Irish banks. This work by the Central Bank was a key element of the Ireland's agreement with the EC, ECB and IMF. The stress test criteria and the terms of reference for the diagnostic evaluation of bank assets were developed in consultation with the EC, ECB and IMF at the end of 2010, and these institutions have since monitored progress in the implementation of the Programme.

The Central Bank also contracted international expertise to ensure that the stress testing, loan loss assessment and deleveraging plans set out within this report were subject to expert scrutiny and direction from independent specialists. In addition to this validation, the stress testing exercises have also been subject to a peer review from central bank regulatory colleagues in France and Italy.

In accordance with the FMP, Anglo Irish Bank and Irish Nationwide Building Society were not included in the PCAR and PLAR exercise because their loan books are being wound down. Appendix I provides a comment on these institutions in light of recent developments and the insights gained from the BlackRock assessment process for the four other banks.

The remainder of this report is organised as follows and includes details for:

- The loan loss assessment exercise performed by BlackRock, and the translation of these figures into three-year Central Bank loss forecast used for capital purposes;
- The PCAR stress testing exercise, which was used to calculate capital requirements;

[4] Total asset disposals plus net change in loan assets (across core and non-core)

- The PLAR liquidity review performed by the Central Bank; and
- The deleveraging plans agreed with the domestic institutions in order to reduce their assets and 'right-size' the aggregate balance sheet.