



Banc Ceannais na hÉireann
Central Bank of Ireland

Eurosystem

2012

PCAR 2011 Review

- *Analysis of PCAR banks up to end-June
2012 compared to PCAR 2011*

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1. Introduction

This report outlines the findings of a review conducted by the Central Bank of Ireland (“Central Bank”) into the financial performance and capital out-turn of Allied Irish Banks plc (AIB), Bank of Ireland (BOI) and Permanent TSB (PTSB) over the period end-December 2010 to end-June 2012 compared to the financial projections utilised in the FMP and PCAR 2011. The basis for this analysis is the March 2011 FMP report¹. Note the report largely does not make reference to post-June 2012 developments or does not provide a forward looking assessment.

Financial Measures Programme (“FMP”) 2011

The FMP was carried out in 2011 with the aim of placing the Irish banking system on a more stable financial footing. The FMP comprised:

- The Prudential Capital Assessment Review (“PCAR”) 2011, which was a stress test of the capital resources of AIB, EBS, BOI and PTSB in order to calculate the cost of recapitalisation required to meet Central Bank imposed requirements.
- An independent loan loss assessment exercise performed by BlackRock Solutions (“BlackRock”), which fed into the PCAR.
- The Prudential Liquidity Assessment Review (“PLAR”) 2011, which established funding and de-leveraging targets for the banks participating in PCAR in order to: reduce the leverage of the banking system; reduce the banks reliance on short-term, largely central bank, funding; and, ensure a more stable path to convergence with Basel III liquidity standards over time.

PCAR Capital Requirements

PCAR 2011 assessed the capital resilience of the banks versus an assumed base case scenario with a risk tolerance of 10.5% core tier 1 (CT1) and an extreme but plausible adverse (or stress) case with a risk tolerance of 6% CT1. The required re-capitalisation was therefore determined on the basis of the projected capital shortfall using both of these scenarios and thresholds. Note these thresholds resulted in additional capital requirements of €18.7bn. The authorities also required an additional equity capital buffer of €2.3bn (i.e. in excess of the 6% CT1 stress target) and a contingent capital buffer of €3bn. Finally, and as agreed in the Programme of Financial Assistance with the External Authorities, the banks subject to PCAR are required to maintain 10.5% CT1 on an on-going basis.

¹ [The Financial Measures Programme Report, March 2011](#)

Box 1 - Key points to note about PCAR and post-PCAR events

The bullet points below highlight a number of key aspects of the PCAR or recorded figures that are of significant note and, where necessary, how we addressed these in compiling this report.

- **The acquisition of EBS Building Society (EBS) by AIB:** We have consolidated the PCAR 2011 submissions and capital requirements assuming there would have been limited intergroup exposures at the time of the acquisition.
- **Application of BlackRock loan loss forecasts to PCAR income statement:** The Blackrock loan losses were provided in total as three year losses rather than on an annualised basis. Therefore, the Central Bank applied incremental loan losses over the 2010 stock of provisions equally one third per year in PCAR. In actuality the timing of the banks losses would not be expected to materialise on such a basis.
- **Some differences to other published figures from the banks:** The stress test results were finalised prior to the completion of audited 2010 year end accounts for all of the banks which leads to some differences in the December 2010 starting position versus PCAR 2011. In addition, we have used regulatory submissions in compiling our analysis which may differ from published year-end and interim figures from the banks due to the earlier timing for the submission or classification differences in regulatory information.
- **Transfer of land and development loans of less than €20m to NAMA (NAMA II):** The PCAR loan losses and deleveraging plans were prepared on the assumption that NAMA II was going to take place. Given the decision not to transfer land and development loans of less than €20m to NAMA and retain them on the bank's balance sheets some adjustments have been made to deleveraging plans since and this is reflected in the way in which we compare realised loan losses to PCAR projections.
- **PCAR was completed on an annualised basis, while this report compares to June 2012:** We have in some instances assumed that half of a banks' PCAR 2011 base or stress profit or loss is comparable to the six months to end-June 2012. Notwithstanding this, we have adjusted or estimated exceptional income or cost items, where possible, either in reported figures or in PCAR 2011 estimates based on the documentation provided by the banks at the time of the stress test. This is also the case with respect to other items where end-year figures were utilised (for example, balance sheets and capital requirements/ RWA).

2. Executive Summary

Post-PCAR Required Re-Capitalisation

PCAR 2011 stress tested the capital of the banks under assumed base and stress scenarios and from this calculated the amount necessary to recapitalise the Irish banking system.

For each of the banks the PCAR 2011 stress scenario resulted in the greatest capital deficit. In total the participating banks were required to raise €24bn in capital; €21bn of equity capital (of which €18.7bn was to meet the 6% CT1 threshold and €2.3bn was an additional equity buffer) and €3.0bn of contingent capital to safeguard against loan losses beyond 2013. This €21bn was fully raised by the institutions by end-June 2012 and the €3bn total contingent capital was raised by the banks issuing contingent capital notes to the Minister for Finance in July 2011².

Table: Capital requirement resulting from PCAR 2011 and how it has been met (€bn)

	AIB	EBS	AIB & EBS*	BOI	PTSB	Total
Gross capital required pre buffer	10.5	1.2	11.7	3.7	3.3	18.7
Buffer (equity)	1.4	0.1	1.5	0.5	0.3	2.3
Equity capital requirement	11.9	1.3	13.2	4.2	3.6	21.0
Buffer CoCo	1.4	0.2	1.6	1.0	0.4	3.0
Total capital requirement	13.3	1.5	14.8	5.2	4.0	24.0
Capital raised:						
Private equity raising**			0.0	2.3	0.0	2.3
Liability management exercises			2.1	1.7	1.0	4.8
Other			0.0	0.0	0.3	0.3
Government capital injection			11.1	0.2	2.3	13.6
Equity capital			13.2	4.2	3.6	21.0
CoCo			1.6	1.0	0.4	3.0
Total capital			14.8	5.2	4.0	24.0

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), Department of Finance, bank financial reports. * AIB & EBS includes EBS on a pro-forma basis up to June 2011 and for PCAR is the sum of AIB and EBS individual submissions. **Includes debt for equity swaps.

² In January 2013, the State sold its holding of BOI's contingent capital notes to private investors at 101% of their par value plus accrued interest.

Drivers of Capital Change

In our review of the outturn of the first 18 months of the PCAR time horizon, we examined the factors driving capital movements. We considered drivers of

- Profitability; including an analysis of loan losses;
- Deleveraging and balance sheet movements; and
- Movements in regulatory capital requirements (or as they are commonly referred to, risk weighted assets (RWA)).

The combination of available capital (measured in terms of CT1) and regulatory capital requirements (measured in terms of RWAs) gives the core tier 1 ratio. Using Tier 1 or Total Capital gives the Tier 1 and Total Capital³ ratios respectively.

Summary of Results

In summary, the results of this review show that in aggregate the three PCAR banks were, in terms of capital position, and with all other things being equal, inside the stress case scenario but outside the base at end-June 2012. This is unsurprising given that the macroeconomic outturn to end-June 2012 approximately follows a similar path. Notwithstanding this, some macroeconomic factors and actual outturns are near or exceed the stress case. In aggregate, the banks:

- Performed ahead of base and stress expectations for pre-provision operating profit in 2011, but pre-provision operating profit is less than projected under both scenarios for 2012 to end-June 2012.
- Have recognised 112% of the flow of expected base case loan losses (excluding NAMA II) and 63% of the flow of stress case loan losses that were included in PCAR.
- Have performed better than expected in terms of deleveraging losses taken to date (c€3.4bn) compared to the €10.8bn and €13.2bn assumed in the PCAR base and stress cases respectively leaving €9.8bn positive difference versus PCAR stress assumptions as at end-June 2012. Note, some additional asset sales are still forecast post-June 2012 and in PTSB's case, little of the originally planned asset sales have taken place due to amendments to the bank's strategy.
- Have higher risk weighted assets (RWA) than PCAR, due to changes in their deleveraging plans (e.g. NAMA II assets staying on-balance sheet) and higher than forecast credit risk RWAs due to increases in Probability of Default (PD) and Loss Given Default (LGD) in some instances. The latter is largely consistent with higher than expected loan defaults.

³ Minimum capital requirements under the Capital Requirements Directive (CRD) is expressed in terms of Total Solvency and the minimum ratio is currently 8%.

Box 2 - Key considerations when reading this report

The bullets below outline key considerations which should be taken into account when reading this report.

- **Interpretation:** Within this report we compare the outturn of these scenarios to the banks actual financial results from end-December 2010 to end-June 2012. This report is not intended to provide findings or conclusions on the future capital needs of the banks; rather it is intended to illustrate the financial performance of the PCAR banks in the time period referenced and to compare it to the scenarios (and associated projections) that were used by the Central Bank in PCAR 2011.
- **PCAR Methodology:** The stress tests were an integrated financial projection based on macro-economic scenarios provided by the Central Bank. As part of this process, earnings, balance sheets, loan loss and capital estimates were provided by the banks under hypothetical future scenarios. These results were challenged by the Central Bank and in some cases adjusted to come to a Central Bank view including in the case of loan loss forecasts provided by BlackRock which were deemed to be the determinative estimates and as such were utilised and fully integrated into the stress test results.
- **Loan Losses:** There were large loan loss provisions recognised in 2011 (including as a result of Central Bank's new Impairment and Provisioning Guidelines and Disclosures Requirements 2011⁴ (the "new Guidelines")) and as a result it is expected that loan losses will be front-loaded versus PCAR and all things being equal, we would therefore expect lower loan loss recognition for 2012. Notwithstanding this, the analysis in Section 4 indicates that loan defaults have been greater than expected at this stage. Over the last 18 months to June 2012 a number other of factors would also have impacted loan losses both positively and negatively compared to the loan loss forecasts assumed within the PCAR scenarios. These factors include:
 - *Lower than PCAR assumed interest rate environment.*
 - *Deviation from foreclosure strategy implied in loan loss forecasts.*
 - *The Central Banks' new Guidelines, which would have driven a more conservative recognition of losses.*

⁴ [Impairment Provisioning and Disclosure Guidelines, December 2011](#)

3. Capital Position – June 2012

Consolidated Summary

In aggregate, the banks had €9.2bn⁵ capital, in excess of the on-going minimum capital ratio of 10.5% CT1 at end-June 2012 available to absorb additional losses due to, for example, loan impairment and losses on sale of assets (net of pre-provision operating profits or losses). However, for comparative purposes and as can be seen in the chart over the page, if the capital raised following PCAR was excluded from their actual capital bases at end-June 2012, they would be roughly halfway between the capital position forecast under the base and stress scenarios bearing in mind the related points highlighted on page 4. This is due both to the points above and the other factors elaborated upon within this report. In addition, there is detailed information provided on a bank-by-bank basis showing each of the capital drivers.

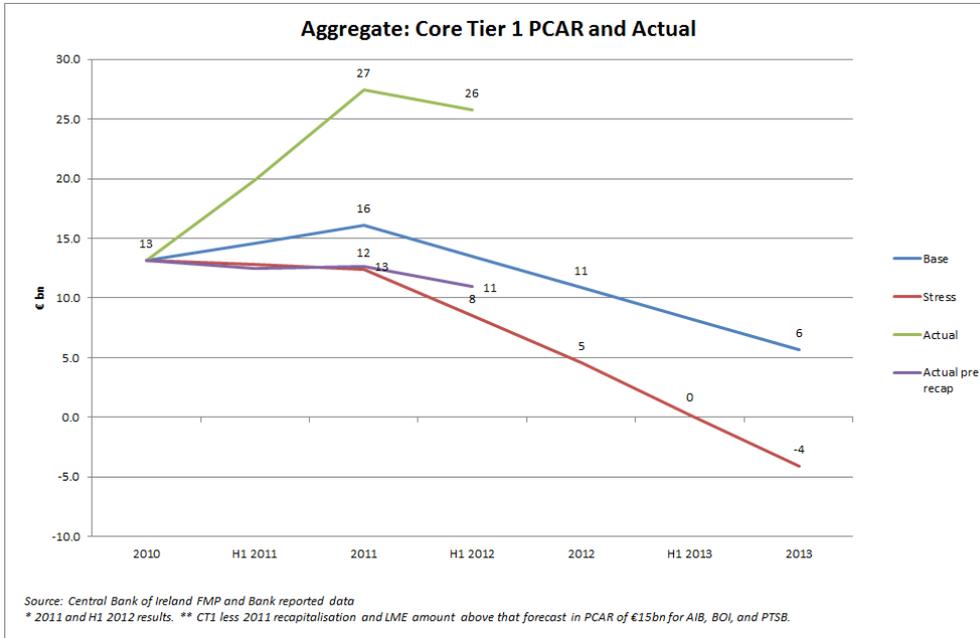
Table: June 2012 capital surplus to 10.5% core tier 1 capital ratio minimum

	AIB	BOI	PTSB ^a
Available capital	14.0	8.6	3.1
Capital requirement	6.5	4.9	1.2
Capital ratio	17.3%	14.0%	20.5%
Surplus at:			
10.5%	5.5	2.2	1.5

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings.

The 'actual pre-recap' figure in the chart below is the aggregate actual CT1 capital position of the banks less any CT1 capital raised over and above that assumed within PCAR 2011 projections to allow for a like-for-like comparison to PCAR base and stress projections. The difference amounts to €15bn (€21bn actual capital raised less €6bn taken into account within PCAR projections).

⁵ PTSB published a CT1 ratio of 18.1% in its June-2012 interim results, however, this analysis is based off regulatory returns which were submitted prior to the interim results and showed a higher figure of 20.5%.



While there is no single driver of capital change and no single explanatory variable for deviation away from the base or stress case; loan losses and losses on deleveraging are the most significant variables given the size of their impact relative to overall profits and other drivers of capital change.

**Table: Summary of actual outturn to H1 2012 vs. PCAR bas and stress cases 2013
Cumulative from 2010 for all banks (€bn)**

	Base 2011-2013	Stress 2011-2013	Actual 2011-Jun 2012	Section:
Pre-provision operating profit	2.7	1.9	0.4	4.1
Loan impairment charges	10.1	17.8	11.3	4.2
Deleveraging losses (disposals/NAMA II)	10.8	13.2	3.4	4.4
Deleveraging (total volume, FMP report)	72.6		45.1	5
Core Tier 1 capital	5.6	-4.2	25.7	7

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings.

4. Economic outturn compared to PCAR 2011 assumptions

Introduction

The base and stress scenario macroeconomic parameters, which were agreed with the External Partners, are outlined below alongside the actual outturn. The FMP report noted that the scenarios were intended as plausible but reasonable bases to conduct a stress test. Stress testing and scenario analysis for capital estimation purposes usually seeks to test the capital resilience of a bank by measuring its capital requirements against a severe but plausible event. By capitalising to that stress scenario, or event and timetable (even with a 6% threshold), the exercise sought to ensure, to a high degree of confidence, that it is extremely unlikely that the capital position of the bank will deteriorate beyond this.

Summary

In the following section, we examine the actual performance of these indicators relative to both the base and the stress scenarios. In general, the macroeconomic variables have broadly performed between the PCAR base and stress scenario inputs, however, with several variable close to the stress case. For information, [Appendix 1](#) includes the current outturn and expectations for 2012 and 2013, respectively.

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

	PCAR Base				PCAR Stress			Actual/Current Forecast		
	2010e	2011f	2012f	2013f	2011f	2012f	2013f	2011a	2012f	2013f
GDP	-0.2	0.9	1.9	2.5	-1.6	0.3	1.4	1.4	0.8	1.7
GNP	-3.0	-1.5	0.8	1.5	-2.6	-0.2	1.2	-2.5	0.3	0.8
Consumption	-1.4	-1.9	-1.0	0.5	-3.9	-1.3	0.1	-2.4	-1.9	-0.7
Investment	-21.1	-8.9	1.8	4.3	-11.3	-1.7	-0.3	-12.6	-3.4	1.7
Government consumption	-2.2	-5.7	-1.8	-2.4	-5.5	-4.3	-2.4	-4.3	-2.9	-1.9
Exports	5.7	4.5	4.5	4.6	2.0	2.1	2.5	5.1	3.3	4.4
Imports	2.3	0.9	2.7	3.3	-1.1	0.5	1.7	-0.3	0.7	3.3
Balance of payments (% of GDP)	-0.9	1.2	2.2	2.6	1.6	3.1	4.3	1.4	0.0	3.3
Employment	-4.0	-0.8	0.5	1.1	-2.5	-1.1	0.1	-2.1	-1.2	0.1
Unemployment rate	13.6	13.4	12.7	11.5	14.9	15.8	15.6	14.4	14.8	14.5
Inflation										
HICP	-1.5	0.4	0.6	1.6	0.1	0.6	1.0	1.1	1.9	1.3
CPI	-1.0	0.9	0.8	1.6	0.7	0.9	1.0	2.6	1.9	1.4
House prices*	-15.5	-13.4	-14.4	0.5	-17.4	-18.8	0.5	-16.7	-6.0	-
Commercial property*	-13.0	-2.5	1.5	1.5	-22.0	1.5	1.5	-11.4	-3.5	-

Source: Central Bank of Ireland Financial Measures Programme Report, March 2011. Current forecasts an average of DoF, ESRI, EC, OECD, IMF and CBI forecasts, where available. 2011A from CBI Quarterly Bulletin Q4 2012.

*Actual/Current Forecast 2012f is change in CSO residential property/IPD commercial property price indices from Dec-11 to Jun-12.

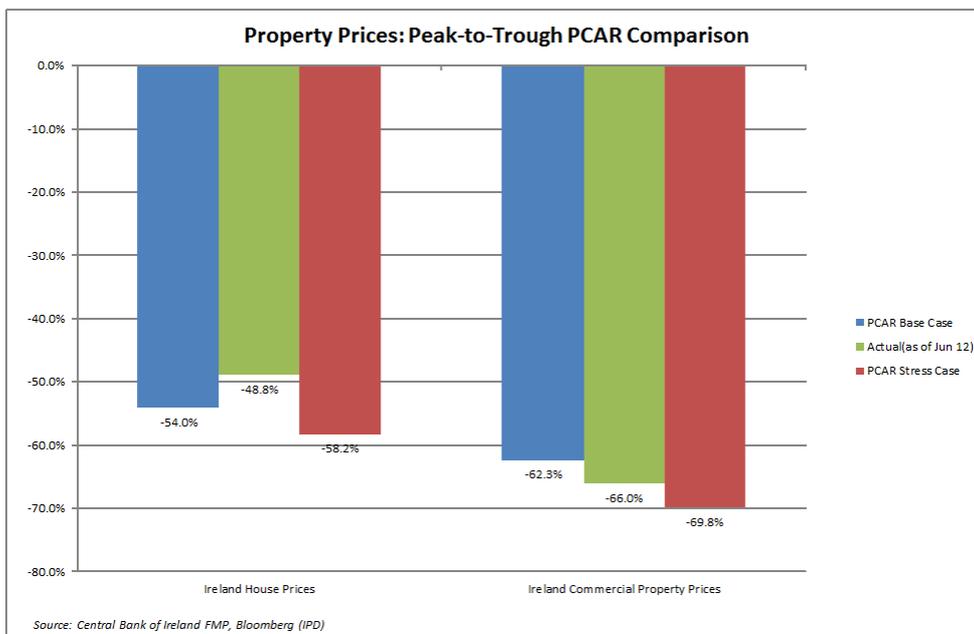
Ireland's GDP growth in 2011 exceeded what was assumed in the PCAR base case. Current forecasts for 2012 and 2013 show GDP growth below base case assumptions, but above what was assumed in the stress case. Similarly, Ireland's GNP contraction in 2011 was greater than was assumed in the PCAR base case, coming close to that assumed under the stress scenario. Current forecasts for 2012 show GNP growth below base case assumptions but above what was assumed in the stress case. Current forecasts for GNP growth for 2013 are below both base and stress scenarios.

The unemployment rate was above the base case assumptions for 2011 but below the stress case assumptions. Current forecasts predict the same relationship for 2012 and 2013.

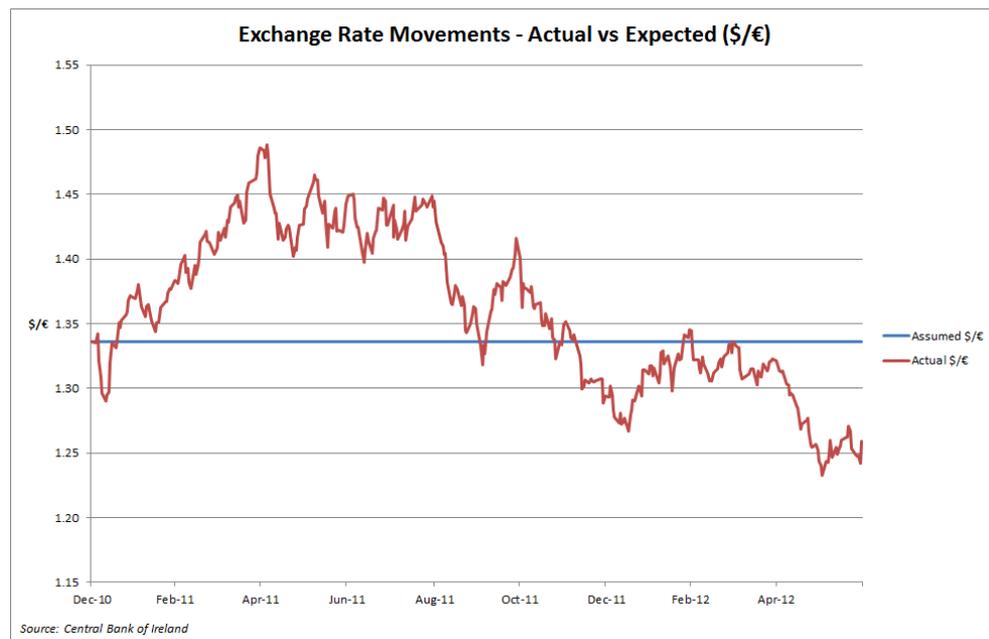
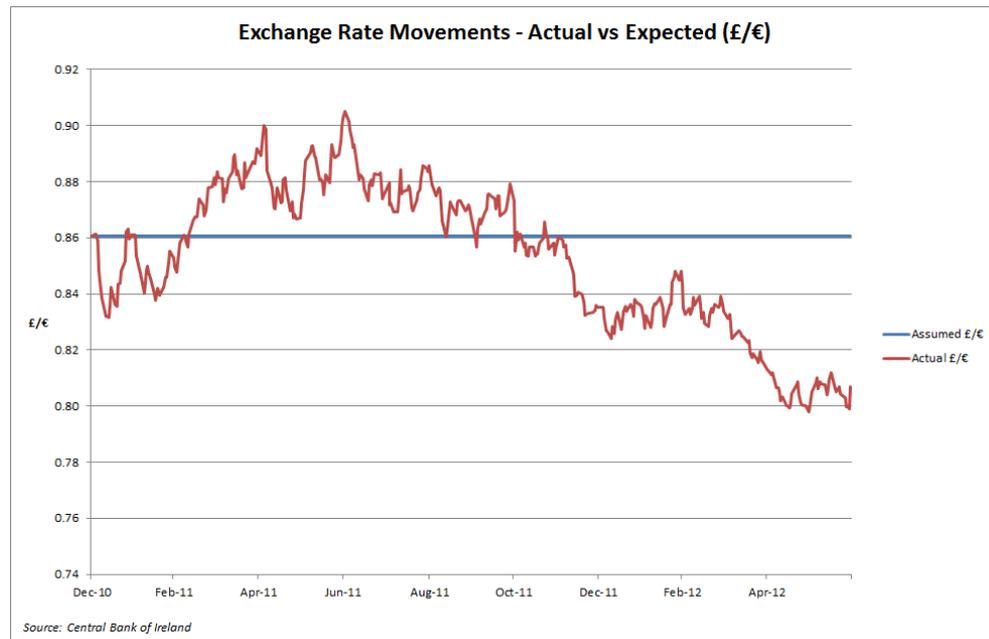
Inflation (represented by HICP) exceeded base and stress case assumptions in 2011 and current forecasts suggest the same will be the case for 2012. Current forecasts suggest that it will be below base case assumptions for 2013 but will exceed stress case assumptions.

In terms of components of GDP and GNP, Ireland's export growth exceeded both base and stress case assumptions for 2011. Current forecasts position export growth for 2012 and 2013 between base and stress case assumptions. The contraction of investment in Ireland in 2011 exceeded the assumptions under both the base and stress case scenarios. Current forecasts suggest that this is likely to be replicated in 2012, with a return to investment growth in 2013.

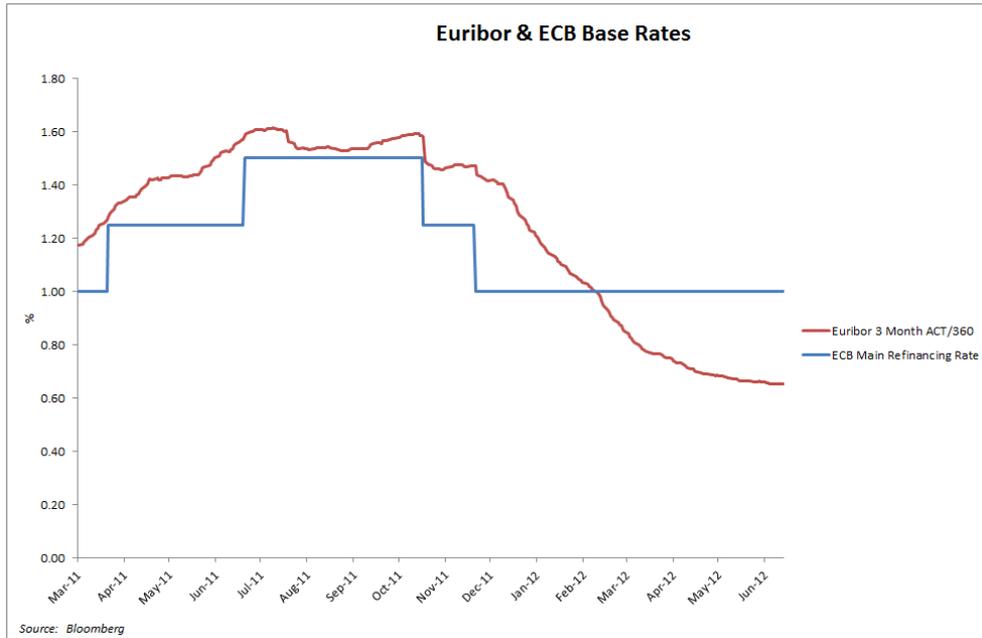
Irish house prices declined by 16.7% in 2011, exceeding PCAR base case assumptions, but declining by less than what was assumed under the stress case. The decline in prices this year (to June 2012) is less than both base and stress case assumptions. Peak-to-trough, house prices are down 49% by end-June 2012 compared to 54% assumed in PCAR base and 58% in PCAR stress. The banks are now using peak to trough house price declines of 55% in determining provisioning levels for Irish mortgages. Irish commercial property prices declined by 11.4% in 2011 (between base and stress), according to the IPD property indices, and by 3.5% in H1 2012 (behind both base and stress case scenarios).



Within the PCAR, the operating assumption was that foreign exchange rates would remain at end-December 2010 levels. In other words, end-December 2010 spot exchange rates were used as the best estimate of future exchange rates in PCAR. Exchange rates since then have been continued to be quite volatile, with the euro weakening relative to end 2010, particularly since late 2011. This increases the value of sterling and US dollar denominated assets and liabilities held on the banks' balance sheets.



The PCAR assumptions included end-December 2010 swap curves to arrive at estimates of future policy and market rates. At the time interest rates were expected to increase from end-2010 levels over the three years to end-2013. However, we have seen market and policy rates fall to lower levels.



5. Profitability

Introduction

The analysis in this section compares primarily to the PCAR stress case as it was the stress case information that was largely published in the FMP 2011 report and it was also this scenario which set the additional capital requirements for each bank. Note in relation to loan loss forecasts; both base and stress figures were provided in the FMP 2011 report.

5.1 Pre-provision and pre-deleveraging operating profit

Overview

The analysis below looks at the actual performance for the 18 months from end-December 2010 to end-June 2012 against the PCAR 2011 stress outputs for the same time period. Pre-provision operating profit (before deleveraging, sale of assets, or Liability Management Exercises (LME)) for the banks, in aggregate in 2011, was ahead of stress case. However, the outturn for the first half of 2012 has underperformed versus PCAR projections⁶.

In addition, the continuing low interest rate environment and the continued high cost of deposits have impacted the banks' gross revenue generation. Low interest rates put pressure on deposit margins, while it also negatively impacts the benefit of non-interest bearing current account balances on earnings, and the return that banks earn on those "free" funds (including current account balances and equity capital). Notwithstanding this, it is also likely to be beneficial in terms of lower loan defaults.

Across all the banks, there has been a positive benefit to net interest income versus what was projected in PCAR from lower than expected usage of monetary authority funding, continued usage of own use bonds (OUBs) and broader ECB measures that have helped reduce the cost of funding.

⁶ We are using interim bank reported data and in some instances, particularly for expenses, it was not possible to adjust for seasonality or restructuring costs.

Table: PCAR 2011 income and expense allowances (€bn) - stress case compared to actuals

€ bn	Stress			Actual	
	2011	2012	2013	2011	H1 2012
AIB & EBS					
Net interest income pre ELG	1.6	1.6	1.4	2.0	0.8
Operating profit	-0.4	-0.1	-0.2	0.3	-0.3
Impairment of financial assets*	-2.9	-3.0	-2.9	-6.7	-0.8
BOI					
Net interest income pre ELG	2.1	1.9	1.9	2.0	0.9
Operating profit	0.6	0.8	0.7	0.4	0.1
Impairment of financial assets*	-2.2	-2.2	-2.2	-1.7	-0.8
PTSB					
Net interest income pre ELG	0.3	0.5	0.4	0.4	0.2
Operating profit	0.1	0.1	0.2	0.1	-0.1
Impairment of financial assets*	-0.8	-0.9	-0.9	-1.4	-0.4
Aggregate					
Net interest income pre ELG	4.0	4.1	3.7	4.4	1.8
Operating profit	0.4	0.8	0.7	0.8	-0.3
Impairment of financial assets*	-5.9	-6.1	-6.0	-9.8	-2.0

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings

*Impairment of financial assets includes impairment charges on loans and other financial assets. Actual figures exclude losses on land and development loans (NAMA II) as these are reflected elsewhere.

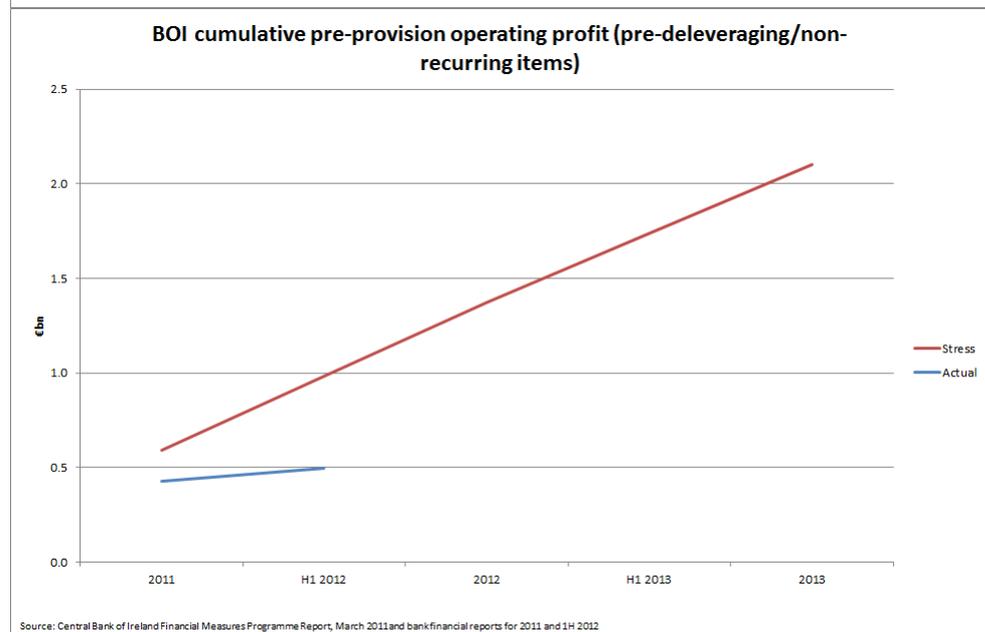
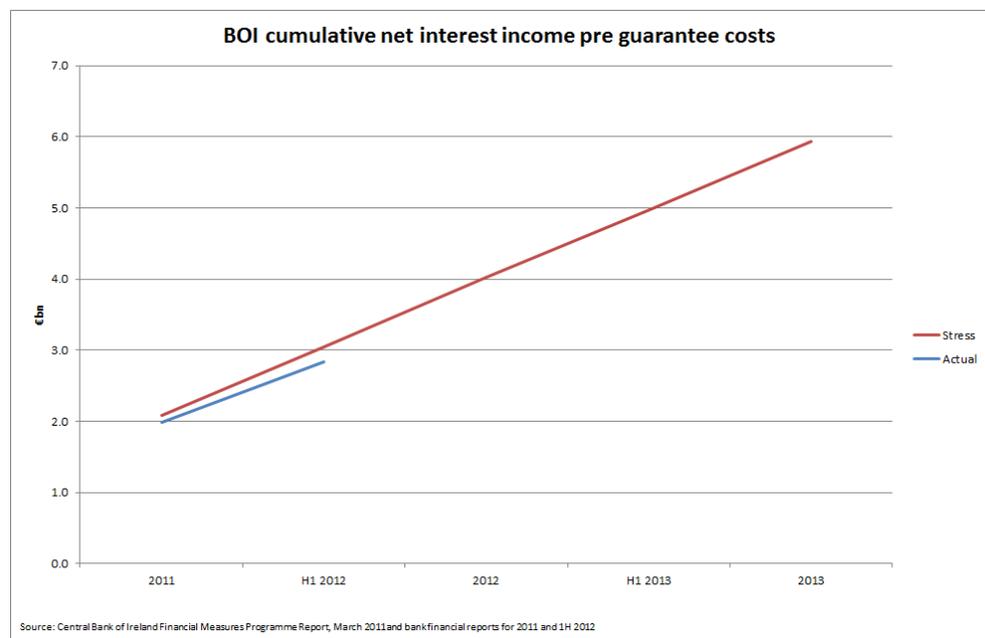
Box 3 – Key points to note about PCAR operating profit analysis

- **PCAR Assumptions:** Within the PCAR, there were a number of assumptions around benchmark interest rates and funding costs. These included that deposit margins remained at or worse than end-December 2010 levels and that policy and market interest rate expectations would be derived from the closing swap curves as of the end-December 2010. Also, additional funding spreads were to be added in the stress scenario to reflect more difficult or expensive funding conditions.
- **PCAR Adjustments:** Within the PCAR process adjustments were made to almost all elements of the income statements of the banks to get to a Central Bank view. As a result, the comparisons below are the actual out-turns versus the Central Bank adjusted PCAR financials.
- **Operating Profit Analysis:** Pre-provision operating profit analysed is before LME, deleveraging losses and other gains on sale of companies. The exception for AIB is the gain on sale of their subsidiary BZW BK and pre-March 2011 LME, which had been realised at the time of the PCAR and are included in the pre-provision operating profit numbers⁷.
- **PCAR Forecast Timing:** The PCAR projections were provided on an annual basis rather than semi-annual basis. Therefore, we have divided the 2012 full year PCAR figures to get a semi-annualised approximation for the half year commentary below. Where possible, any timing issues between H1/H2 2012 were taken into account and based on information provided by the banks at the time of PCAR 2011.
- **Extrapolation:** Caution should be taken against extrapolating these figures forward to December 2013 as drivers for both income and costs have changed over the last 18 months and can be expected to continue to change for the next 18 months.

⁷ The table above excludes these items in 2011 for comparative purposes.

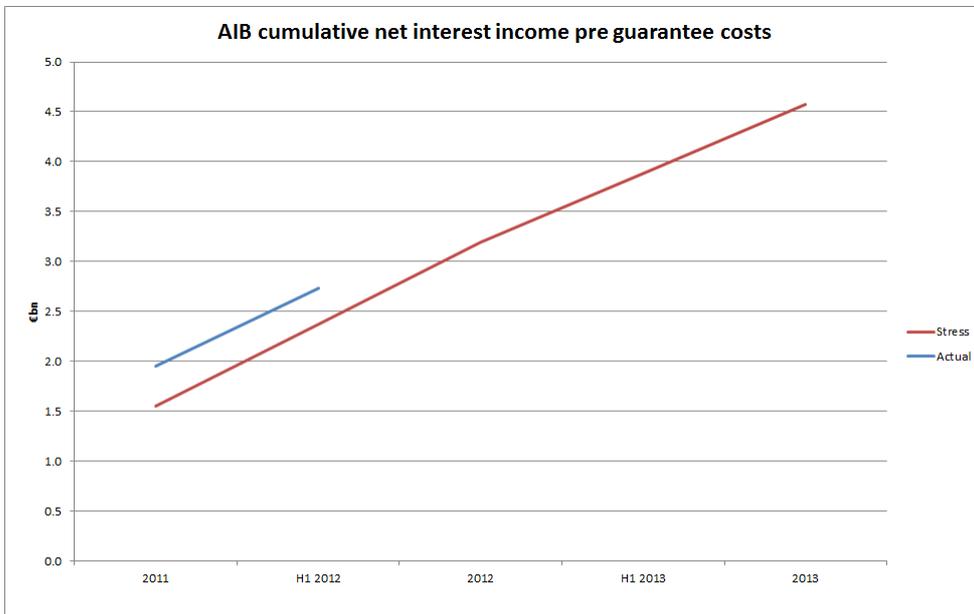
BOI

Recorded net interest income (excluding Eligible Liability Guarantee Scheme (“ELG”) fees) for the 18 months to end-June 2012 of €2.8bn was €0.2bn lower than the pro-forma 18 month PCAR stress case. BOI highlighted in its interim report to end-June 2012 that net interest income had been behind expectations due to the higher cost of customer deposits and the low interest rate environment. The lower than PCAR net interest income fed through to lower than PCAR pre-provision operating profit (before exceptional items and deleveraging) for the 18 months to end-June 2012, of €0.5bn lower than the stress case. This shortfall came primarily from expenses and other income, including the ELG cost.

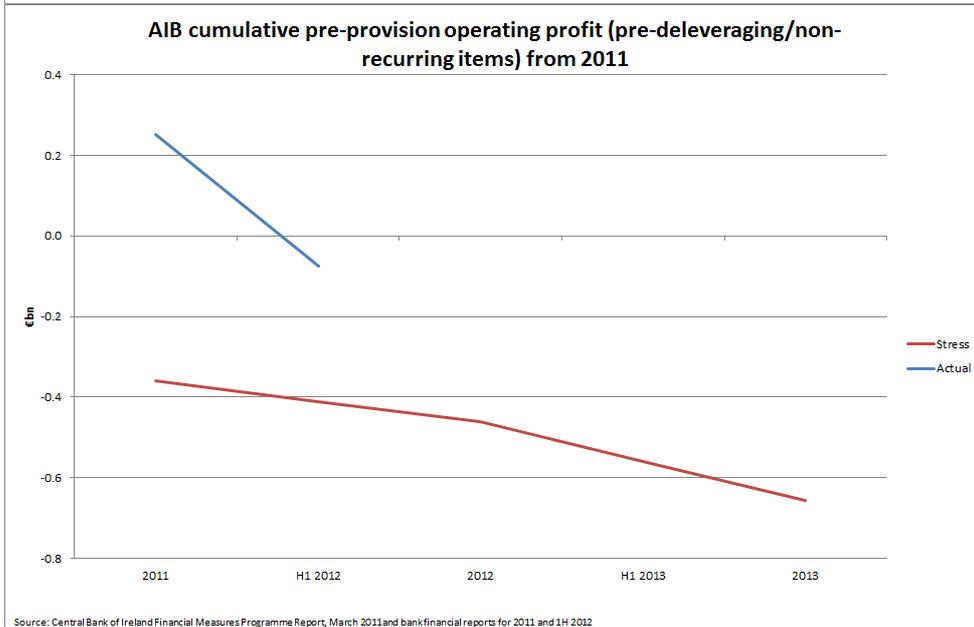


AIB

Recorded net interest income for the 18 months to end-June 2012 of €2.7bn was €0.3bn higher than stress case projections. ELG costs were lower than assumed, which was offset by operating expenses being higher than expected. While 2011 operating expenses were in line expectations, H1 2012 was higher than expected, largely due to the recognition of €0.2bn in termination expenses. This led pre-provision operating profit (before the sale of BZWBK and the pre-March 2011 LME) to be circa €0.3bn higher than in the PCAR stress projections.



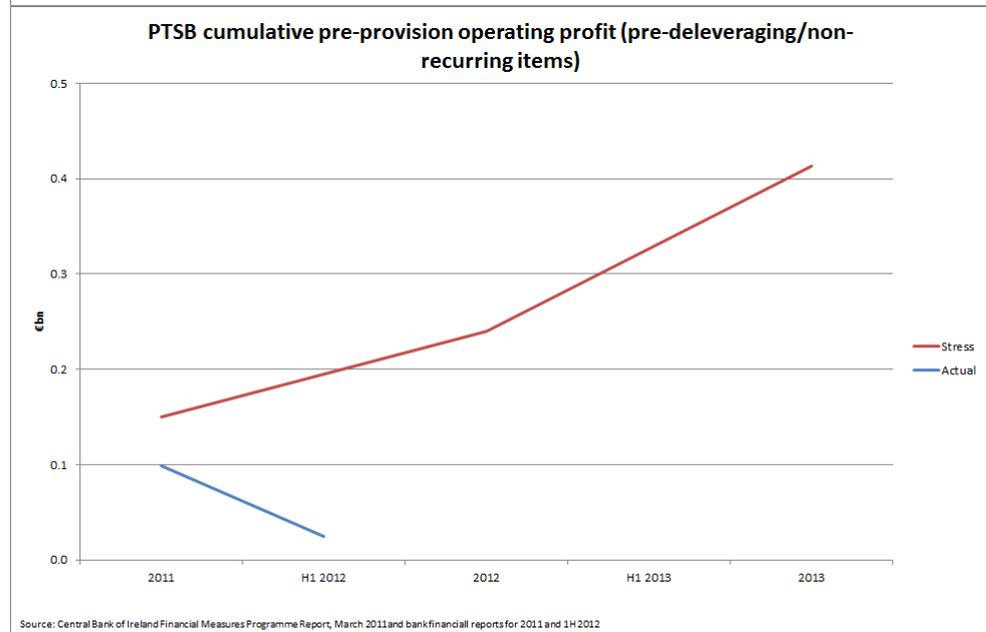
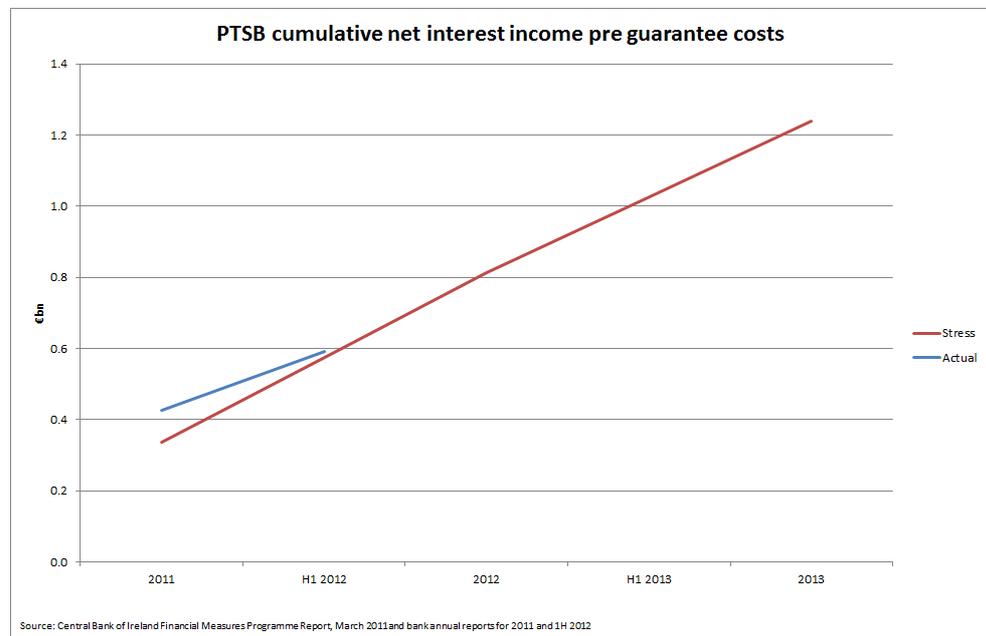
Source: Central Bank of Ireland Financial Measures Programme Report, March 2011 and bank financial reports for 2011 and 1H 2012



Source: Central Bank of Ireland Financial Measures Programme Report, March 2011 and bank financial reports for 2011 and 1H 2012

PTSB

Recorded net interest income (pre-ELG) for the 18 months to end-June 2012 was €0.6bn, in line with stress case projections from PCAR 2011. Interest rates have remained lower than expected and deposit rates remained higher. This fed through to pre-provision operating profit, before any exceptional items, which was €0.03bn for the 18 months to June 2012, €0.16bn lower than stress case. Expenses were higher than expected over the period, however, included in the 18 months to end-June 2012 were expenses of €0.09bn for restructuring costs and a third of these had yet to be incurred. Other operating income was lower than forecast, as dividend income from Irish Life was less than assumed.



5.2 Loan loss provisions

Overview

Banks recognise loan losses by way of an impairment charge in the income statement with write-off of the actual loans usually taking place at some other point (e.g. loan settlement or collateral repossession and liquidation). Halfway through the PCAR time horizon to end-June 2012, the PCAR banks have, in aggregate and in total for all loan portfolios, recognised loan loss provisions that are higher than the base case, but still lower than the loan losses assumed in the adverse case. In terms of percentage of losses recognised, the analysis compares the provisions recognised by end-June 2012 to the PCAR base and stress projections for the full period to end-December 2013.

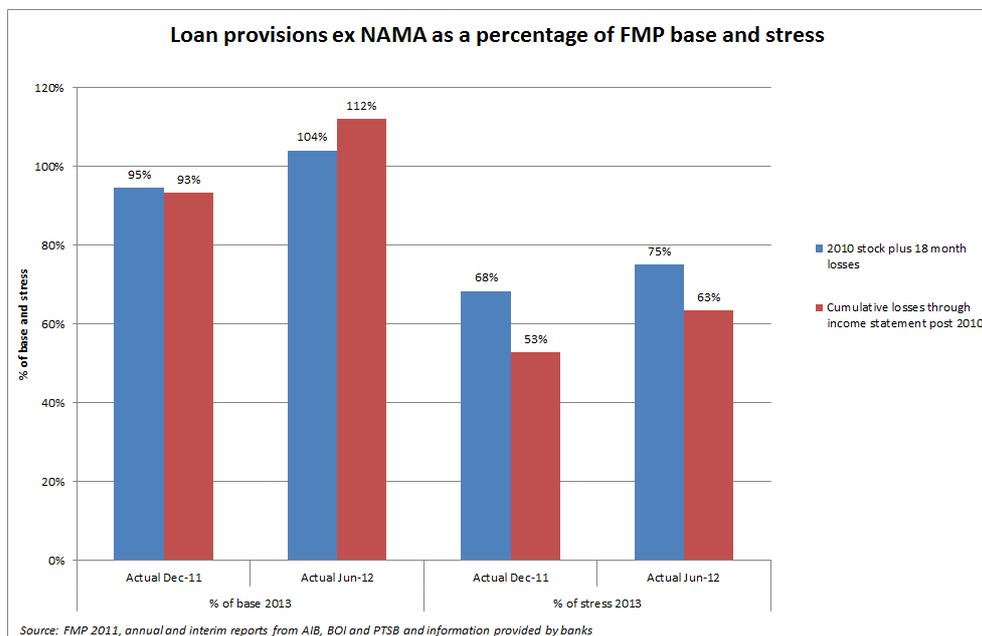
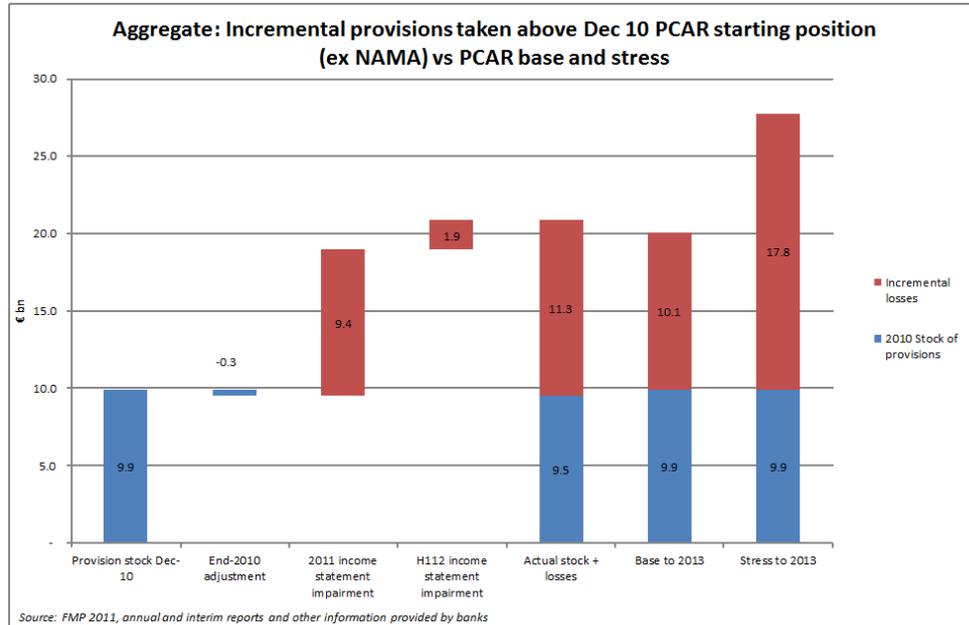
In the FMP, the Central Bank calculated three-year stress case losses of €27.7bn, based on the BlackRock loan-lifetime loss assessment. These loan losses can be disaggregated into: (i) the December 2010 stock of provisions of €9.9bn; and, (ii) the loan impairment charges to be taken through the income statement over the three years to end-2013 of €17.8bn. In this section, the banks' performance against the BlackRock base and stress loan estimates is examined by mainly looking at the cumulative impairment charge provisions taken through the income statement, less the 2010 stock of provisions (i.e. against the €17.8bn). In terms of the cumulative flow of loan impairment charges over 2011 and the first six months of 2012, the banks have taken €11.3bn of impairment losses on loans, exceeding the expected base case flow of provisions by 12% and amounting to 63% of the expected flow of stress case provisions of €17.8bn over the three years.

Table: Central Bank 2011-2013 projected losses derived from Blackrock and used for capital purposes and performance to June 2012 (€bn)*

	Losses 2011-2013		Actual losses to Jun-12	% PCAR	
	Base	Stress		Base	Stress
AIB	10.5	14.2	12.2	116%	86%
BOI	7.4	10.1	5.8	79%	58%
PTSB	2.1	3.4	2.8	131%	81%
	20.0	27.7	20.8	104%	75%

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings

*Excludes NAMA II/subsequently land and development loans. Starting stock of provisions plus income statement impairment charges.

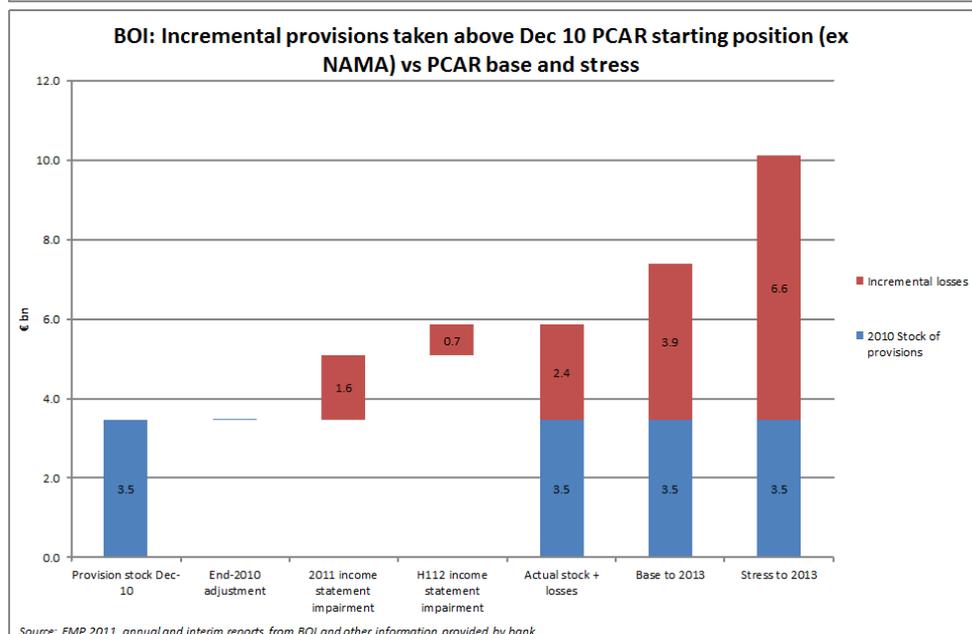
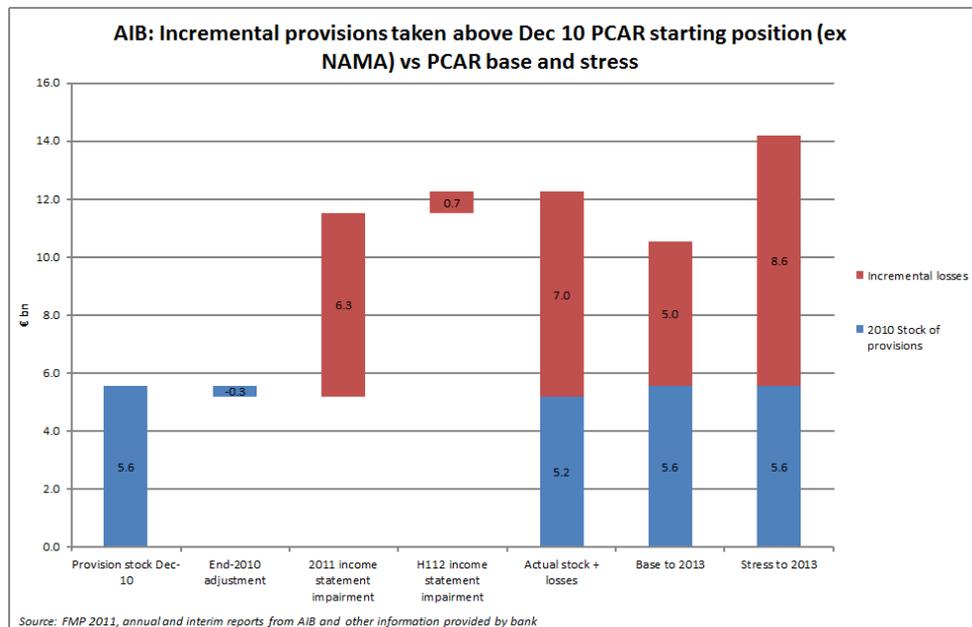


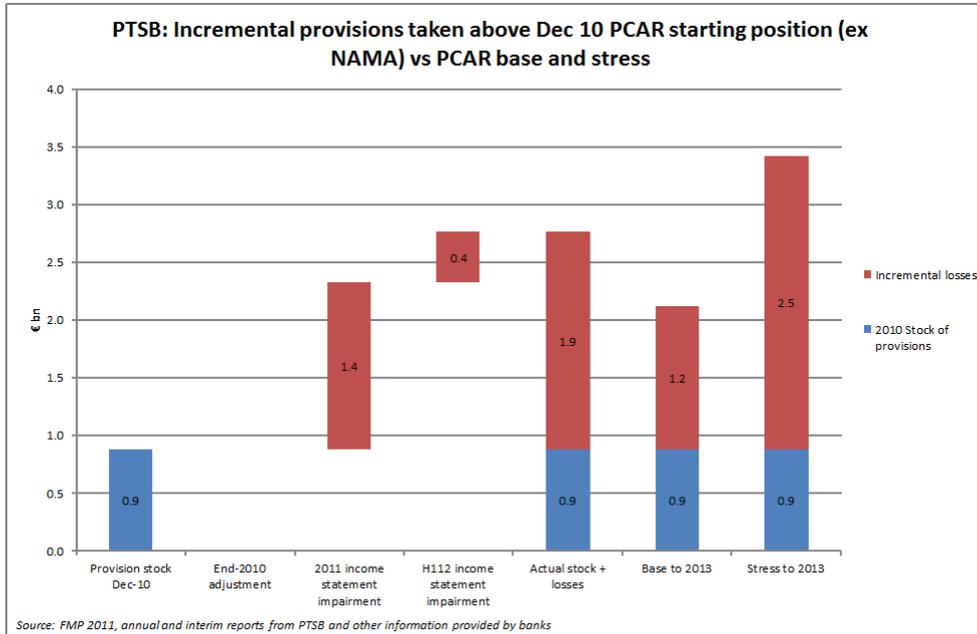
Box 4 – Key points to note about loan loss provisions in PCAR

- **Loan Loss Timing:** Due to the nature by which the BlackRock losses were applied to the income statement (with losses applied equally, one third per annum over the PCAR horizon), there are differences in timing over the three year period as to when the banks actually realise losses versus those expected in PCAR. It is important to note that it would not be meaningful to extrapolate the losses taken by the banks in the 18 months since end-December 2010 to the rest of the period. The timing of loss realisation will also vary by bank depending on their portfolio mix and provisioning approach.
- **Impact of new Guidelines:** As part of the PCAR process, loan loss forecasts were converted into future provision estimates. Post-PCAR, the Central Bank published new guidelines for the banks which will result in a variation in how provisions ultimately emerge relative to the assumptions applied within PCAR. In other words, the more conservative recognition of loan loss provisions provided for within the new Guidelines has likely resulted in the earlier recognition of losses relative to that assumed in PCAR.
- **Impact of NAMA II Loans:** The comparison of reported impairment provisioning to PCAR base and stress is provided net of NAMA II loans that were expected to transfer at the time of PCAR. This means that losses on land and development loans are excluded from our main loan loss comparison. However, we have analysed the losses on land and development loans separately by comparing provisions taken on these loans to the PCAR expected losses on transfer to NAMA in the section above.
- **Adjustments for Deleveraged Assets:** The lifetime loan losses were adjusted for loans identified for disposal under the banks' deleveraging plans. Thus, loan losses associated with these portfolios for the period up to disposal as well as the loss on disposal were accounted for in the PCAR process.

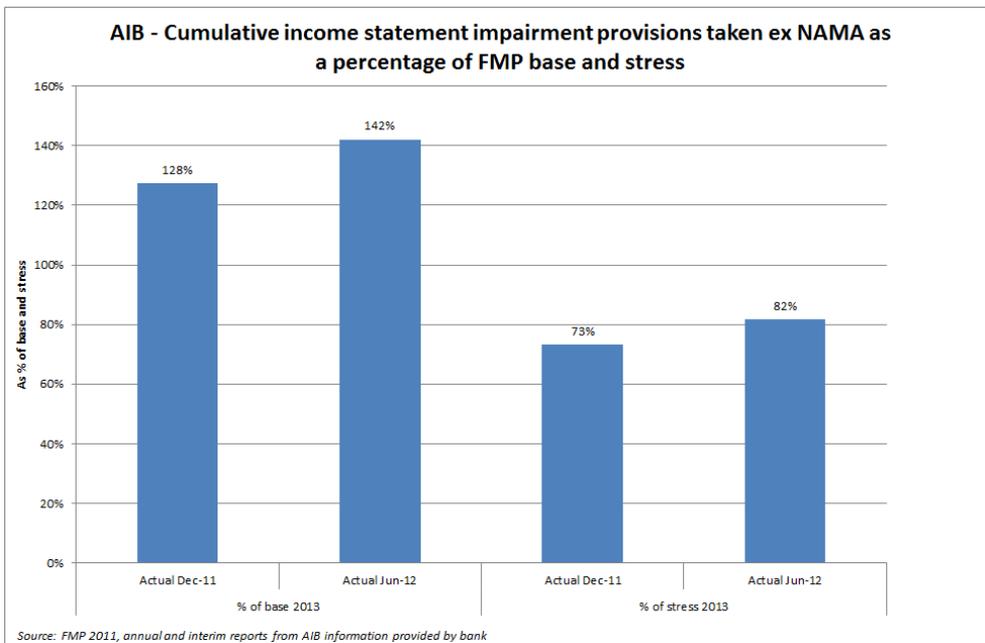
Bank-by-Bank Review

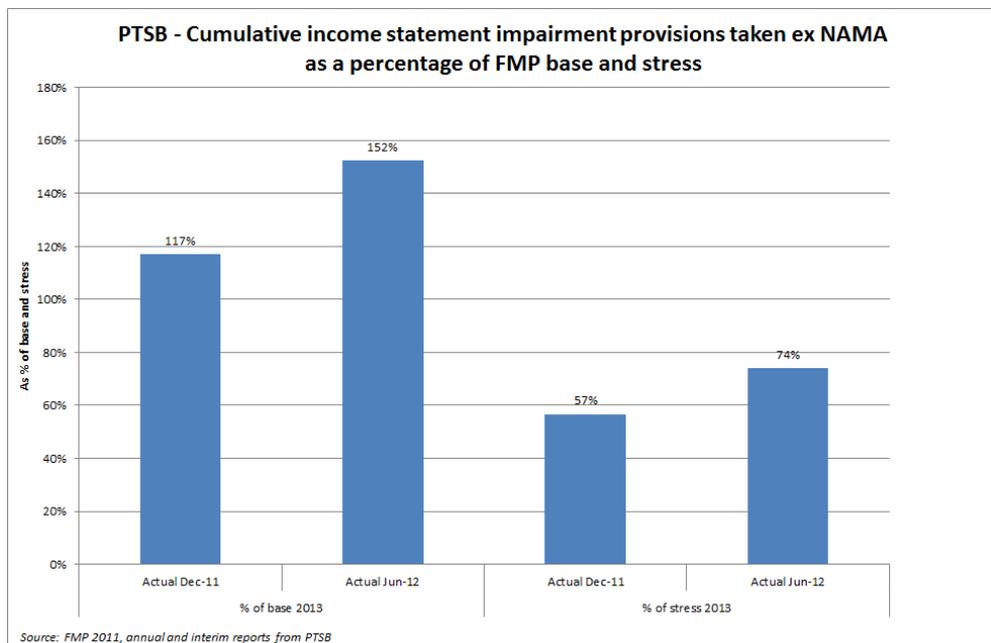
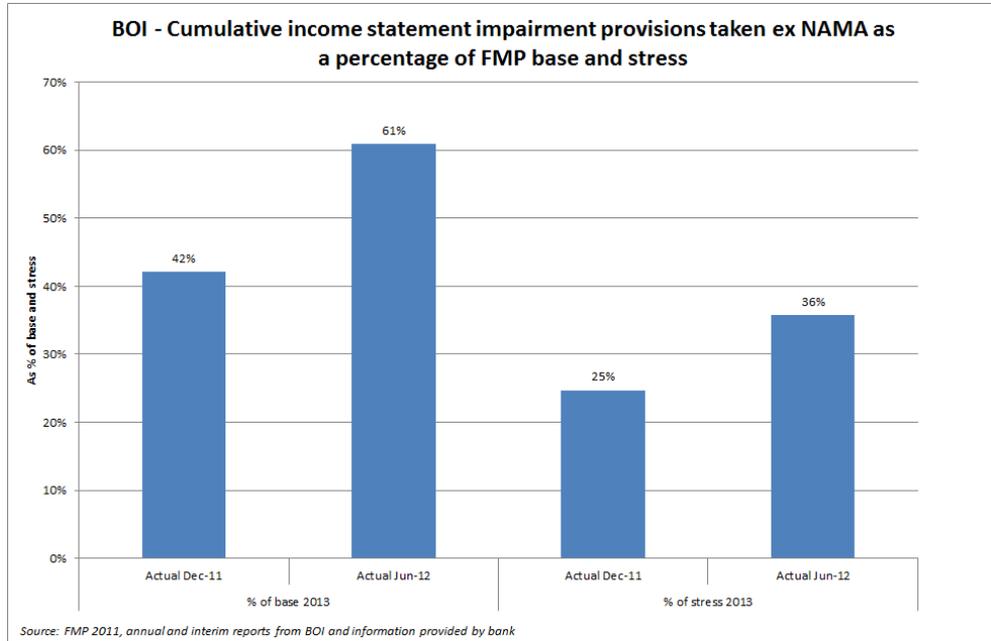
Examining performance on a bank-by-bank basis (in terms of the cumulative flow of impairment charges taken through the income statement (i.e. comparable to the €17.8bn total aggregate stress case amount discussed above)), it shows that AIB has exceeded the base case by €2.1bn on an expected flow basis, while PTSB was €0.6bn higher. BOI was €1.5bn below the base case as at end-June 2012. By end-June 2012, AIB had taken 82% of the expected three-year flow of stress loan loss provisions; PTSB had taken 74%; while BOI had recorded 36%.





The charts below compare the loan impairment provisions taken by each bank over the 18 months to end-June 2012 with the three-year impairment provisions (net of the 2010 stock of provisions) projected under the base and stress cases in PCAR.





5.3 Loan Loss analysis

Overview

This section seeks to provide further granularity on the loan loss provisions taken to end-June 2012. Impairment provisions are a function of the level of loans deemed to be in default, as well as the assessment of the amount which can be recovered on these loans. As such, the analysis below attempts to compare the level of defaults forecast within the PCAR stress scenario and compare this with actual loan defaults to end-June 2012.

As part of PCAR 2011, BlackRock provided a wide range of outputs in their calculation of loan losses. The Central Bank translated this lifetime loan loss information into provision forecasts, which were in turn utilised in the three year PCAR capital estimation. We have analysed the mortgage portfolio on the basis of the projected level of default stock up to end-December 2013 assumed in PCAR. However, in order to analyse the level of default associated with provision forecasts for the Corporate, Small to Medium Enterprises (SME), Commercial Real Estate (CRE) and Consumer asset classes; loss severities have been 'assumed' by the Central Bank for this analysis. The assumed loss severities for these asset classes have been estimated on the basis of discussions with BlackRock and the range of outputs provided as part of their input to PCAR 2011. In addition, BlackRock agree with the appropriateness of this methodology in terms of ex-post analysis.

Box 5 - Overview of Methodology to estimate PCAR Projected Defaults

- **Mortgages:** The projected default stock and the level of exposures assumed to be written off (see below for reference to write-offs) was available from the loan loss exercise. Therefore, by adding back assumed write-offs to the BlackRock loan loss forecast for the period to end-December 2013, the full projected levels of default can be calculated and as such compared with actual defaults (gross of write-offs) for the mortgage portfolio to date.
- **Other Asset Classes:** For SME, Corporate, CRE and Consumer asset classes, PCAR 2011 losses were estimated based on the amount of loans assumed to default and liquidate therefore projected defaults were not explicitly produced. As such, projected defaults are estimated in our analysis by dividing projected losses by an assumed loss severity (i.e. the percentage loss on a loan in the event of repossession and liquidation of the underlying collateral, where applicable).
- **Assumed Losses:** The 'assumed' losses utilised in this analysis are expert judgement based, but are informed by details provided by BlackRock as part of PCAR 2011 as well as of the views of Central Bank analysts.
- **Sensitivity to Assumptions:** As a result of the assumptions in relation to loss severity, the analysis is clearly sensitive to this. That is, the higher the assumed loss severity, the lower the amount of implied defaults. Likewise, when comparing loss severity to provision cover⁸, the higher the assumed loss severity, the less conservative banks actual provision cover may appear and vice versa.
- **Treatment of Cures:** For loans in default, a certain proportion is normally expected to cure (i.e. return to performance with no associated loss). For the non-mortgage asset classes we have, conservatively, taken no account of cures in our analysis. That is, if you were to assume that a certain percentage of loans default and a certain percentage of these defaulted loans will cure; then the projected default amounts in the analysis below should be scaled up to reflect this assumed percentage.
- **Write-Offs:** The current levels of default stock will not include accounts which have been written off to end-June 2012. While the exact level of default balances assumed to be written off was not available, it has been estimated by dividing provision write-offs in the 18 months to June 2012 by an assumed loss severity, as set out in the table below. This amount is added back to current default stock to aid comparison between defaults to date versus the forecast.
- **Loan Categorisation:** The BlackRock loan loss categories will differ somewhat from the loan categorisation of the banks, on which the actual figures are based and the comparison is made. In aggregate these figures reconcile and overall the analysis provides an indication of the asset classes that are performing better or worse compared to PCAR stress loan loss forecasts.

⁸ Provision cover here broadly refers to the ratio of loan loss provisions to non-performing loans.

Projected Defaults – Stress Case

The tables and graphs below summarise how defaults to end-June 2012 compare against default levels assumed within the PCAR stress scenario to end-December 2013. This is shown by bank for mortgages and in aggregate for the other asset classes.

Table: Actual and Estimated Default Stock⁹ - Mortgages

Mortgages	PCAR Total Stress Loss Estimate to Dec 2013 (€bn)	Total Implied Defaults in PCAR Stress to Dec 2013 (€bn)	Dec 2010 Default Stock (€bn)	June 2012 Default Stock (€bn)	June 2012 Default Stock Gross of Write-Offs (€bn)
AIB	4.4	8.6	3.2	8.1	8.2
BOI	2.4	6.4	2.6	3.9	4.0
PTSB	2.7	6.3	2.6	5.2	5.3

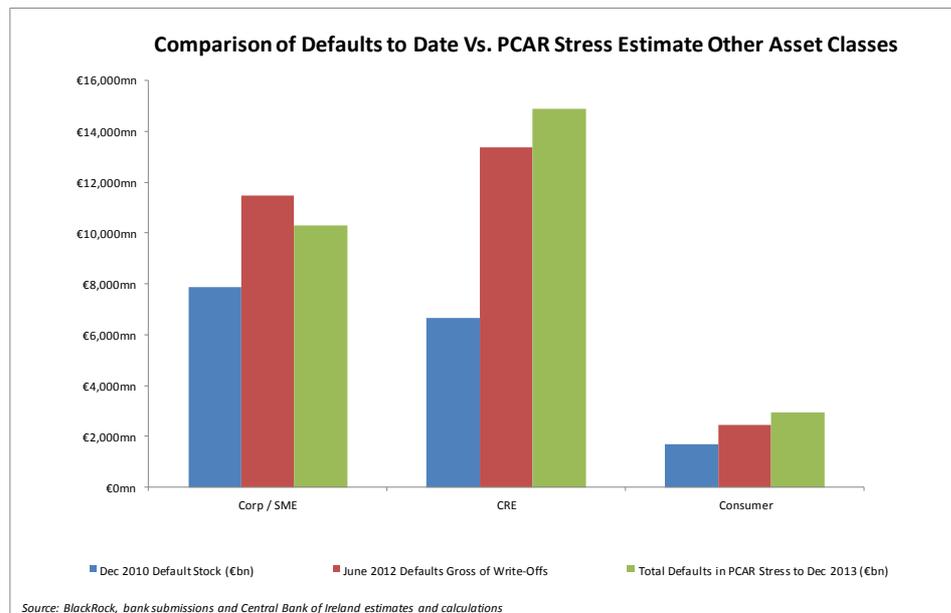
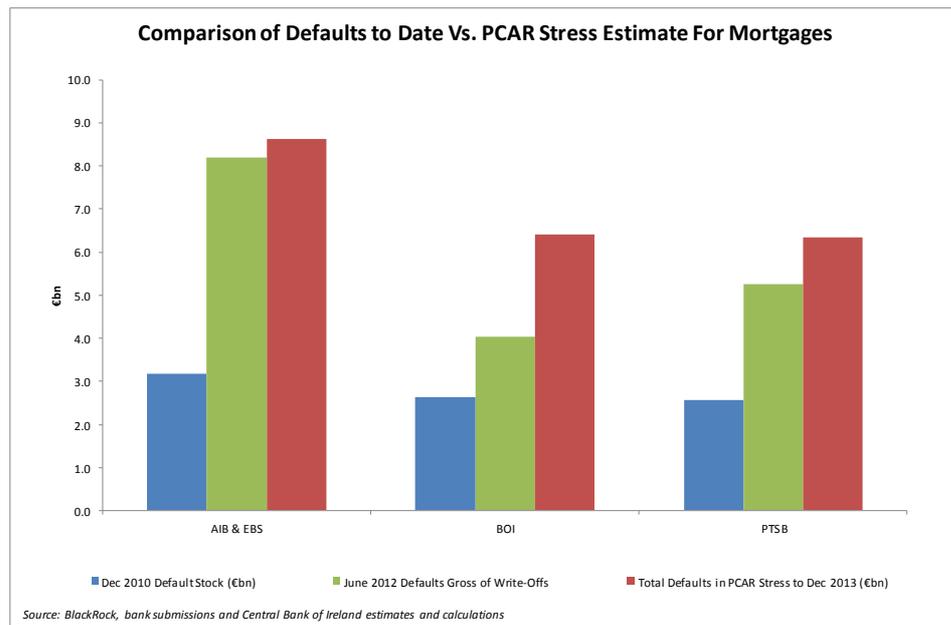
Table: Actual and Estimated Default Stock - Other Asset Classes

Other Asset Classes	PCAR Total Stress Loss Estimate to Dec 2013 (€bn)	Total Implied Defaults in PCAR Stress to Dec 2013 (€bn)	Dec 2010 Default Stock (€bn)	June 2012 Default Stock (€bn)	June 2012 Default Stock Gross of Write-Offs (€bn)
Total	18.2	28.1	16.3	25.0	27.3

Source: BlackRock Solutions PCAR Loan Loss Forecasting Outputs & Presentations, Central Banks of Ireland estimates, Regulatory Returns, and Bank Submissions

⁹ Defaults above are defined as CRD Default i.e. greater than 90 days past due, or otherwise classified as 'unlikely to pay'

For mortgages, all banks' defaults to end-June 2012 are lower than the adverse forecast out to 2013. For the non-mortgage asset graph¹⁰, the red bar estimates the level of defaults to end-December 2013 implied by our analysis. Note the treatment of cures in the non-mortgage portfolio as the estimated defaults shown by the red bar is therefore estimated net of any cures which might occur in these asset classes.



¹⁰ It would be incorrect to simply directly compare the red and green bars. A more direct comparison could be made by either scaling down the green bar by an assumed cure rate for CRE, Corp / SME and Consumer, or alternatively scaling the red bar upwards in a similar fashion. In addition, the Banks' asset type classification may differ slightly from the segmentation assumed under PCAR.

Projected Provision Cover – Stress Case

The other component of impairment provisioning is the estimate of what can be recovered on loans in default. The table below compares the level of provision cover assumed within the analysis conducted by BlackRock as part of PCAR 2011 with the actual provision cover at end-June 2012. The assumed provision coverage in PCAR reflected the methodological approach taken which resulted in an assumed level of default, by bank, as well as the assumed losses with such defaults, namely the loss severity. BlackRock defined losses as the principal loss amount crystallised at the time of property liquidation following repossession. Consequently, provision cover will differ by bank due to the make-up of the various portfolios from a credit quality and geographic perspective, as well as the asset class breakdown.

Table: Provision cover / loss severity - Mortgages

	Assumed PCAR Provision Cover Mortgages	June 2012 Mortgage Cover
AIB	52%	37%
BOI	37%	37%
PTSB	42%	38%

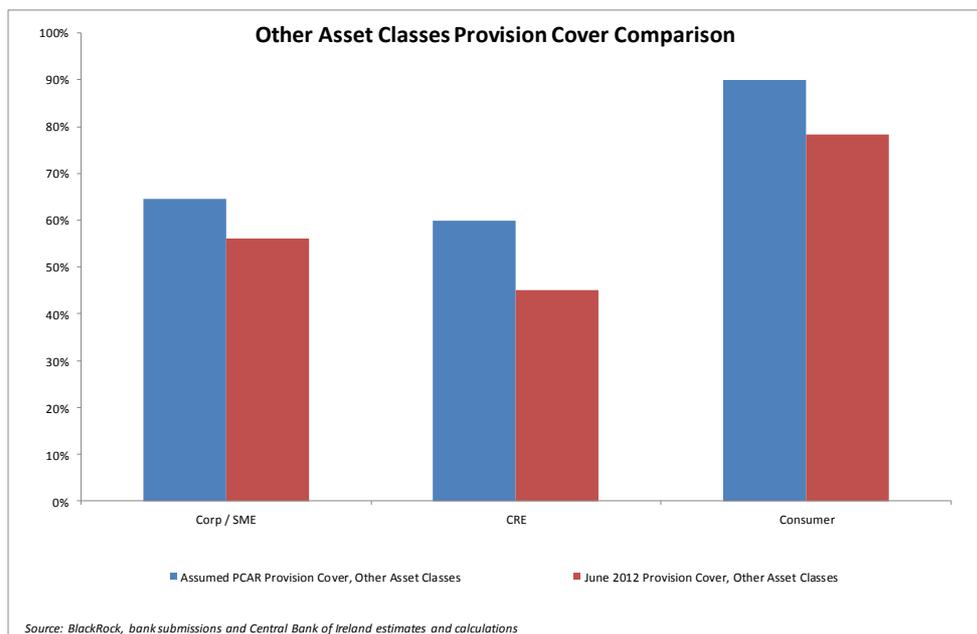
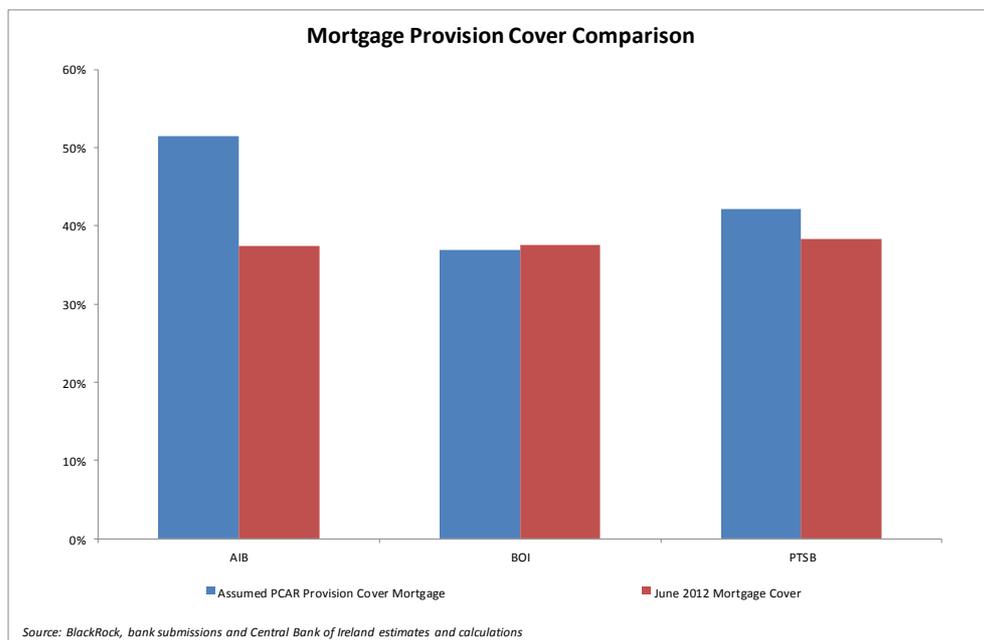
Source: BlackRock Solutions PCAR Loan Loss Forecasting Outputs & Presentations, Central Banks of Ireland estimates, Regulatory Returns and Bank Submissions

Table: Assumed level of Defaults Written-Off

	Amount of balance written-off (€bn)	Assumed Loss Severity (%)	Total Default Loan Balance Excluded (€bn)
Mortgage	0.2	50%	0.4
Other Asset Classes	1.7	70%	2.3
Total	1.9	69%	2.7

Source: Regulatory returns, bank submissions to the Central Bank of Ireland, and Central Bank of Ireland estimates

For mortgages, in aggregate, actual provision cover is broadly in line with PCAR estimates. The provision cover assumed under PCAR reflected the forecast defaults and associated projected losses at end-December 2013. Provision cover reflects the level of defaults in the mortgage portfolio and the levels of provisions taken against these defaulted assets at end-June 2012. Where the forecast provision cover under PCAR is higher than current this reflects the actual level of default as well as the inherent portfolio mix (e.g. AIB and EBS's mortgage portfolio is largely concentrated in Ireland and NI). For the non-mortgage asset classes the assumed provision cover required within PCAR is again net of cures.



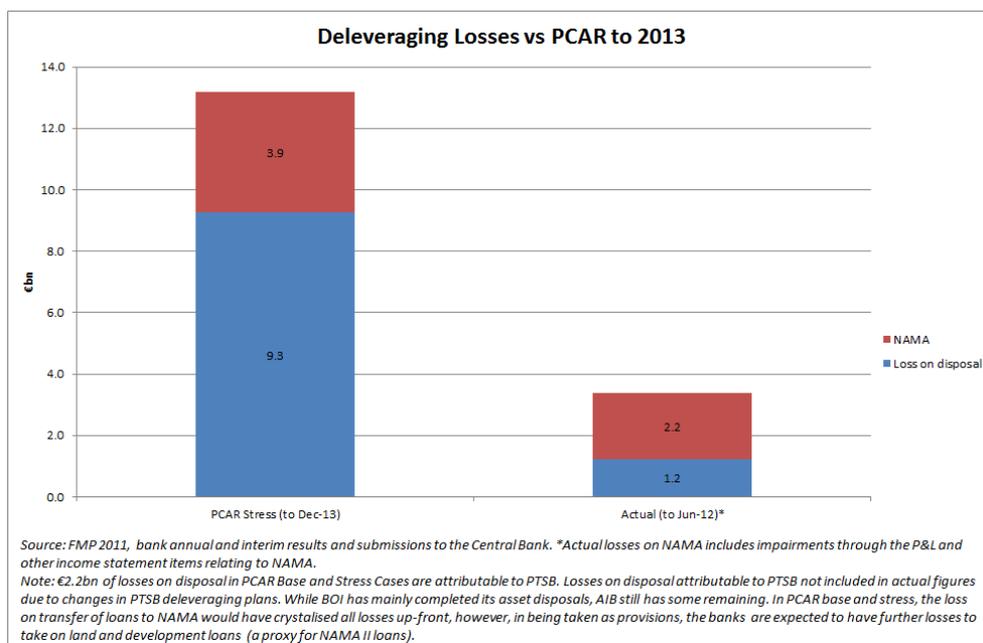
5.4 Losses on disposals and NAMA

Overview

Whilst deleveraging and balance sheet change will be covered in further detail in Section 6, losses on deleveraging are a significant driver of capital change, through the impact on profitability in the recorded year, and were a significant input into the capital required to be raised post-PCAR. For example, PCAR assumed that the banks, under the stress case, would realise deleveraging losses of €13.2bn made up of losses on the disposal of assets of €9.3bn and losses on the transfer of loans to NAMA of €3.9bn.

Subsequently, it was decided that the transfer of land and development loans of less than €20m (NAMA II) would not go ahead and that those loans would be retained on the banks' balance sheets. As a result, the deleveraging plans of the banks were revised. On this basis, the analysis shows the loss on disposal¹¹ of non-core assets realised to end-June 2012 as well as the loss on transfer of residual NAMA I loans (>€20m) to NAMA, and impairment provisions taken through the income statement on land and development loans (as a proxy for NAMA II¹²).

In aggregate, banks have taken losses/provisions on NAMA I and proxy NAMA II loans of €2.2bn and losses on disposal of assets of €1.2bn. Losses on NAMA of €2.2bn are less than the forecast €3.9bn in PCAR due to the differences in timing between a loss crystallised on disposal (PCAR) and incremental provisions (actuality).



¹¹ In certain circumstances, pre-maturity repayments have been classified as disposals.

¹² NAMA II loans were excluded from the BlackRock loan loss forecasting process, so impairment provisions on these are not included in our previous analysis of loan losses.

In general, the banks have performed better than expected in terms of deleveraging losses taken to date (c€3.4bn) compared to the €10.8bn and €13.2bn assumed in the PCAR base and stress cases respectively leaving €9.8bn positive difference versus PCAR stress assumptions as at end-June 2012.

BOI

BOI losses on asset disposals and NAMA of €1.3bn are significantly lower than PCAR stress case projections of €3.9bn and are also below PCAR base case. In terms of timing of disposals and losses most were assumed to happen in 2011. The positive difference came from disposal proceeds versus the haircuts assumed in PCAR on the disposal of these assets. BOI had (as of June 2012) largely completed its asset disposal programme; however, some items had not yet settled by end-June 2012 but will be reflected in the full year accounts.

AIB

Losses on non-core disposals and NAMA for AIB were €2.1bn to end-June 2012, also much lower than the total three year stress assumptions in PCAR of €7.1bn. AIB's losses on disposal of assets are currently significantly less than the base and stress case total projections. As of end-June 2012, AIB still has approximately €4.5bn of non-core assets left to de-leverage.

PTSB

PTSB did not participate in NAMA so its losses on deleveraging were confined to the sale of non-land and development loan portfolios. While PTSB has sold some assets, its strategic plan is being revised as part of an EU restructuring plan, which is still under assessment and thus deleveraging has not been initiated in a significant way. Therefore, PTSB's losses on deleverage of €5.7m to June 2012 is insignificant relative to PCAR base or stress expectations.

6. Deleveraging and balance sheet movements

Overview

The PLAR process was used to identify the amounts of assets required to be disposed of by the banks to aid the return to stable funding levels, reduce monetary authority borrowing and help put the banks' balance sheets on a sustainable path to Basel III liquidity metric compliance (namely the proposed Liquidity Coverage and Net Stable Funding Ratios (LCR and NSFR)). Where deleveraging was assumed, the capital gain or loss on disposal of assets, balance run-off, the income foregone, the costs retained, and the reduction in RWAs were all fully integrated at the appropriate time horizon into PCAR in terms of forecasts of income, profit and loss, loan balances and RWAs.

Box 6 – Key points to note about PLAR and Deleveraging

- **PCAR zero balance sheet growth assumption:** Zero balance sheet growth was a central operating assumption behind PCAR, and assumed that the balance sheet only reduced when impairments were forecast and that any exposures that matured were assumed to be replaced with assets of a similar risk. Assets that were designated as non-core or for run-off under deleveraging plans were excluded from this central assumption.
- **Revisions to deleveraging plans:** Deleveraging plans for the banks were revised in June 2011 following the decision not to transfer land and development loans of less than €20m to NAMA (NAMA II). Due to this and other bank specific developments, deleveraging targets have changed over the course of the 18 months. We consider the original deleveraging plan as published in the FMP ("FMP 2011 Plan"), and assess the banks' current position versus the amended deleveraging targets.
- **Removal of LDR targets:** The August 2012 Memorandum of Understanding, under Ireland's EU-IMF Programme of Financial Support, introduced an advanced monitoring framework for banks' funding and liquidity, which also substituted the Loan to Deposit Ratio (LDR) targets with nominal deleveraging requirements and a Basel III/CRD IV NSFR benchmark. Banks' deleveraging would be assessed based on the existing nominal targets for disposal, run-off and loan loss provisions in line with the 2011 Financial Measures Programme and an advanced monitoring framework would be established in relation to funding and liquidity monitoring, covering in detail all factors affecting banks' NSFR.

6.1. Total loan book movements

Overview

The analysis considers movements in total net loans, across the core and non-core (deleverage) books. The zero balance sheet growth assumption means that within the stress test most of this movement is in the non-core book, apart from increased impairment provisions in the core book. The FMP report assumed total deleveraging, including disposals, loan book run-off and increased impairment provisions, of €72.6bn.

Table: Core and Non-core loan books and Deposits as in FMP report (€bn)

	AIB		BOI		PTSB	
	Dec 2010	Dec 2013	Dec 2010	Dec 2013	Dec 2010	Dec 2013
Net loans						
Core	75.9	74.8	76.2	73.6	26.6	21.3
Non-core	27.4	4.2	39.1	9.1	10.4	0.0
Total	103.3	79.0	115.3	82.7	37.0	21.3
<i>Deleveraging 2010-2013</i>		24.3		32.6		15.7
Deposits	61.8	64.6	65.4	69.4	14.9	17.5
Loan to deposit ratio						
Core	123%	116%	117%	106%	179%	122%
Total	167%	122%	176%	119%	248%	122%

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings

The banks' progress on deleveraging can be seen in the table below. Note; given the revision of the banks' deleveraging plans, we compare the banks' out-turns to end-June 2012 versus the up-to-date nominal deleveraging targets in the table below¹³.

¹³ The table above is from the FMP report. Figures in the table may differ slightly to previously published figures due to amendments to banks' deleveraging plans, finalisation of bank's annual reports (for 2010) post-FMP 2011 publication, and rounding and timing differences as of December 2010 and June 2012.

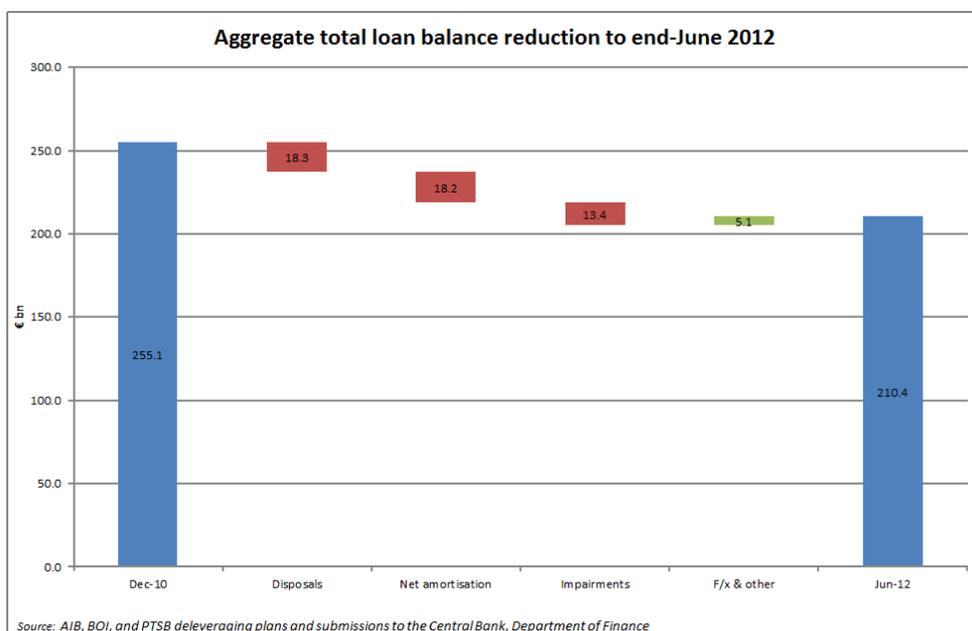
Table: Core and Non-core loan books and Deposits as amended post FMP (€bn)

	AIB			BOI			PTSB		
	Dec 2010	Dec 2013*	Actual Jun 2012	Dec 2010	Dec 2013*	Actual Jun 2012	Dec 2010	Dec 2013*	Actual Jun 2012
Net loans									
Core	75.2	71.9	66.6				26.6	21.3	23.6
Non-core	27.7	7.2	13.2				10.5	0.1	9.7
Total	102.9	79.1	79.8	115.2	84.5	97.5	37.0	21.3	33.2
Total deleveraging		23.8	23.1		30.7	17.7		15.7	3.8
Non-core deleveraging		20.5	14.5					10.4	0.8
% of non-core deleveraging complete as of Jun-12			71%						8%
Deposits	61.8	64.6	63.6	65.4	68.7	71.7	14.9	17.5	17.3
Loan to deposit ratio									
Core	122%	111%	105%				178%	121%	137%
Total	166%	122%	125%	176%	123%	136%	248%	122%	193%

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, Dept of Finance November 2012 deleveraging update, and Central Bank workings.

*As assumed in amended deleveraging plans. Loan figures can include loans classified as held for sale

The chart shows the achieved total aggregate balance sheet deleveraging of €44.7bn during the period from end-December 2010 to end-June 2012.



Box 7 – Key points to note about deleveraging and PLAR

- **Revisions to De-leveraging Plans:** Since the March 2011 FMP Report there have been revisions made to the banks' deleveraging plans.
- **Other impacts on de-leveraging:** While our focus is on non-core deleveraging, it is worth noting that credit supply, demand and customer deleveraging of their own debt levels have driven declines in core loans over and above what was assumed under the conservative zero balance sheet growth model in PCAR/PLAR and subsequent plans.
- **Removal of LDR Target:** The focus of deleveraging has moved from the requirement to meet target loan to deposit ratios to nominal targets relating to non-core deleveraging.

AIB

In terms of de-leveraging AIB has reduced net loans by €23.1bn, with €14.5bn of its non-core deleveraging complete at end-June 2012. AIB's loss on disposal to end-June 2012 of €0.5bn is significantly less than had been expected¹⁴. As at end-June 2012, AIB had €6bn of non-core deleveraging to achieve by end-2013, of which €4.2bn was expected to be disposals and €1.8bn amortisation. The non-core deleveraging to date combined with the reduction in net core loans and an increase in deposits since 2010 has led to a total balance sheet LDR of 125% and a core LDR of 105% at end-June 2012.

BOI

In terms of de-leveraging BOI has reduced net loans by €17.7bn, with €12.6bn of its target net loan reduction achieved at end-June 2012. Within this, BOI's deleveraging via loan disposal was effectively complete at end-June 2012 and the loss on disposal has come in below both base and stress expectations at €0.8bn (excluding NAMA). The other deleveraging achieved was primarily comprised of run-off of designated loan books. This deleveraging, alongside deposit growth, has led to a 136% total loan to deposit ratio and 99% core LDR. As at end-June 2012, BOI had a further €13.8bn of deleveraging to achieve by end-2013.

PTSB

In terms of de-leveraging PTSB has achieved only €0.8bn of its non-core deleverage plan. With increased deposits and a reduction in net core loans since 2010, its loan to deposit ratio has fallen to 193% on total loans and 137% on core. (PTSB's H1 2012 LDR is 190% in its interim report and includes intra-group loans and deposits from non-banking operations).

¹⁴ AIB has taken provisions over and above what had been initially expected on non-core loans and there is some interaction between these provisions, the deleverage loss on disposal anticipated and the level of loan loss provisions being taken.

6.2. Deposit progression and LDRs

Overview

Under PLAR 2011, the banks were originally required to achieve loan to deposit ratios (LDRs) of 122.5% by December 2013. Note the PLAR deleveraging plans were originally linked to base case PCAR projections; however there was limited or no deposit growth assumed in the PCAR and PLAR funding projections.

BOI

Deposit growth levelled off in H1 2012, however deposit growth overall for BOI has been well ahead of PCAR base and stress assumptions, in particular due to strong growth in its UK¹⁵ deposit book. In addition BOI began to reduce the rates paid on its deposits (including in the UK), in line with its strategy. BOI's LDR has been decreasing in-line with the original PLAR trajectory and the bank met its target of 144% LDR at end-December 2011 and was at 136% at end-June 2012.

AIB

AIB saw a rebound and growth in deposits in H1 2012 across its business lines. At end-June 2012 AIB's deposits were above stress case PCAR projections and close to, but below the end-2012 base case scenario. AIB also acquired the deposit business of the former Anglo Irish Bank (Anglo) (€8.3bn) in February 2011 (which was included in the PCAR assumptions), however excluding the impact of the EBS and Anglo transactions, organic AIB deposits actually decreased by €5.5bn in 2011, with strong outflows from non-bank financial institutions and international corporates during quarter 1, 2011. AIB also met its original mandated interim target ratio at end 2011 with an LDR of 138%, down from 165% at December 2010. By June 2012, the LDR had further improved to 125%.

PTSB

PTSB deposit projections in PCAR included the acquisition of the €3.6bn deposit portfolio from Irish Nationwide Building Society (INBS) in February 2011. However, this was offset by a reduction in deposits during the year, with corporate deposits falling 38% to €2.3bn in 2011. The H1 2012 deposit balance was also boosted by the acquisition of the Northern Rock Irish deposit book of €0.5bn in January 2012 and by the return of some of the corporate deposits; increasing by €1.3bn to €3.6bn. As of June 2012, PTSB's deposits were slightly below PCAR base and stress projections. PTSB's LDR was 227% at end 2011 and 190% at end June 2012. The total LDR was higher than the PLAR target due to changes in the strategic plan for the bank, as a result of the on-going review of the plan by the European Commission.

¹⁵ BOI's UK deposit book is held within its UK subsidiary and largely comprises of deposits sourced through the UK Post Office. There has been a noticeable positive foreign exchange impact on the stock of deposits for both BOI (in particular) and (to an extent) AIB, given their UK exposures.

6.3. Overall progress on funding composition

Overview¹⁶

In accordance with the Advanced Monitoring Framework introduced in the August 2012 MOU, banks' deleveraging will be assessed based on the existing nominal targets for disposal and run-off of non-core assets. Funding and liquidity will be assessed under the framework, including through monitoring of all factors affecting banks' Net Stable Funding Ratio ("NSFR").

AIB

AIB's funding balance has reduced due to its deleveraging programme, but also due to the recapitalisation, where it received €11.1bn in additional equity. This cash capital injection has significantly decreased funding needs relative to those projected in the PCAR. The main reduction in funding has been in relation to Central Bank borrowing which is lower than the end-2012 stress PCAR estimates.

BOI

Deposits have performed better than projected, as discussed in the previous section. Central Bank funding reduced by €8bn in the 18 months to end-June 2012, notwithstanding the additional funding of €2.8 billion related to the Irish Government guaranteed repo transaction with Irish Bank Resolution Corporation, and €1.5bn incremental funding availed of via the ECB's LTRO. Short term unsecured wholesale funding decreased to €1.8bn at end-June 2012; this was below what was forecast in PCAR base and stress, but is offset by higher levels of repos and €4.2bn of secured funding.

PTSB

The funding balance for PTSB is higher than would otherwise have been the case due to the suspension of the PCAR assumed deleveraging plan. The issuance of €2.7bn of unguaranteed funds secured on its UK mortgage book has increased long term funding ahead of PCAR base and stress, as these assets had been earmarked for sale. In addition, the recapitalisation of PTSB with equity of €2.3bn and cash consideration of €1.3bn for the life company reduced funding requirements over the period, with Central Bank funding lower than had been expected by end-2012 under both base and stress. Overall, deposits are marginally behind PCAR base and stress expectations with lower corporate deposits, although this has partially recovered in 2012 and has been further offset by higher levels of retail deposits.

¹⁶ The commentary here does not take account of developments in funding markets post-June 2012.

7. Evolution of capital requirements¹⁷

Overview

In general, the banks' capital requirements are higher than under the PCAR scenarios at this stage of the deleveraging process. Credit risk capital requirements form the bulk of the PCAR banks' total capital requirements with market and operational risk a much smaller fraction. Changes in capital requirements for each of the banks are thus largely due to changes in credit risk capital requirements. Also, changes in credit risk capital requirements are largely driven by balance sheet size and composition (and in particular will be affected where assets are being disposed or run-off). All of the PCAR banks (AIB, BOI and PTSB) use the Foundation Internal Ratings Based Approach¹⁸ ("FIRB") to calculate regulatory credit risk capital requirements for varying portions of their portfolios. The balance not covered by FIRB is calculated under the standardised approach. Therefore, the mix, geography and approach to the calculation of capital requirements makes comparability across the banks difficult.

Table: PCAR 2011 capital requirements (€bn) - stress compared to actuals

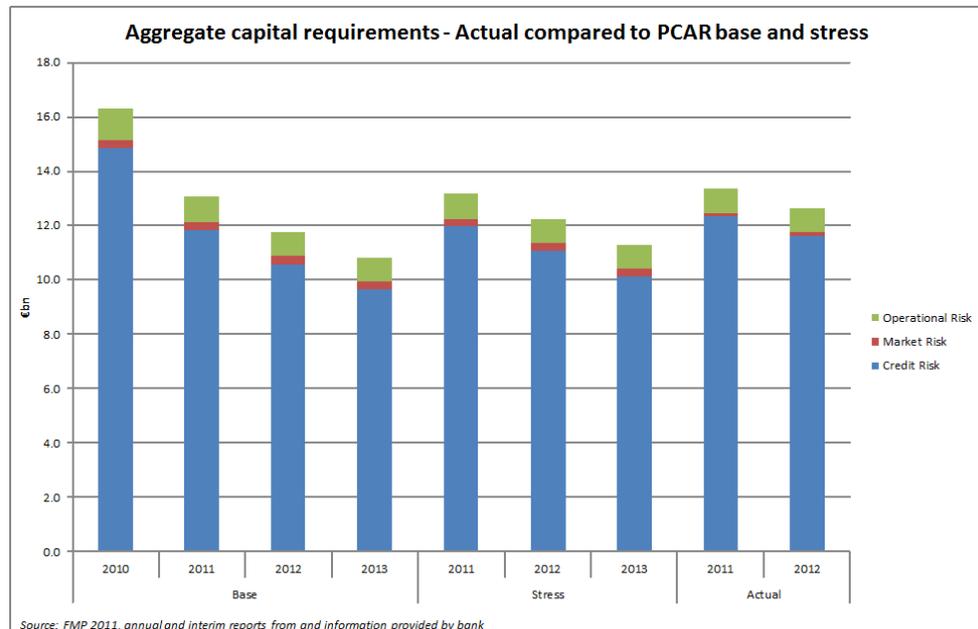
	Stress			Actual	
	2011	2012	2013	2011	H1 2012
AIB & EBS					
Credit risk*	6.5	5.9	5.6	6.2	5.9
Market risk	0.1	0.1	0.1	0.0	0.0
Operational risk	0.5	0.5	0.5	0.5	0.5
	7.1	6.5	6.2	6.7	6.5
BOI					
Credit risk*	4.4	4.3	4.0	4.9	4.5
Market risk	0.2	0.2	0.2	0.1	0.1
Operational risk	0.4	0.3	0.3	0.4	0.4
	4.9	4.8	4.4	5.4	4.9
PTSB					
Credit risk*	1.1	0.8	0.6	1.2	1.2
Market risk	0.0	0.0	0.0	0.0	0.0
Operational risk	0.0	0.0	0.0	0.1	0.0
	1.1	0.9	0.6	1.2	1.2

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings

*Includes other capital requirements specific to the stress tests in 2011.

¹⁷ This relates to the amount of capital banks are required to hold to cover credit, market and operational risks identified under the Basel II/CRD III rules and are a key input into solvency ratios. These are often provided as risk weighted assets, which are capital requirements times 12.5.

¹⁸ Under FIRB banks must use own estimates of PD, LGD, CCF and EAD for retail exposures (e.g. mortgages), however for non-retail exposures (e.g. SME) own estimates of LGD are not utilised, rather a floor of 45% LGD is applied.



Bank-by-Bank Analysis

As the PCAR was not completed using half-year figures, we compare end-June 2012 actual figures to end-December 2012 PCAR projections. AIB's credit risk capital requirements at end-June 2012 are in line with the stress case, albeit this is largely a result of NAMA II loans being retained on balance sheet, without which they would be below the projections. BOI, which has completed much of its deleveraging, has a credit capital requirement circa €0.2bn (4%) above the 2012 stress case. However, Exposure at Default (EAD) is also higher as a result of the retention of NAMA II loans. In addition, BOI has a significant portion of assets in GBP Sterling (which has strengthened against the Euro) and finally, BOI's loan impairment realisation has been less than assumed in PCAR. Credit capital requirements for PTSB are in large part higher due to a change in deleveraging plans. €2.9bn of the Irish book and €7.5bn of the UK book had been earmarked for sale but this was postponed, as discussed earlier.

8. Summary of capital versus PCAR expectations

8.1. Overview

PCAR 2011 required the participating banks to collectively raise €24bn in capital: €18.7bn of equity capital in order to remain above a 6% CT1 in the stress scenario plus an additional buffer of €5.3bn. This additional capital buffer included €2.3bn of equity capital for conservatism and €3.0bn of contingent capital to safeguard against loan losses beyond 2013. The €24bn was fully raised by the institutions by end-June 2012. €14.8bn was raised by AIB (including EBS), €5.2bn by BOI, and €4bn by PTSB. Of the €21bn CT1 capital required, 65% was raised from the Government and the National Pension Reserve Fund ("NPRF"), 23% was raised from LME, 11% from private issuance and the remainder from the sale of Irish Life Group to the Government by PTSB. The €3bn total contingent capital was raised by the banks issuing contingent capital notes to the Minister for Finance in July 2011¹⁹. These were subordinated tier 2 capital instruments issued at par with five year maturities, an annual coupon of 10% and a potential step-up to a maximum of 18% on the sale to a third party, which convert to equity if a banks CT1 ratio falls below 8.25%.

Table: Capital requirement resulting from PCAR 2011 and how it has been met (€bn)

	AIB	EBS	AIB & EBS*	BOI	PTSB	Total
Gross capital required pre buffer	10.5	1.2	11.7	3.7	3.3	18.7
Buffer (equity)	1.4	0.1	1.5	0.5	0.3	2.3
Equity capital requirement	11.9	1.3	13.2	4.2	3.6	21.0
Buffer CoCo	1.4	0.2	1.6	1.0	0.4	3.0
Total capital requirement	13.3	1.5	14.8	5.2	4.0	24.0
Capital raised:						
Private equity raising**			0.0	2.3	0.0	2.3
Liability management exercises			2.1	1.7	1.0	4.8
Other			0.0	0.0	0.3	0.3
Government capital injection			11.1	0.2	2.3	13.6
Equity capital			13.2	4.2	3.6	21.0
CoCo			1.6	1.0	0.4	3.0
Total capital			14.8	5.2	4.0	24.0

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), Department of Finance, bank financial reports. * AIB & EBS includes EBS on a pro-forma basis up to June 2011 and for PCAR is the sum of AIB and EBS individual submissions. **Includes debt for equity swaps.

¹⁹ In January this year, the State sold its holding of BOI's contingent capital notes to private investors at 101% of their par value plus accrued interest.

8.2. Evolution of capital and CT1 ratios

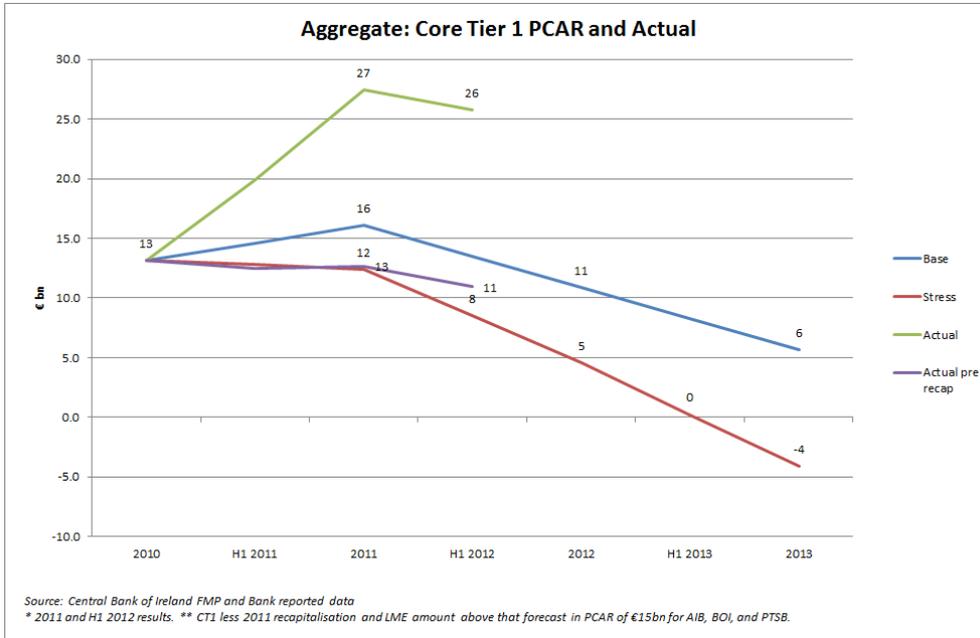
Overview

Aggregate CT1 capital for the three banks has moved from €13bn as at end-December 2010 to €26bn as at end-June 2012. Net losses (stripping out the income benefit of LME during 2011/2012) were a significant drag on capital, but have been offset by the €21bn of equity capital raising (including LME). Post-PCAR the sale of Irish Life by PTSB and the acquisition of the Anglo deposit book by AIB also contributed positively to capital over the period. In the graph on page 43, the total equity capital raising of €21bn can be seen in “capital raising assumed in PCAR”²⁰ of €6bn, “post March 2011 LME” of €5bn and “Additional capital raising” of €10bn.

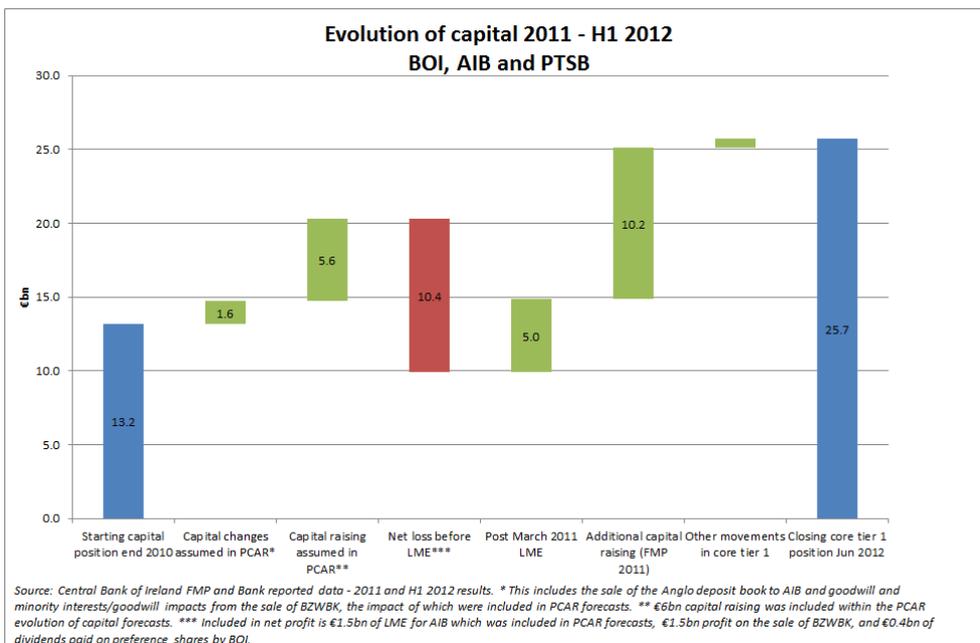
PCAR assumed €6bn of CT1 capital-raising in 2011 in its projections. Actual capital raised was €21bn. To compare the actual evolution of capital to that in the PCAR projections in the chart below, we strip out the post PCAR capital-raising (€10.2bn + €5.0bn) above what was assumed in PCAR (€5.6bn), thus we strip out €15bn from actual capital (the majority of this capital was raised in 2011 and can be seen in the two larger green bars to the right of the second chart below).

Other changes to capital, which were included in PCAR forecasts, relate to the integration of the Anglo deposit book into AIB and capital benefits from the sale of BZWBK by AIB. In aggregate the €10bn in losses includes pre-provision operating profit net of deleveraging losses and LME gains of €0.4bn, provisions on non-NAMA loans of €11.3bn, deleveraging losses of €3.4bn, tax credits from losses of €1.9bn, pre-March 2011 LME of €1.5bn and business disposals of €1.7bn.

²⁰ This relates to the remaining the capital the banks had been required to raise following the PCAR 2010 stress test, which was assumed to be raised in 2011 within PCAR projections. The final capital raising amounts announced following PCAR 2011 incorporates these amounts.



On this basis, the CT1 capital position before recapitalisation (the €15bn above that which was assumed in PCAR) was below base case but in line with stress case for the three banks at end-December 2011. The timing of the sale of Irish Life by PTSB (see section on PTSB for more detail) distorts the graph above somewhat. PCAR had assumed the sale in 2013, but the write-down to the value of the life company happened in 2011 with the pick-up to capital due to the removal of the related life company deduction occurring in H1 2012 when the sale completed.



As at end-June 2012, post the capital-raising, BOI had a CT1 ratio of 14%, AIB of 17.3% and PTSB of 20.5%²¹, with surplus capital to 10.5% CT1 minimum. This equates to, in aggregate, surplus capital of €9.2bn available to, for example, absorb additional losses due to loan impairment and losses on sale of assets (net of pre-provision operating profits or losses).

Table: June 2012 capital surplus to 10.5% core tier 1 capital ratio minimum

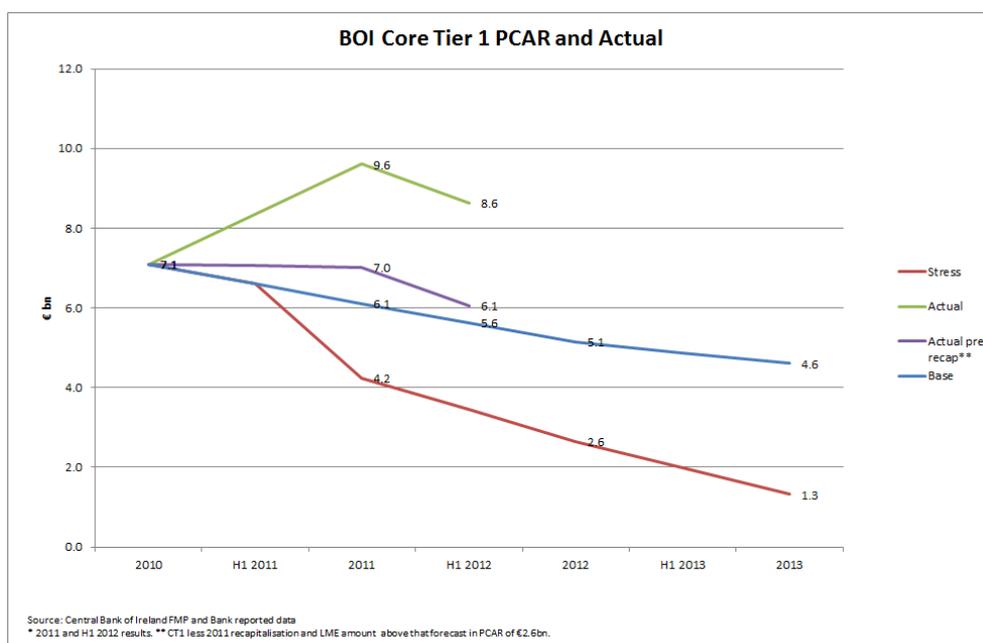
	AIB	BOI	PTSB*
Available capital	14.0	8.6	3.1
Capital requirement	6.5	4.9	1.2
Capital ratio	17.3%	14.0%	20.5%
<i>Surplus at:</i>			
10.5%	5.5	2.2	1.5

Source: Central Bank of Ireland Financial Measures Programme Report (March 2011), bank financial reports, regulatory returns, and Central Bank workings.

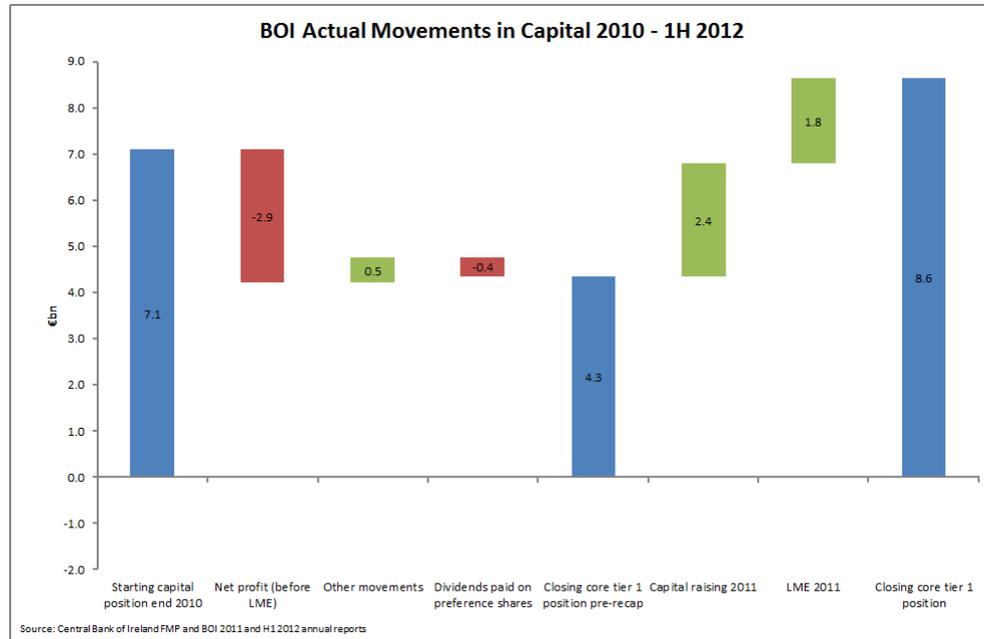
²¹ PTSB published a CT1 ratio of 18.1% in its June-2012 interim results, however, our analysis is based of regulatory returns which were submitted prior to the interim results and showed a higher figure of 20.5%

BOI

BOI as at end-June 2012 had CT1 capital of €8.6bn, giving a CT1 ratio of 14%, after the additional capital raising. Stripping out the recapitalisation and LME of 2011 (net of the €1.7bn which was assumed within PCAR, so €2.6bn), CT1 capital is ahead of both PCAR base and stress case projections in terms of the forecast capital position at end-June 2012.

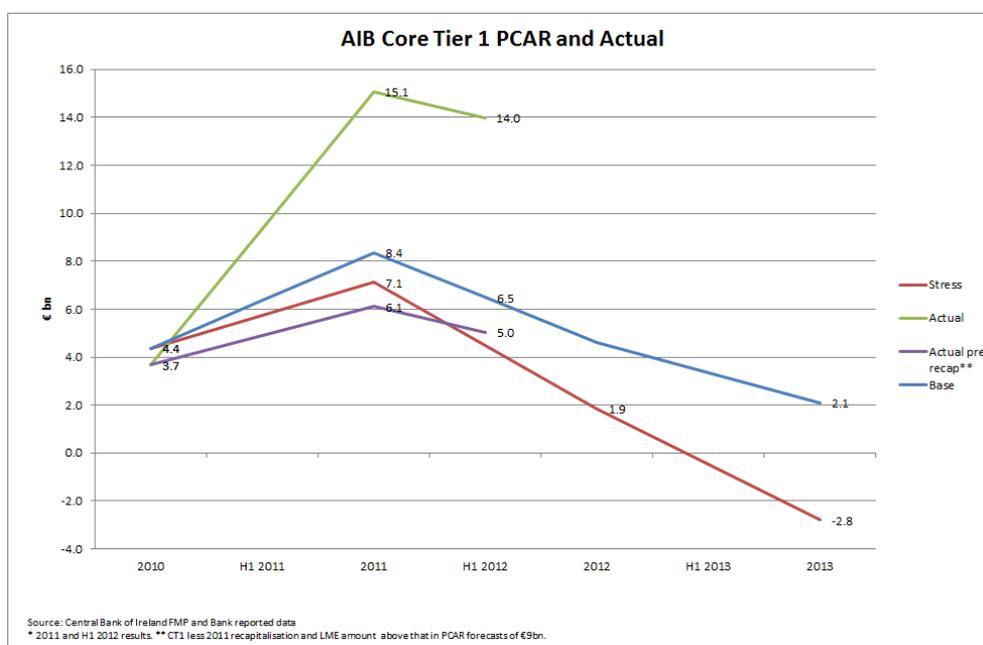


The movement in BOI's CT1 capital from the capital position as of 2010 to H1 2012 level is shown below. In PCAR, capital was projected to move from €7.1bn at end-December 2010 to €1.3bn in 2013 in the stress case and €4.6bn in the base case. The main negative driver of this was loan losses and deleveraging, offset somewhat by the assumption of €1.7bn capital-raising in 2011. In actual fact, capital of €2.4bn was raised, along with €1.8bn of gains on LME (totalling the €4.2bn published in FMP with fees and taxes allocated differently between the two items), leading to CT1 capital at end-June 2012 of €8.6bn. Net losses of €2.9bn (after impairment provisions but before LME) for the 18 months compares to €8.1bn assumed for the three years in PCAR stress. This is better than PCAR if compared to 2011 and H1 2012 numbers, due to lower than projected losses on disposals and loan losses (€0.8bn for the 18 months). The loss of €1.5bn (stress case) on transfers to NAMA did not occur but impairment charges/income statement movements of €0.5bn were recognised on these loans. Loan impairment provisions recognised in the income statement to end-June 2012 of €2.4bn compare to three-year PCAR base projections of €3.9bn and €6.6bn in the base and stress cases respectively.



AIB

AIB as at end-June 2012 had CT1 capital of €14bn, giving a CT1 ratio of 17.3%, after the capital injection of €11bn during 2011. Stripping out the recapitalisation and LME, that was included within PCAR (leaving in the €4.2bn recap, €1.5bn pre-March 2011 LME and €1.5bn sale of BZWBK assumed in PCAR, therefore excluding €9bn in total), CT1 capital would be slightly above the stress case but would still be below the base case in terms of the capital position at end-June 2012. Note the starting positions on the chart below are €3.7bn on actual which excludes EBS and €4.4bn for PCAR, which incorporates EBS. For every other point on the chart we are comparing like with like – AIB including EBS consolidated and AIB and EBS PCAR submissions combined.

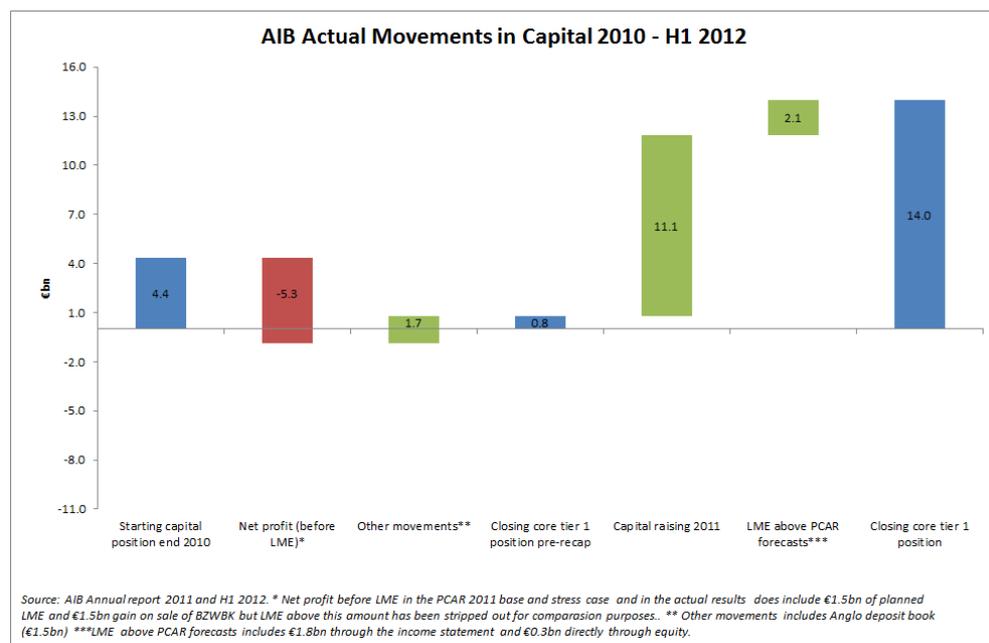


The movement in AIB's CT1 capital from the capital position as of 2010 to the H1 2012 level is shown above. The PCAR 2011 capital projections for 2011 to 2013 saw capital move from €4.4bn at end-December 2010 to €2.1bn in base and -€2.8bn in stress by end 2013. This forecast included €1.5bn of LME that is included in the net profit line in the base, stress and actual lines in the graphs on profitability, which was completed in January 2011 and €1.5bn profit through the income statement from the sale of BZWBK which was completed in April 2011. Also included in the PCAR scenario was €4.2bn of capital raising that was expected to be completed following the 2010 PCAR exercise.

When we look at what has actually happened, capital was boosted by the injection of €11.1bn from the government and €2.1bn of additional LME (€1.8bn through the income statement and €0.3bn directly through equity; meeting the €13.2bn required equity capital published in the FMP Report). While the acquisition of EBS from the government for €1 contributed €0.8bn to capital for AIB, our starting position in the graph below is the end-December 2010 capital position of AIB and EBS, so this nets out between the two entities

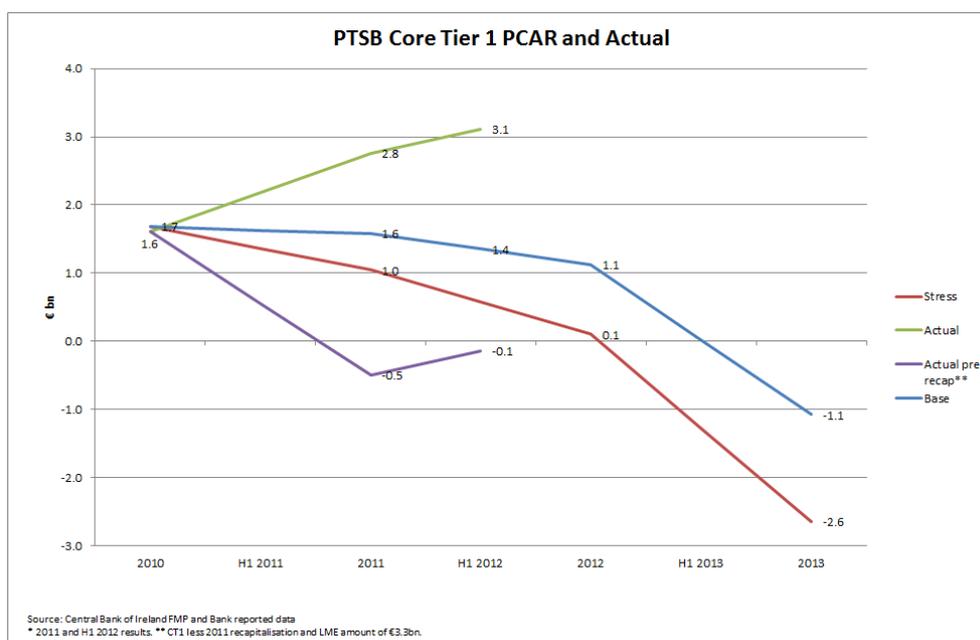
on a consolidated basis (capital gain to AIB and capital loss to EBS). Net losses after provisions/deleveraging losses and before the additional LME (but after the €1.5bn included in PCAR) of €5.3bn for the 18 months to end-June 2012 compares to the three-year forecast of €13.4bn in the stress scenario. This includes a €1.3bn benefit from deferred tax assets. (AIB did not recognise any incremental deferred tax assets in the PCAR 2011 process but have recognised them in their accounts since then.)

The loss on disposal of assets that was recognised through the income statement was also less than had been forecast to this point in PCAR 2011 (€0.5bn recognised to date). Three year losses on NAMA I and II of €2.4bn did not occur, but provisions/other income statement items of €1.6bn have been taken on these. To date, provisions of €7bn (excluding land and development loans) have been recognised, compared to 3 year projections €5.0bn in base case and of €8.6bn in stress.



PTSB

PTSB as of end June 2012 had CT1 capital of €3.1bn, giving a CT1 ratio of 20.5%²² after the capital injection of €2.3bn during 2011. Stripping out the recapitalisation and LME amounts of €3.3bn, CT1 capital was below PCAR base and stress case projections in 2011 and at end-June 2012 in terms of the capital position.



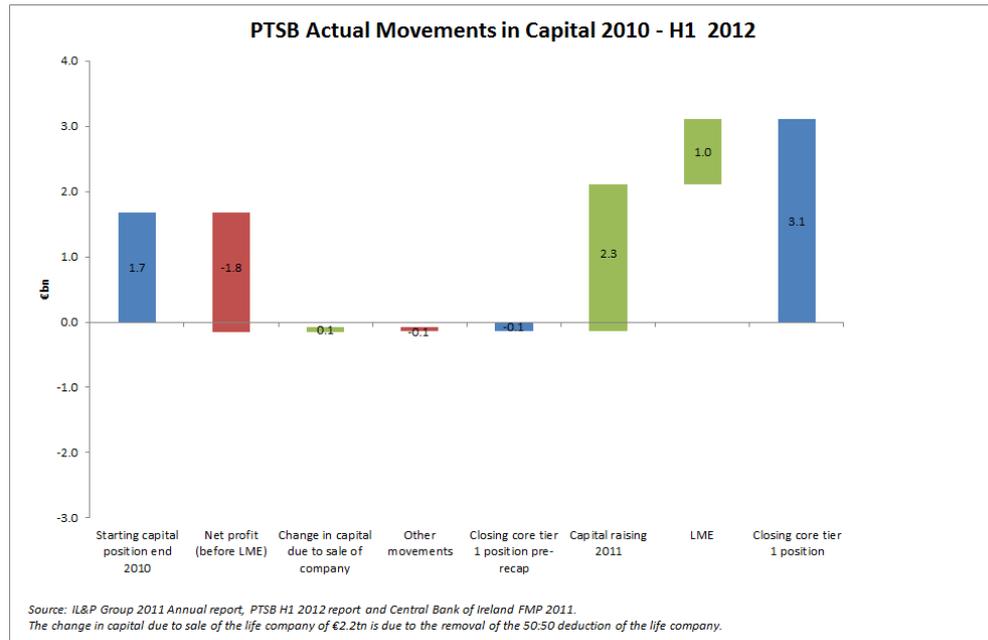
The movement in PTSB's CT1 capital from the capital position as of 2010 to H1 2012 is shown above. The PCAR 2011 capital forecasts for 2011 to 2013 saw capital move from €1.7bn at December 2010 to -€1.1bn in the base case and -€2.6bn under stress by end 2013. No capital-raising was assumed in the PCAR for PTSB.

Looking at the 18 months to date, capital of €2.3bn was injected by the government and PTSB also raised €1bn through LME. Considering the movements in capital due to the sale of the life company on the same basis as how they were included within the PCAR numbers, the net change in capital is €0.1bn. Net losses (after provisions and before LME) of €1.8bn compares to the three-year forecast of €4bn. The planned deleveraging has for the most part not occurred, so losses on deleveraging of €2.2bn have not been realised.

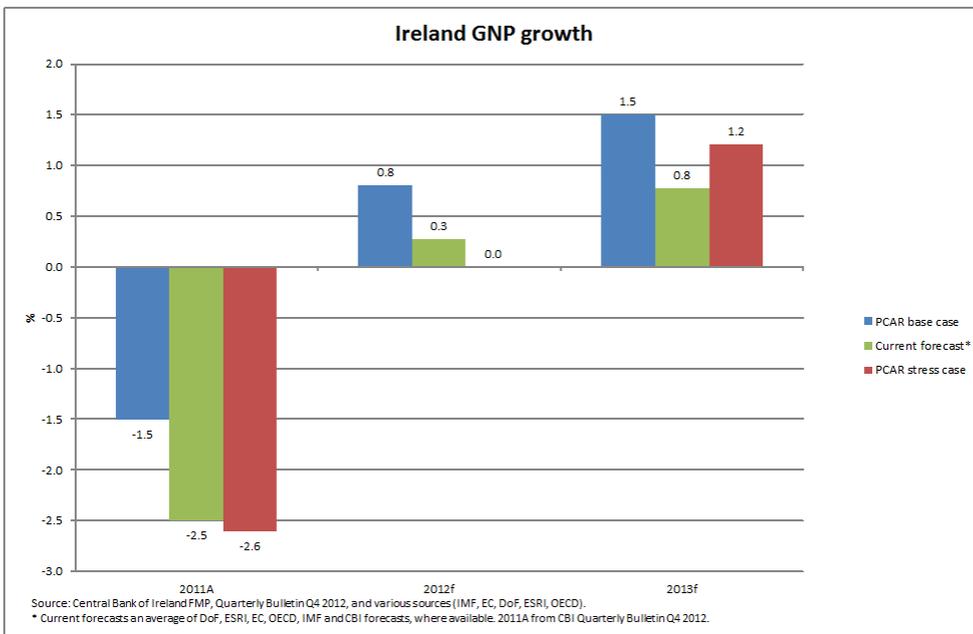
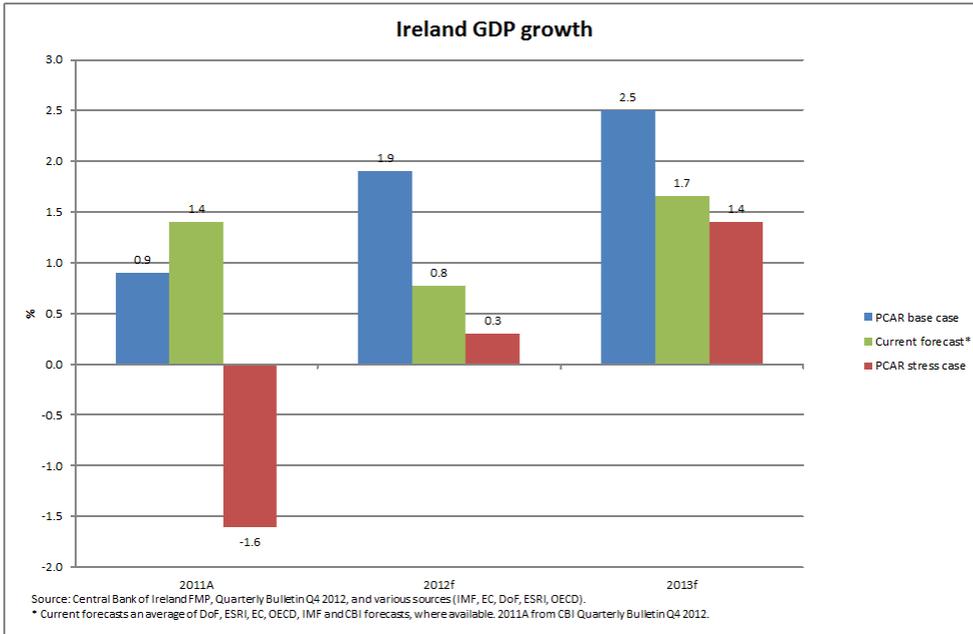
PTSB's CT1 pre-recapitalisation was significantly lower than forecast in 2011, due to the timing of the sale of the Irish Life. PCAR had assumed the sale of Irish Life in 2013, with both the loss on sale and the benefit to regulatory capital from the removal of the deduction for life company holdings occurring in 2013 (in both the base and stress scenarios). However, a write-down on the value of the life company was actually reflected in 2011. The deduction due to the life company was also reduced that year as a result; but the removal of

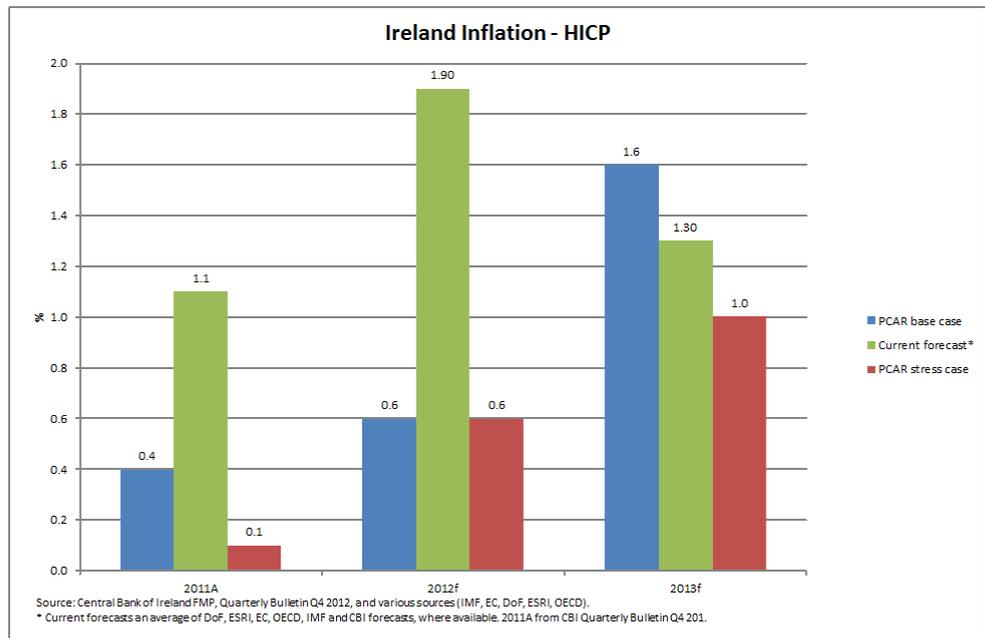
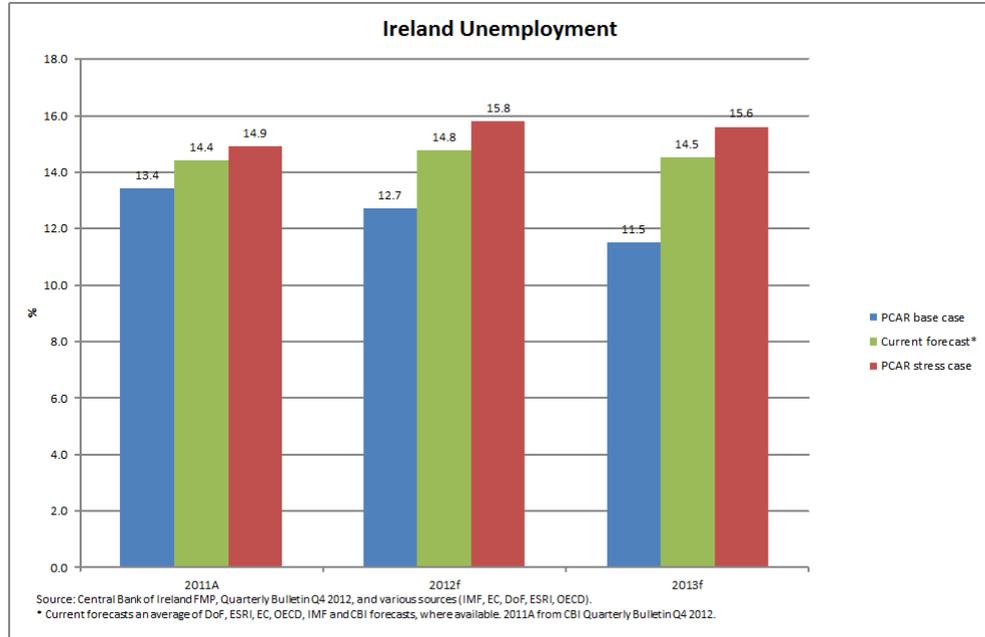
²² 18.1% in PTSBs June 2012 interim results.

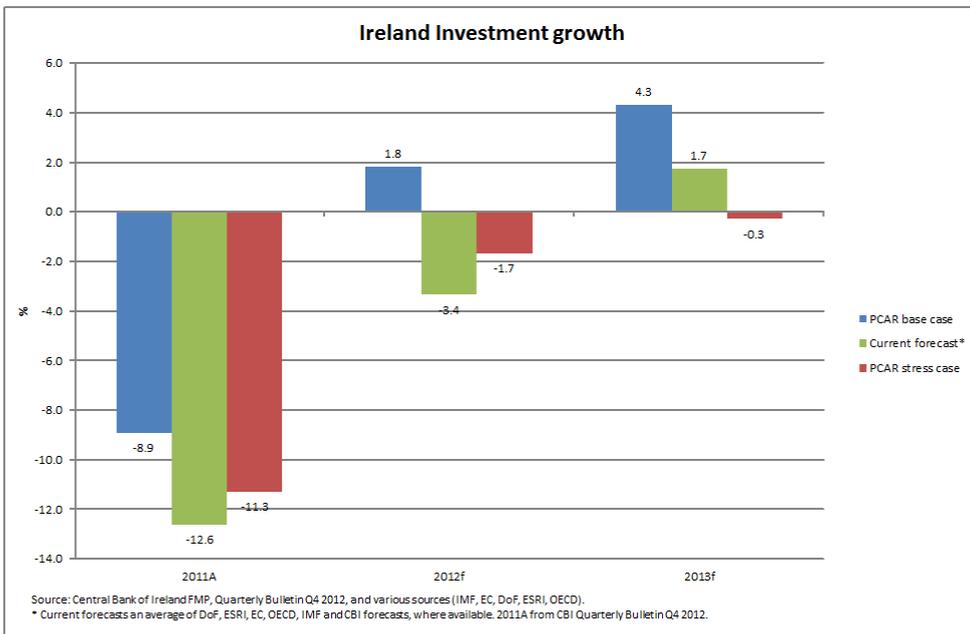
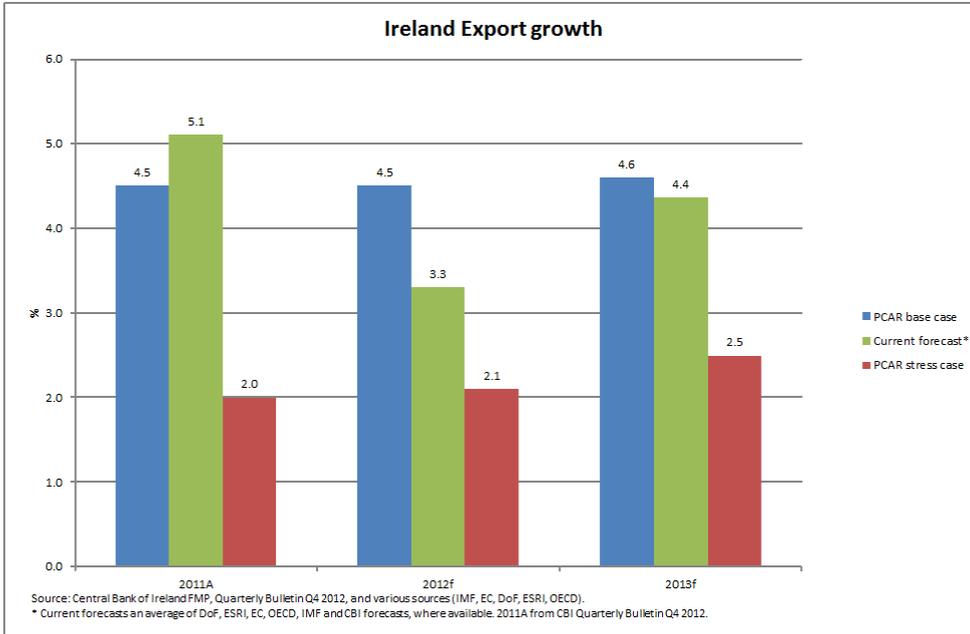
€1.1bn in Tier 2 capital due to LME offset some of this. The removal of the rest of the life company deduction happened by H1 2012, when the life company was sold to the State for €1.3bn, hence the uplift to capital in 2012. In the post-recap capital numbers, this is masked by the government injection of €2.3bn in 2011.

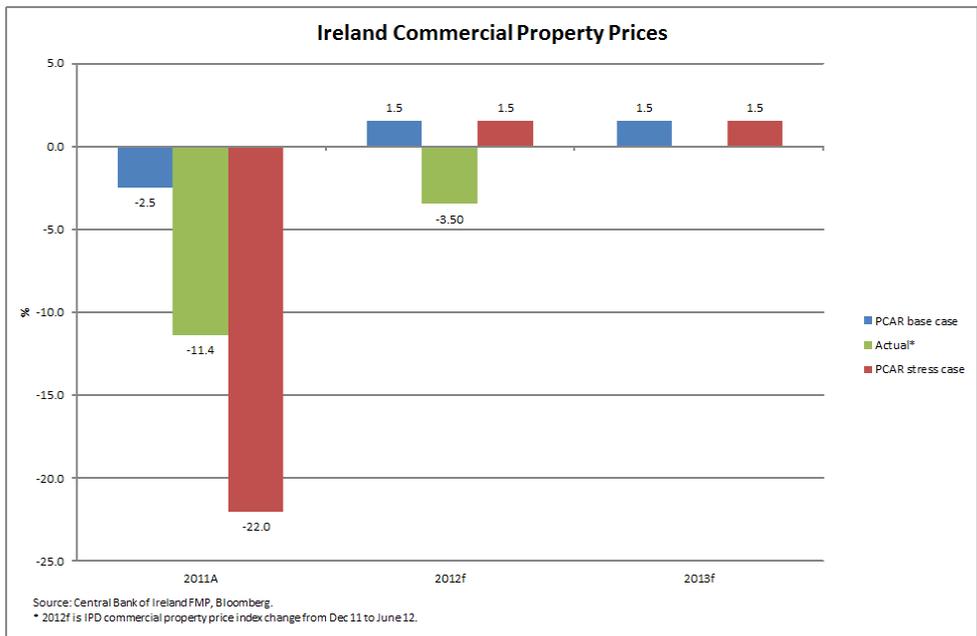
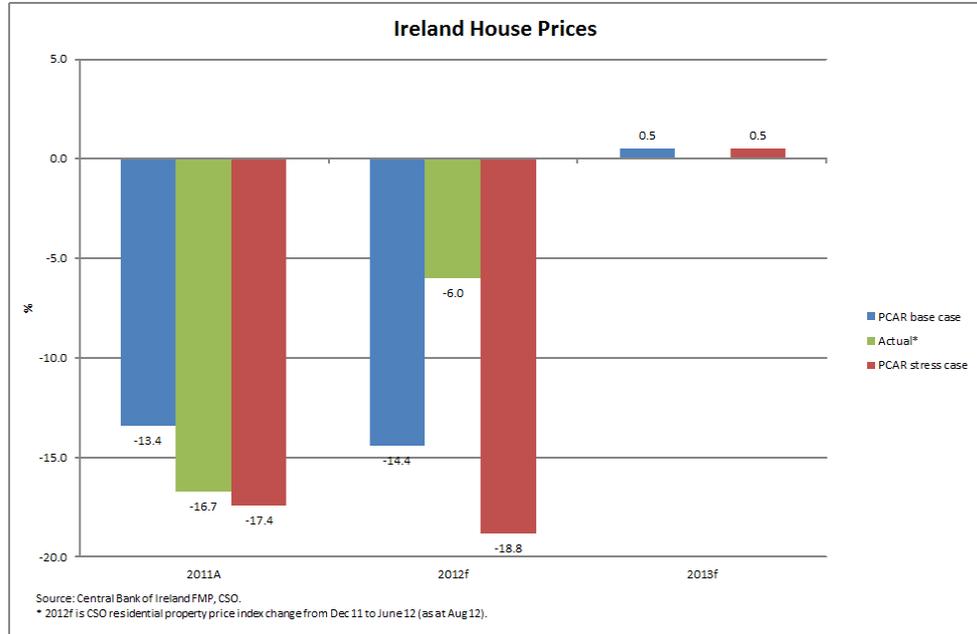


Appendix 1 – PCAR economic assumptions, actual outturn and current expectations









Appendix 2 – Glossary

Basel III	A global regulatory framework for banks and banking systems, developed by the Basel Committee on Banking Supervision of the Bank of International Settlements (BIS).
Capital	In banking, capital comprises mainly share capital, capital contributions, reserves, alternative capital instruments or hybrid instruments. Capital acts as a cushion against losses and a protection for depositors' money, and it can be viewed as a measure of financial strength.
Core Tier 1 capital (CT1)	This is Tier 1 capital excluding certain hybrid or alternative capital instruments. Hybrid or alternative capital instruments are types of instruments with both debt and equity features, for example convertible bonds.
Capital basis	Capital basis refers to the set of rules or regulations by which capital adequacy is assessed. In the EU the current set of rules is laid out in the Capital Requirements Directive.
Capital buffer	The amount of capital a financial institution needs to hold above minimum requirements, calculated through an assessment of risks which fall outside the risks evaluated in the capital ratio. In the case of the Financial Measures Programme, the capital buffer provides additional capitalisation against potential capital absorbing events outside the parameters of the PCAR stress test. This includes defaults outside the PCAR period (without taking account of post-2013 operating income) and other risks which would affect capital adequacy.
Capital requirement	The capital requirement determines the amount of current and future risk an institution must hold within a given regulatory framework. (An example would be 6% Core Tier 1 requirement under stress scenario.) Risk is measured by an institution's capital adequacy ratio. Institutions which cannot meet the prescribed capital requirement must find a way to increase their capitalisation or to reduce their risk weighted assets.

Capital Requirements Directive (CRD)	The European law which governs minimum capital requirements for all Credit Institutions in EU Members States. Its provisions reflect, to a large extent, the rules laid down by the Basel Committee on Banking Supervision.
Core loan portfolios	The loan portfolios identified by the banks as important in the context of supporting the Irish economy and/or important to ensure their on-going financial viability.
Exposure at default (EAD)	The value on which a banks is exposed to should a loan or other obligation to the bank fall into default.
Deleveraging	The process of reduction of non-core assets over time through asset run-offs and disposals.
Haircut	A haircut on a loan is the difference between the nominal value of a loan and the purchase price paid by an investor or acquirer. The discount applied is based on the quality of the loan, ability to repay and underlying collateral.
Liability management exercise (LME)	A transaction whereby a bank makes a profit through the repurchase of liabilities for an amount less than their carrying value on the banks' balance sheet. For example, the repurchase of subordinated debt for 50% of its face value would generate a profit before tax of 50% of the nominal value outstanding of the debt instrument in question where a holder elects to engage in the transaction with the bank.
Liquidity	The degree to which an asset can be easily converted into cash without any price discount.
Liquidity Coverage Ratio (LCR)	The LCR is a measure of short-term contingent liquidity risk. Its objective is to ensure that a bank has sufficient liquidity to meet potential net outflows from both on- and off-balance sheet exposures in a stressed environment. It is defined as the ratio of a bank's stock of high quality liquid assets to its expected net cash outflows in the first 30 days of a specified stress scenario, in line with the parameters set out by the BCBS in December 2010 and subsequently updated in January 2013.

Loan to Deposit Ratio (LDR)	The Loan to Deposit Ratio measures a bank's liquidity by expressing customer loans net of impairment provisions as a percentage of customer deposits.
Loan Loss Forecasting	An exercise to determine the extent to which loans will be re-paid over a certain time horizon, based upon the probability of each loan defaulting, the extent to which each loan is currently exposed, and the amount that would likely default at a given point in time.
Loan-To-Value ratio (LTV)	Measures the risk associated with a loan by dividing the amount of a loan provided by a bank by the actual value of the asset. Typically, higher a LTV ratio means a higher risk loan.
Loss Given Default (LGD)	The credit loss incurred on a loan if a creditor defaults.
National Asset Management Agency (NAMA)	<p>NAMA is a State agency created in 2009 to improve the creditworthiness of Irish banking system. Its primary function is to take over distressed commercial loans from Irish banks, providing banks with bonds in return. Assets acquired by NAMA will be resolved through sale or wind down.</p> <p>NAMA II refers to land and development loans of less than €20m which were expected to be transferred to NAMA at the time of PCAR 2011, but subsequently were not transferred.</p>

National Pension Reserve Fund (NPRF)	<p>The National Pensions Reserve Fund was established in April 2001 to meet as much as possible of the costs of Ireland's social welfare and public service pensions from 2025 onwards, when these costs are projected to increase dramatically due to the ageing of the population. The Fund is controlled and managed by the National Pensions Reserve Fund Commission. The Commission's functions include the determination and implementation of the Fund's investment strategy in accordance with its statutory investment policy. This policy requires that the Fund be invested so as to secure the optimal total financial return provided the level of risk is acceptable to the Commission. Since 2009 the Commission is also required to make investments in credit institutions, as directed by the Minister for Finance where, having consulted the Governor of the Central Bank and the Financial Regulator, he decides such direction as is required, in the public interest. (Source nprf.ie)</p>
Net Stable Funding Ratio (NSFR)	<p>The NSFR is a measure of banks' structural liquidity mismatch. Its objective is to ensure that a bank's long-term assets (on- and off balance sheet) are funded by stable funding sources, measured by either behavioural or contractual term. It is defined as the ratio of a bank's available stable funding to its required amount of stable funding.</p>
Non-Core Loan Portfolios	<p>The businesses that the banks have identified as not specifically supporting the Irish economy or not important in the context of their on-going viability.</p>
Probability of Default (PD)	<p>Probability of Default measures the likelihood that a loan will not be repaid and will fall into default. There are many techniques for estimating the probability of default for a given loan type, including logistic regression, proprietary models or a ratings based approach.</p>
PCAR	<p>Prudential Capital Assessment Review. An exercise that estimates the capital requirements of credit institutions under a given set of macroeconomic variables and/or risk sensitivities.</p>

PLAR	Prudential Liquidity Assessment Review. An exercise to monitor and enforce sound quantitative and qualitative liquidity standards.
Risk-Weighted Assets (RWA)	A measure of the amount of a bank's assets, adjusted for risk. This sort of asset calculation is used in determining the capital requirement or Capital Adequacy Ratio, with risk weightings regulated by the local Central Banks or other financial regulators.
Solvency	The ability to meet short and long term liabilities and other claims on an institution.

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