08

BASEL II PILLAR 3
APS 330: CAPITAL ADEQUACY & RISK MANAGEMENT IN ANZ

Year ended 30 September 2008

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Important Notice

This document has been prepared by Australia & New Zealand Banking Group Ltd (ANZ, or the Group) to meet its annual disclosure obligations under the Australian Prudential Regulation Authority (APRA) APS 330 Capital Adequacy: Public Disclosure of Prudential Information.

This annual disclosure was prepared as at 30 September 2008. ANZ has a continuous disclosure policy, under which ANZ will immediately notify the market of any material price sensitive information concerning the Group, in accordance with legislative and regulatory disclosure requirements.

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Chapter 1. Introduction

Purpose of this Document

This document has been prepared in accordance with the Australian Prudential Regulation Authority (APRA) Australian Prudential Standard (APS) APS 330 Capital Adequacy: Public Disclosure of Prudential Information (APS 330).

APS 330 mandates the release to the investment community and general public of information relating to ANZ's capital adequacy and risk measurement practices. APS 330 has been established to implement Pillar 3 of the international framework for bank capital adequacy, known as 'Basel II' [1].

In simple terms, Basel II consists of three mutually reinforcing 'pillars':

- Pillar 1 covers the rules for calculating the minimum capital required for a bank's credit, operational and market risk. There is a range of approaches that may be adopted by banks, ranging from simple to more sophisticated risk measurement and management approaches.
- Pillar 2 covers a review of the adequacy of the Pillar 1 capital, taking into account all the rest of the risks a bank faces, as well as current economic conditions, future growth plans and likely stress scenarios.
- Pillar 3 seeks to harness the power of market discipline to supplement regulatory supervision of banks. To achieve this, an informed market is required – hence the disclosure of the information contained in this document. The information to be disclosed is tied to the risk measurement and management approaches approved under Pillar 1.

Basel II in ANZ

APRA has been a strong supporter of the Basel II process and has adopted it for use by banks in Australia. Preparation for Basel II has taken banks several years, as the new rules have touched many policies, processes and systems. In December 2007, ANZ received accreditation for the most advanced approaches for credit and operational risk, complementing its existing accreditation for market risk. ANZ is one of very few banks in the world to have accreditation at the most advanced level for all three key risk types.

APS 330 requires the publication of information on a quarterly, semi-annual and annual basis. This document is the annual disclosure, which contains the most comprehensive information.

In addition to releasing APS 330 for Pillar 3, APRA has revised several existing standards and published a new suite of prudential standards to implement the rest of Basel II. The standards that relate to ANZ are:

Existing Standards

- APS 110: Capital Adequacy (APS 110)
- APS 111: Capital Adequacy: Measurement of Capital (APS 111)

New Standards

- APS 113: Capital Adequacy: Internal Ratings-based Approach to Credit Risk (and to a limited extent, APS 112: Capital Adequacy: Standardised Approach to Credit Risk) (APS 113)
- APS 115: Capital Adequacy: Advanced Measurement Approaches to Operational Risk (APS 115)
- APS 116: Capital Adequacy: Market Risk (APS 116)
- APS 117: Capital Adequacy: Interest Rate Risk in the Banking Book (APS 117)
- APS 120: Securitisation (APS 120)

Pillar 2 has no separate prudential standard, as it is strictly for supervisors. However, APRA has published an information paper on its proposed approach.

Verification of Disclosures

These disclosures have been appropriately verified internally but have not been audited by ANZ's external auditor. However, they have been prepared to ensure consistency with the financial disclosures contained in ANZ's Annual Report.

Reconciliation to Annual Report

These disclosures have been produced in accordance with regulatory capital adequacy concepts and rules, rather than in accordance with International Financial Reporting Standards. As such, there will be differences in some common areas of disclosures.

These differences will be most pronounced in the credit risk disclosures, several of which are made on the basis of Exposure at Default (EAD – refer chapter 5) which includes undrawn amounts of commitments and contingent exposures. A number of the disclosures are made at the regulatory 'asset class' level (refer chapter 5), a classification scheme that traverses multiple areas of ANZ's internal organisation.

Unless otherwise stated, all amounts are rounded to AUD millions.

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[1] Basel Committee on Banking Supervision, International Convergence of Capital Measurement and Capital Standards: A Revised Framework, 2004

Chapter 2. Scope of Application

Top Corporate Entity in ANZ

The top corporate entity in the Group is Australia and New Zealand Banking Group Limited.

Consolidation

For financial reporting purposes, ANZ consolidates its financial statements and all of its controlled entities where it is determined that there is a capacity to control. Control means the power to govern directly or indirectly the financial and operating policies of an entity so as to obtain benefits from its activities.

In relation to special purpose entities, such control is deemed to exist where:

- In substance, the majority of the residual risks and rewards from their activities accrue to the Group; or,
- In substance, the Group controls their decision making powers so as to obtain the majority of the risks and rewards from their activities.

For the purpose of determining ANZ's capital adequacy at the consolidated banking Group, ANZ includes all controlled subsidiary entities except for those involved in the following business activities, as required by APS 110:

- Insurance businesses (including friendly societies and health funds);
- Acting as manager, responsible entity, approved trustee, trustee or similar role in relation to funds management;
- Non-financial (commercial) operations; and
- Securitisation special purpose vehicles to which assets have been transferred in accordance with APRA's requirements as set out in APS 120.

Investments in entities deconsolidated for prudential purposes are deducted from regulatory capital and the assets of those entities are excluded from aggregate Risk Weighted Assets (RWA). For consolidated banking group reporting, all investments in subsidiaries are either eliminated on consolidation or deducted from the capital base where deconsolidation for prudential purposes is required.

The material controlled entities of the Group are:

Name	Deducted from capital?	Business
Amerika Samoa Bank	No	Banking
ANZ Capel Court Limited	No	Investment Banking
ANZ Capital Funding Pty Ltd	No	Funding
ANZ Capital Hedging Pty Ltd	No	Hedging
ANZ Commodity Trading Pty Ltd	No	Finance
ANZcover Insurance Pty Ltd	No	Captive-Insurance
ANZ Trustees Limited	Yes	Trustee/Nominee
ANZ Funds Pty Ltd	No	Investment
ANZ Bank (Europe) Limited	No	Banking
ANZ Bank (Samoa) Limited	No	Banking
ANZ Holdings (New Zealand) Limited	No	Holding Company
ANZ National Bank Limited	No	Banking
ANZ Investment Services (New Zealand) Limited	No	Fund Manager
ANZ National (Int'l) Limited	No	Finance
Awarata Finance Limited	No	Finance
Arawata Trust	No	Finance
Arawata Holdings Limited	No	Holding Company
Harcourt Corporation Limited	No	Investment
Arawata Trust Company	No	Finance
Endeavour Finance Limited	No	Finance
Tui Endeavour Limited	No	Finance
Private Nominees Limited	No	Nominee
UDC Finance Limited	No	Finance
ANZ International (Hong Kong) Limited	No	Holding Company
ANZ Asia Limited	No	Banking
ANZ Bank (Vanuatu) Limited	No	Banking
ANZ International Private Limited	No	Holding Company
ANZ Singapore Limited	No	Merchant Banking
ANZ Royal Bank (Cambodia) Limited	No	Banking
Bank of Kiribati Ltd	No	Banking
LFD Limited	No	Holding Company
Minerva Holdings Limited	No	Holding Company
Upspring Limited	No	Finance
Votraint No. 1103 Pty. Ltd	No	Investment
ANZ Lenders Mortgage Insurance Pty Limited	Yes	Mortgage Insurance
ANZ Nominees Limited	No	Nominee
ANZ Orchard Investments Pty Ltd	No	Holding Company
Australia and New Zealand Banking Group (PNG) Limited	No	Banking
Citizens Bancorp Inc	No	Holding Company
Citizens Security Bank (Guam) Inc	No	Banking
Esanda Finance Corporation Limited	No	General Finance
ETRADE Australia Limited	No	Online Stockbroking
Omeros II Trust	Yes	Securitisation
PT ANZ Panin Bank	No	Banking
ANZ Vientiane Commercial Bank Limited	No	Banking

Restrictions on Transfers of Funds within the Group

ANZ operates branches and locally incorporated subsidiaries in many countries. These operations are capitalised at an appropriate level to cover the risks in the business (economic capital) and to meet local prudential requirements. This minimum level may be enhanced to meet local taxation and operational requirements. Any repatriation of capital from subsidiaries or branches is subject to meeting the requirements of the local prudential regulator and/or the local central bank requirements. Apart from ANZ's operations in New Zealand, local country capital requirements do not impose any material call on the Group's capital base.

ANZ undertakes banking activities in New Zealand through its wholly owned subsidiary, ANZ National Bank Limited (ANZ National), which is subject to minimum capital requirements as set by the Reserve Bank of New Zealand (RBNZ). The Reserve Bank of New Zealand (RBNZ) has adopted the Basel II framework, effective from 1 January 2008, and ANZ National has been accredited to use the advanced approaches for the calculation of credit and operational risk. This closely aligns the capital required for ANZ National to the level of capital required under the Group's methodology. However, ANZ National maintains a buffer above the minimum capital base as required by the RBNZ. This capital buffer has been calculated via the Internal Capital Adequacy Assessment Process (ICAAP[2]), undertaken for ANZ National, to ensure ANZ National is appropriately capitalised under stressed economic scenarios.

Capital Deficiencies in Non-Consolidated Subsidiaries

The aggregate amount of any under-capitalisation of any non-consolidated subsidiary (or subsidiaries) that is required to be deducted from capital is zero.

[2] Internal Capital Adequacy Assessment Process is discussed in detail within the Capital Adequacy section of this document.

Chapter 3. Capital

Capital Structure

ANZ's regulatory capital calculation is governed by APRA's Prudential Standards which adopt a risk-based capital assessment framework based on the Basel II capital measurement standards. This risk based approach requires eligible capital to be divided by total RWA, with the resultant ratio being used as a measure of a bank's capital adequacy. APRA determines Prudential Capital Ratios (PCRs) for Tier 1 and Total Capital, with capital as the numerator and Risk Weighted Asset (RWA) as the denominator.

Regulatory capital is divided into Tier 1, carrying the highest capital elements, and Tier 2, which has lower capital elements, but still adds to the overall strength of the entity.

Tier 1 capital is comprised of 'Fundamental' capital and 'Residual' capital, and Tier 1 deductions. Fundamental capital comprises shareholder's equity adjusted for items which APRA does not allow as regulatory capital or classifies as lower forms of regulatory capital. The following adjustments are made to fundamental capital:

- Reserves exclude the hedging reserve and the available-for-sale revaluation reserve;
- Retained earnings excludes reserves of insurance, funds management and securitisation entities and associates and includes deferred fees forming part of loan yields; and
- Current year earnings is net of the dividends paid during the current year and the expected final dividend payment, net of the expected dividend reinvestment under the Dividend Reinvestment Plan and excludes profits of insurance, funds management and securitisation entities and associates.

Residual capital covers non-innovative and innovative hybrid Tier 1 instruments with limits restricting the volume that can be counted as Tier 1 capital. Tier 1 deductions include amounts deducted solely from Tier 1, mainly intangible assets, and deductions taken 50% from Tier 1 and 50% from Tier 2, which mainly includes the tangible component of investment in other entities regulated by APRA, or their overseas equivalent, and the amount of Expected Losses (EL) in excess of Eligible Provisions net of tax.

Tier 2 capital is comprised of Upper and Lower Tier 2 capital less capital deductions taken 50% from Tier 2 capital. Upper Tier 2 capital mainly comprises perpetual debt instruments whilst Lower Tier 2 includes dated subordinated debt instruments which have a minimum term of five years.

Total Capital is the sum of Tier 1 capital and Tier 2 capital.

The following table summarises ANZ's capital position as at 30 September 2008.

Figure 1: Capital Structure

Fundamental Tier 1 capital		**$m**
Paid-up ordinary share capital		12,566
Foreign currency translation reserve	(816)	
Share and share option reserve	107	
Reserves		(709)
Retained earnings including current year earnings	13,772	
less : Accumulated retained profits and reserves of insurance, funds management and securitisation entities and associates	(841)	
Dividend not provided for	(1,511)	
add : Deferred fee revenue including fees deferred as part of loan yields	351	
Accrual for Dividend Reinvestment Plans	453	
Prudential retained earnings		12,224
Minority interests		62
Fundamental Tier 1 capital		**24,143**
Innovative Tier 1 capital		2,847
Non-innovative Tier 1 capital		2,095
Gross Tier 1 capital		**29,085**
Deductions from Tier 1 capital		
Goodwill		(3,064)
Intangible component of investments in non-consolidated subsidiaries and other non-Level 2 entities		(1,773)
Other deductions from Tier 1 capital only	*Refer to following tables*	(1,813)
50/50 deductions from Tier 1 capital	*Refer to following tables*	(1,206)
Total Tier 1 capital deductions		**(7,856)**
NET TIER 1 CAPITAL		**21,229**
Tier 2 capital		
Upper Tier 2 capital	*Refer to following tables*	1,377
Lower Tier 2 capital		9,195
Gross Tier 2 capital		**10,572**
Deductions from Tier 2 capital		
Upper and lower Tier 2 capital deductions		(28)
50/50 deductions from Tier 2 capital		(1,206)
Total Tier 2 capital deductions		**(1,234)**
NET TIER 2 CAPITAL		**9,338**
TOTAL CAPITAL BASE		**30,567**

Figure 1: Capital Structure (cont)[3]

Other Deductions from Tier 1 capital	$m
Capitalised software and other intangible assets	(677)
Capitalised expenses including loan and lease origination fees, capitalised securitisation establishment costs and costs associated with debt raisings.	(642)
Applicable deferred tax assets (excluding the component relating to the general reserve for impairment of financial assets)	(92)
Earnings not recognised for prudential purposes	(117)
Other	(285)
Total	**(1,813)**

Deductions taken 50% from Tier 1 and 50% from Tier 2	Gross	50%
Investment in ANZ Lenders Mortgage Insurance	(131)	(65)
Investment in Funds Management and Securitisation entities	(68)	(34)
Investment in joint ventures with ING in Australia and New Zealand	(524)	(262)
Investment in other Authorised Deposit Taking Institutions and overseas equivalents	(1,219)	(610)
Investment in other commercial operations	(72)	(36)
Expected loss in excess of eligible provsions	(334)	(167)
Other	(64)	(32)
Total	**(2,412)**	**(1,206)**

Details of Upper Tier 2 Capital	
Eligible component of post acquisition earnings and reserves in associates and joint ventures	248
Perpetual subordinated notes	1,075
General reserve for impairment of financial assets net of attributable deferred tax asset	54
Total	**1,377**

[3] Under Basel II, 'General reserve for impairment of financial assets net of attributable deferred tax asset' consists of the surplus of the general reserve for impairment of financial assets net of tax and/or the provisions attributable to the standardised portfolio.

Hybrid Tier 1 Capital Instruments

The Group has on issue two outstanding non-innovative Residual Tier 1 Capital instruments:

- **ANZ Convertible Preference Shares**. On 30 September 2008 ANZ raised AUD1,081m of convertible preference shares which will mandatorily convert into ordinary shares on 16 June 2014, subject to certain conditions being satisfied. They may convert earlier under certain circumstances. The distributions are preferred, non-cumulative, based on the quarterly Bank Bill Rate subject to Directors resolving to pay in their absolute discretion and other payment tests being satisfied. In a winding-up of ANZ, the instrument will rank equal with other preference shares, but behind all depositors and creditors and ahead of ordinary shareholders.
- **UK Stapled Securities**. On 15 June 2007 ANZ raised GBP450m of non-cumulative mandatory convertible stapled securities. On 15 June 2012, or an earlier date under certain circumstances, the UK Stapled Securities will mandatorily convert into ordinary shares. The distributions are non-cumulative at a fixed rate of 6.54% payable semi-annually. In a winding-up the ANZ preference shares forming part of the ANZ Stapled Securities will rank equal with other preference shares, but behind all depositors and creditors and ahead of ordinary shareholders.

The Group has on issue three innovative Tier 1 Capital instruments:

- **US Trust Securities**. On 27 November 2003, ANZ raised USD1,100m of loan capital in two tranches of USD350m with an initial call date of 15 January 2010 at a coupon rate of 4.48%, and USD750m with an initial call date of 15 December 2015 and a coupon rate of 5.36%. On these dates ANZ has the discretion to redeem the US Trust Securities for cash, subject to APRA approval. If it does not exercise this discretion, the investor is entitled to require ANZ to exchange the US Trust Securities into ordinary shares. The distributions are non-cumulative payable half yearly in arrears. In a winding-up of ANZ the ANZ preference shares forming part of the US Trust Securities will rank equal with other preference shares, but behind all depositors and creditors and ahead of ordinary shareholders.
- **Convertible Notes**. On 26 September 2008, ANZ raised AUD600m of perpetual, subordinated, unsecured, interest bearing convertible notes. The convertible notes are convertible into ordinary shares on 26 September 2009 at the holder's option and on each third interest payment date thereafter. ANZ has call rights for face value on various dates including each interest payment date on or after 26 December 2008 subject to APRA approval. Distributions are non-cumulative, payable monthly in arrears based on the 30 day bank bill rate plus 200 basis points. In a winding-up of ANZ the instrument will rank equal with preference shares, but behind all depositors and creditors and ahead of ordinary shareholders.
- **Euro Trust Securities**. On 24 September 2004, ANZ issued EUR500m of preference share raising AUD871m, at the spot rate on the date of issue. Distributions are non-cumulative payable quarterly in arrears based upon the three month EURIBOR rate plus a margin of 66 basis points up until 15 December 2014, at which date ANZ has a call right for cash (subject to APRA approval). After this date, the distribution rate is a rate is based on the three month EURIBOR rate plus a margin of 166 basis points. In a winding-up of ANZ the ANZ preference shares forming part of the Euro Trust securities will rank equal with other preference shares, but behind all depositors and creditors and ahead of ordinary shareholders.

For more information on these instruments please refer to the Loan Capital and Share Capital notes (Notes 27 and 28 respectively) in the 2008 ANZ Annual Report.

Upper Tier 2 Capital Instruments

Upper Tier 2 capital instruments comprise perpetual subordinated notes. The ANZ Group has two instruments that qualify as Upper Tier 2 capital which are a USD300m instrument issued by ANZ on 30 October 1986 which pays a rate of LIBOR plus 15 basis points and a NZD835m instrument issued by ANZ National Bank Limited on 17 April 2008 which pays a fixed rate of 9.66% for five years payable semi-annually in arrears. At the first call date of 18 April 2013 the interest rate resets to the five year swap rate plus 200 basis points.

Lower Tier 2 Capital Instruments

Lower Tier 2 capital instruments include subordinated notes which have a fixed term. To qualify as lower Tier 2 capital the instrument must have a minimum term of five years and the amount eligible for inclusion in capital is amortised on a straight line basis at a rate of 20% per annum over the last four years to maturity.

For more details on these Tier 2 capital instruments, please refer to the Subordinated Notes section (Note 27) of the Loan Capital section within the 2008 ANZ Annual Report.

Capital Adequacy

ANZ is required to hold capital to ensure that it can support its current and forecast growth rates, and survive unexpected losses (to a given confidence level). The process to establish how much capital is required is referred to as capital adequacy. From a regulatory capital perspective, the cornerstone of this process is the 'risk weighting' of the Group's assets and the requirement to hold capital as a minimum percentage of the total RWA.

As described in the Introduction, the Basel II Pillar 1 rules for calculating RWA (APS 112, 113, 115-117) are the starting point for regulatory capital adequacy, as banks must then take a broader perspective of the range of risks and the range of likely growth/stress scenarios they face.

ANZ's ICAAP conforms with the Basel II Pillar 2 capital adequacy regime, and in particular the capital adequacy planning process. It aligns capital levels and targets to risk appetite and outlines processes by which the Group identifies, measures, monitors and manages risks, thereby ensuring that the Group's capitalisation is appropriate.

Capital Planning and Targets

Annually, ANZ conducts a detailed strategic planning process over a three-year time horizon, the outcome of which is embodied in the Strategic Plan. This process involves ANZ Economics forecasting key economic growth rates which ANZ Divisions use to determine key financial data for their existing business. New strategic initiatives to be undertaken over the planning period and their financial impact are then determined. These processes are used to:

- Review capital ratios, targets and levels against the Group's risk profile and appetite outlined in the Strategic Plan. The Group's capital targets reflect such factors as APRA's minimum PCRs, maintenance of ANZ's preferred credit rating and the desire to ensure that under stressed economic scenarios that capital levels are sufficient to remain above both Economic Capital and PCR requirements;
- Perform stress-tests of those outcomes under different economic conditions and reassess the Group's capital position both before and after mitigating actions;
- Identify the level of capital generated organically and hence determine current and future capital requirements for the Group (Level 2) and the Extended Licensed Entity (ELE[4]) (Level 1); and
- Identify strategies to maintain capital flexibility to fund unplanned events.

From this process, a Capital Plan is developed which identifies the capital issuance and maturity profile, options around capital products, timing, markets and strategies under differing market and economic conditions to raise the required capital and contingent capital options.

The Capital Plan is maintained and updated through a monthly review of forecast financial performance, economic conditions and development of business initiatives and strategies.

Under a Basel II regulatory capital regime, movements in counterparty creditworthiness result in increased volatility of a bank's RWA compared to the previous Basel I regulatory capital regime. For example, the downgrading of a bank's borrowers to reflect an underlying weakening in credit worthiness will result in an increase in a bank's RWA and capital requirements. At the same time, a bank's capital base may be reduced through loan losses. This has led to the observation that Basel II is 'pro-cyclical'.

Accordingly, under Basel II, a bank's capital position should be expected to exhibit greater volatility compared to Basel I rules. As noted above, ANZ conducts stress tests to determine the level of additional capital (the 'capital buffer' above Pillar 1 minimum capital) needed to absorb losses experienced during an economic downturn.

Target ratios are set to be consistent with the Group's risk appetite and Economic Capital methodology, plus an allowance for the impact of stress testing on the capital position. The approach was developed to ensure capital requirements are manageable and consistent with credit ratings and minimum requirements - even in periods of stress.

APRA has established a regulatory capital floor for AIRB and AMA banks[5] during a transition period starting from the commencement of the AIRB and AMA on 1 January 2008. The regulatory capital floor calculation involves the calculation of RWA and gross capital under both Basel I and Basel II rules. Reductions in capital may be available, provided that a bank maintains its prudential capital ratio, subject to a floor of 90% of the transitional regulatory floor calculation. APRA has not announced an end date for the transition period.

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[4] The Extended Licensed Entity (ELE) comprises the Company and any subsidiary not regulated by APRA or any equivalent overseas regulator that may be treated as an extension of ANZ itself for the purposes of measuring capital adequacy and exposures to related entities. To be included in the ELE, the subsidiary must meet the criteria detailed APS 110 and the inclusion must be approved in writing by APRA.

[5] Refer to Chapter 5 for an explanation of AIRB and Chapter 6 for an explanation of AMA.

The following table summarises the risk weighted assets by major risk class.

Figure 2: Capital Adequacy[6] [7] [8]

	Risk Weighted Assets $m
Subject to Advanced IRB approach	
Corporate	127,365
Sovereign	2,079
Bank	12,624
Residential Mortgage	33,727
Qualifying revolving retail (credit cards)	8,703
Other retail	14,218
Credit risk weighted assets subject to Advanced IRB approach	**198,716**
Credit Risk Specialised lending (SL) exposures subject to slotting criteria	**30,250**
Subject to Standardised approach	
Corporate	13,348
Sovereign	0
Bank	21
Residential Mortgage	344
Credit risk weighted assets subject to standardised approach	**13,713**
Credit risk weighted assets relating to securitisation exposures	4,271
Credit risk weighted assets relating to equity exposures	1,146
Other assets	2,654
Total credit risk weighted assets	**250,750**
Market risk weighted assets	2,609
Operational risk weighted assets	18,017
Interest rate risk weighted assets in the banking book	4,058
TOTAL RISK WEIGHTED ASSETS	**275,434**
Capital ratios (%)	
Level 2 Total capital ratio	**11.1%**
Level 2 Tier 1 capital ratio	**7.7%**
Level 1: Australia and New Zealand Banking Group Limited extended licensed entity Total capital ratio	**11.6%**
Level 1: Australia and New Zealand Banking Group Limited extended licensed entity Tier 1 capital ratio	**8.4%**
Other significant ADI or overseas bank subsidiary: ANZ National Bank Limited Group Total capital ratio	**11.6%**
Other significant ADI or overseas bank subsidiary: ANZ National Bank Limited Group Tier 1 capital ratio	**8.1%**

[6] Other assets category is in line with the definition of other assets per APS 113 attachment E paragraphs 5, 9, 10 & 13.

[7] The risk weighted assets disclosed in this table for the AIRB approach include the regulatory scalar factor of 1.06. The scalar factor was introduced by the Basel Committee as a means to retain the pre-Basel II level of regulatory capital in the global banking system.

[8] Standardised exposures to all private sector counterparties (other than banks and residential mortgages) have been classified in the 'Corporate' category as they do not meet the requirements for other AIRB asset classes. The main categories of the exposures are Business Lending, Margin Lending and Other Personal Lending.

In relation to the Basel asset classes outlined above, the following table details the types of exposures in each asset class.

Basel Asset Class	Typical Types of Exposure
Corporate	Individually rated and managed exposures not covered under other categories - mainly lending and off-balance sheet facilities provided to larger companies, partnerships and other bodies
Sovereign	Exposures to sovereigns and central banks. Includes direct exposures e.g. bond holdings and indirect e.g. exposures guaranteed by sovereign Export Credit Agencies ("ECAs")
Bank	Exposures to non-Group bank counterparties. Includes bond holdings and deposits with other banks, trade finance exposures and guarantees provided by other banks
Residential Mortgage	Retail exposures secured by residential properties - mainly home loans, investment loans & equity manager facilities
Qualifying Revolving Retail	Retail managed consumer credit card exposures with customer limits less than $100k
Other Retail	Retail managed exposures other than mortgage and qualifying revolving - includes personal loans, consumer and small business leasing, retail small business lending
Specialised Lending subject to slotting approach	Exposures where the main servicing and repayment is from the asset being financed. Includes specified commercial property development/investment lending, project finance and object finance
Standardised	Lending exposures where IRB models cannot be applied - mainly local business lending and personal lending in Asia and the Pacific
Securitisation	Exposures to securitisation vehicles - mainly liquidity and funding facilities provided to third party securitisations and securitisation bond exposures
Equity	Holdings of third party equities where not consolidated or deducted from capital
Other Assets	Mainly fixed assets

International Comparisons

One of the main purposes of the Pillar 3 disclosures is to facilitate comparisons of banks, both within and across jurisdictions.

International investors should be aware that there are a number of features of APRA's implementation of Basel II that have the effect of making key capital adequacy ratios appear lower than would be the case if they were calculated under the rules in other jurisdictions. The following table shows ANZ's estimation of its Tier 1 and Core Tier 1 capital adequacy ratios under British rules (set by the Financial Services Authority (FSA) and under Canadian rules (set by the Office of the Superintendent of Financial Institutions (OSFI))[9]:

	ANZ under APRA rules	ANZ under FSA rules	ANZ under OSFI rules	Actual average for Canadian AA banks
Tier 1	7.7%	~10.0%	~10.7%	9.7%
Core Tier 1	5.9%	~8.0%	~8.7%	7.4%

The results for Canadian AA banks have been included to provide some perspective, as AA rated banks would be assumed to have similar capital levels in order to retain their ratings.

For capital, the major reasons for the differences are that FSA and OSFI:

- Do not require a deduction for accrued dividends (although APRA does give credit for expected shares to be issued under a dividend reinvestment plan);
- Do not require a Tier 1 deduction for certain capitalised expenses and deferred tax assets;
- Allow the comparison of expected loss to eligible provisions to be made on a gross basis before considering any tax effect, whereas APRA require general reserves for credit losses (net of tax) to be compared with expected loss; and
- Have a more favourable treatment for investments in associates (which would include ING joint ventures), and insurance and funds management subsidiaries.

For RWA, the major reasons for the differences are:

- APRA has set a 20% floor on the downturn LGD for mortgages (as compared with the 10% minimum set by the FSA and OSFI);
- FSA and OSFI do not require Interest Rate Risk (IRR) in the Banking Book (IRRBB) to be a Pillar I requirement (so it is excluded from regulatory capital adequacy ratios); and
- Differences in the treatment of specialised property lending, equity and margin lending products.

The Australian Bankers' Association has released a detailed fact sheet[10] documenting the differences between the Australian and British rules and the implications for regulatory capital ratios.

[9] These estimates have been developed to incorporate the major differences, and have been developed with input from Ernst & Young.

[10] www.bankers.asn.au

Chapter 4. Risk Management Governance in ANZ

Risk Management Committees

The ANZ Board has two Board sub-committees that supervise risk management within ANZ.

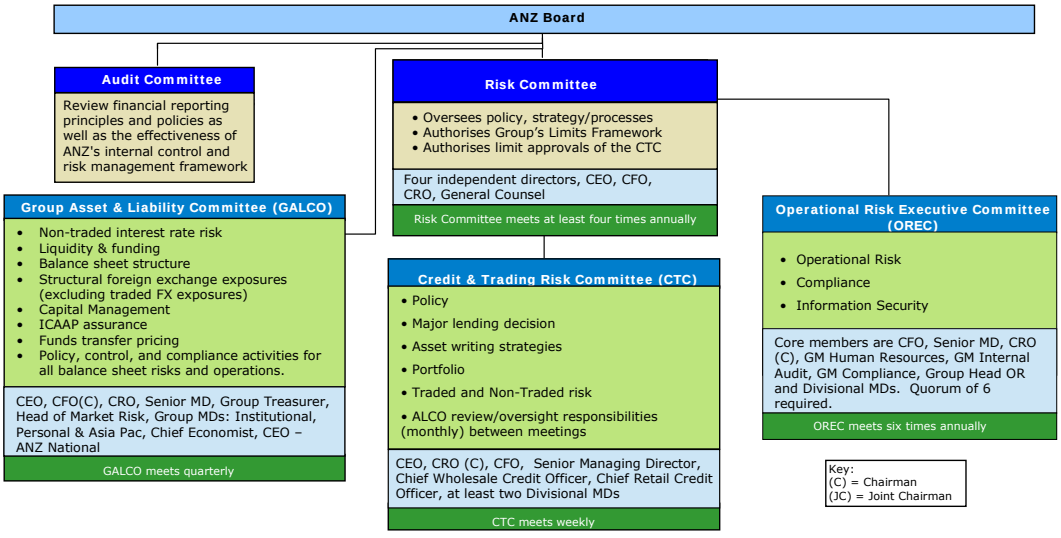
- The Risk Committee – The purpose of the Risk Committee is to assist the Board of Directors in the effective discharge of the Board's responsibilities for business, market, credit, equity and other investment, financial, operational, liquidity and reputational risk management and for the management of the Group's compliance obligations; and
- The Audit Committee – In addition to its role reviewing financial reporting principles and policies, controls and procedures, the Audit Committee also reviews the effectiveness of ANZ's internal control and risk management framework.

Executive management committees provide the means by which the Risk Committee is able to fulfil its responsibilities and are responsible for co-ordination of risk matters for each of the areas of risk management. These executive management committees and their main functions are:

- The Group Asset and Liability Committee (GALCO) – is responsible for coordinating risk matters relating to balance sheet risk within global policies and limits established by the Risk Committee. The role of GALCO is to direct and coordinate balance sheet management globally. GALCO is supported by a specialist committee that covers capital requirements, and regional asset and liability management committees;
- The Operational Risk Executive Committee (OREC) – is the primary senior executive management forum responsible for oversight of operational risk. OREC's role is to approve the Operational Risk Framework and risk mitigation associated with operational risk events, monitor the state of operational risk management and approve ANZ's approach to emerging operational risks; and
- The Credit and Trading Risk Committee (CTC) – is the senior executive management forum responsible for the oversight and control of credit and trading risk and, as a delegation from GALCO, non-traded risk. For risk grading governance, the CTC is supported by two other executive committees to supervise and approve risk grading methodology – one for Wholesale and one for Retail. They receive reports demonstrating the accuracy and reliability of the risk grading system, set performance standards and if necessary, recommend any remediation activities.

The Audit Committee is supported by Internal Audit, whose role is to provide independent and objective assurance around ANZ's operations. Internal Audit's primary reporting line is to the Audit Committee.

The structure of the above committees is depicted in the following diagram:



Risk Management Functions

ANZ's risk management is viewed as a core competency of the organisation and to ensure that risks are identified, assessed and managed in an accurate and timely manner, ANZ has:

- An independent risk management function, with both central functions (which typically cover such functions as risk measurement, reporting and portfolio management), together with embedded risk managers within the businesses; and
- Developed frameworks to provide structured and disciplined processes for managing key risks. These frameworks include articulation of the appetite for these risks, portfolio direction, policies, structures, limits and discretions.

Chapter 5. Credit Risk Management

Definition of Credit Risk

Within ANZ, credit risk is defined as the risk of financial loss resulting from the failure of the Group's customers to honour or perform fully the terms of a loan or contract.

Regulatory Approval to use the Advanced Internal Ratings-Based Approach

ANZ has been given approval by APRA to use the Advanced Internal Ratings-Based approach (AIRB) to credit risk, under APS 113 Capital Adequacy: Advanced Internal Ratings-Based Approach to Credit Risk.

There are several small portfolios where ANZ applies the standardised approach to credit risk, under APS 112 Capital Adequacy: Standardised Approach to Credit Risk.

Credit Risk Appetite

The credit risk appetite for ANZ has been set as 'Medium'. This means risk concentrations must be mitigated by having a diversified portfolio, and the Group must focus on the risk/reward trade off that underpins credit risk.

Credit Risk Management Framework

As described in Chapter 4, ANZ has developed a comprehensive framework to manage credit risk.

The framework is supported by a comprehensive policy library, covering all aspects of the credit life cycle (such as transaction structuring, risk grading, initial approval, ongoing management and problem debt management). The policy library also includes specialist policy topics. The policy library is structured to support ANZ's lending businesses.

Credit Risk Organisation

As described in the preceding chapter, the CTC is the Group's most senior executive level credit risk committee. It provides the ongoing monitoring of the link between the risk appetite and the asset writing strategies, portfolio reviews, identification, monitoring and measurement of current and emerging risks and risk controls (such as portfolio caps, risk triggers, high level credit policies and single customer concentration tolerance).

An independent risk management function, at Group, divisional and business unit levels, is staffed by risk specialists. The primary responsibility for prudent and profitable management of credit risk assets and customer relationships rests with the business units. In addition to providing independent credit assessment on lending decisions, Risk Management also performs key roles in portfolio management by development and validation of credit risk measurement systems, loan asset quality reporting, and development of credit standards and policies.

The authority to make credit decisions is delegated by the Board through the Board Risk Committee to the CTC and executive management. The CTC in turn delegates some of its credit discretion to individuals as part of a 'cascade' of authority from senior to the most junior credit officers. Within ANZ, credit approval for almost all non-retail lending is made on a 'dual approval' basis, jointly by the business writer in the Business Unit and the respective independent credit risk officer. For retail lending, highly automated risk assessment processes mean that sole credit discretions are the norm, with assessors reviewing the output of decision tools. Individuals must complete appropriate training in order to be granted a credit discretion.

Portfolio Direction and Performance

The credit risk management framework contains several important portfolio direction and performance tools which enable Risk Management to play a fundamental role in monitoring the direction and performance of the portfolio. These include:

- Asset writing strategies that are prepared by the businesses and set out planned portfolio growth, capital usage and risk/return profile, and also identify areas that require attention to mitigate and improve risk management;
- Regular portfolio reviews; and
- Exposure concentration limits, covering single customers, industries and cross border risk, to ensure a diversified portfolio.

In supporting portfolio monitoring and analysis, ANZ uses tools, technologies and techniques to assist with portfolio risk assessment and management. These help to:

- Monitor, analyse and report the Group's credit risk profile and progress in meeting portfolio objectives;
- Calculate and report the Group's Collective Provision, Economic Capital, Expected Loss, regulatory RWA and regulatory Expected Loss;
- Develop and maintain the Group's credit risk measurement and policy framework; and
- Validate rating/scoring tools and credit estimates.

Risk Reporting

Management information systems (MIS), reporting and analysis for credit risk are managed centrally and at the Business Unit level.

Periodic reporting provides confirmation of the effectiveness of processes, highlights emerging issues requiring attention and allows monitoring of portfolio trends by Business Units, Divisions, Group and the Board.

Examples of reports include risk grade profiles, credit rating migrations, large exposure reporting and credit watch and control lists. Within the Retail segments, monthly reporting packs are prepared that focus on such aspects as scoring and delinquency/slippage monitoring.

General Credit Disclosures

The following tables disclose the gross credit exposure broken down by geography, industry and residual contractual maturity. Basel asset class is a combination of standardised and IRB approaches. Securitisation, other assets and equity are excluded.

Figure 3: Regulatory Credit Exposure

Basel Asset Class	Regulatory credit exposure $m
Corporate	239,996
Sovereign	9,350
Bank	50,827
Residential Mortgage	187,263
Qualifying revolving retail (credit cards)	23,458
Other retail	26,708
Total exposures	**537,602**

Figure 4: Geographic Distribution of Regulatory Credit Exposure

Basel Asset Class	Australia $m	New Zealand $m	Other $m	Total $m
Corporate	149,489	53,498	37,009	**239,996**
Sovereign	2,440	3,678	3,232	**9,350**
Bank	20,425	5,091	25,311	**50,827**
Residential Mortgage	140,769	45,569	925	**187,263**
Qualifying revolving retail (credit cards)	19,106	4,352	0	**23,458**
Other retail	21,844	4,864	0	**26,708**
Total exposures	**354,073**	**117,052**	**66,477**	**537,602**

Figure 5: Residual Contractual Maturity Breakdown of Regulatory Credit Exposure[11]

Basel Asset Class	<= 12 mths $m	1 to 5 years $m	More than 5 years $m	No Maturity Specified $m	Total $m
Corporate	107,831	102,874	26,517	2,774	**239,996**
Sovereign	6,968	1,557	825	0	**9,350**
Bank	37,230	11,650	1,929	18	**50,827**
Residential Mortgage	2,103	4,655	155,795	24,710	**187,263**
Qualifying revolving retail (credit cards)	0	0	0	23,458	**23,458**
Other retail	6,830	13,498	6,232	148	**26,708**
Total exposures	**160,962**	**134,234**	**191,298**	**51,108**	**537,602**

Figure 6: Industry Distribution of Regulatory Credit Exposure

Basel Asset Class	Agriculture, Forestry, Fishing & Mining $m	Business Services $m	Construction $m	Entertainment, Leisure & Tourism $m	Financial, Investment & Insurance $m
Corporate	37,939	9,392	5,879	9,978	28,894
Sovereign	0	0	0	0	6,101
Bank	0	4	0	99	50,082
Residential Mortgage	0	0	0	0	0
Qualifying revolving retail (credit cards)	0	0	0	0	0
Other retail	2,257	1,548	2,268	758	277
Total exposures	**40,196**	**10,944**	**8,147**	**10,835**	**85,354**

Basel Asset Class	Government and Official Institutions $m	Manufacturing $m	Personal $m	Property Services $m	Wholesale Trade $m
Corporate	5,563	29,621	8,452	41,805	19,604
Sovereign	2,819	161	0	10	46
Bank	0	11	22	6	44
Residential Mortgage	0	0	187,263	0	0
Qualifying revolving retail (credit cards)	0	0	23,458	0	0
Other retail	14	832	12,250	923	622
Total exposures	**8,396**	**30,625**	**231,445**	**42,744**	**20,316**

Basel Asset Class	Retail Trade $m	Transport & Storage $m	Other $m	Total $m
Corporate	13,336	9,739	19,794	**239,996**
Sovereign	0	0	213	**9,350**
Bank	0	41	518	**50,827**
Residential Mortgage	0	0	0	**187,263**
Qualifying revolving retail (credit cards)	0	0	0	**23,458**
Other retail	2,029	1,007	1,923	**26,708**
Total exposures	**15,365**	**10,787**	**22,448**	**537,602**

[11] No Maturity Specified predominately includes credit cards, margin lending and residential mortgage equity manager accounts.

Past Due and Impaired Assets

Past Due Loans

Exposures that are deemed past due are those where a contractual payment arrangement has not been met or the customer is outside of contractual arrangements. Typically, past due items include facilities operating in excess of approved arrangements or loans where scheduled repayments are outstanding. Exposures that are 90 days or more past due can be defined as either portfolio managed or individually managed. Portfolio managed are typically unsecured credit card and personal loan facilities which are allowed to be retained on an accrual basis for up to 180 days past due. The remainder of 90 day past due accounts are held on an accrual basis having been assessed as well secured. Facilities that are 90 days past due and are neither portfolio managed or well secured, are treated and recorded as impaired.

Impaired Assets and Individual Provisions

Irrespective of whether a facility is 90 days past due, individually managed facilities are classified as impaired when there is doubt as to whether the contractual amounts due, including interest and other payments, will be met in a timely manner. Individual provisions are assessed for all individually managed impaired assets on a case-by-case basis taking into consideration factors such as the realisable value of security (or other credit mitigants), the likely return available upon liquidation or bankruptcy, legal uncertainties, estimated costs involved in recovery, the market price of the exposure in secondary markets and the amount and timing of expected receipts and recoveries.

When a loan is uncollectible, either partially or in full, it is written-off against the related provision for impairment. Portfolio facilities are normally written-off when they become 180 days past due or earlier in the event of the customer's bankruptcy or similar legal release from the obligation. A certain level of recoveries is expected after write-off, which is reflected in the amount of the provision for credit losses. In the case of secured facilities, remaining balances are typically written-off after proceeds from the realisation of collateral have been received if there is a shortfall.

Where individual provisions recognised in previous periods have subsequently decreased or no longer exist, such impairment losses are reversed in the current income statement.

Collective Provisions

As well as holding individual provisions for credit loss, the Group also holds a collective provision to cover credit losses which have been incurred but have not yet been specifically identified.

Exposures that are assessed collectively are placed in pools of similar assets with similar risk characteristics. The required provision is estimated on the basis of historical loss experience for assets with credit risk characteristics similar to those in the collective pool. The historical loss experience is adjusted based on current observable data such as changed economic conditions. The provision also takes account of the impact of inherent risk of large concentrated losses within the portfolio.

ANZ's collective provisioning methodology is predominantly based around the product of an exposure's Probability of Default (PD) multiplied by Loss Given Default (LGD) multiplied by Exposure at Default (EAD) [12]. ANZ uses slightly different PD, LGD and EAD factors in the calculation of regulatory capital and expected loss (EL), due to the different requirements of APRA and accounting standards. The key differences are:

- ANZ must use more conservative LGD assumptions for regulatory capital purposes, such as the 20% LGD floor for retail mortgages and 'downturn' LGD factors; and
- ANZ must use 'cycle adjusted' PDs for regulatory capital purposes, but uses 'point in time' estimates to calculate provisions.

In simple terms, these differences reflect the effects of the credit cycle on credit losses. 'Point in time' refers to losses at any given point in the credit cycle, 'cycle adjusted' refers to adjusting estimates to reflect a full credit cycle and 'downturn' refers to losses at the worst of the cycle and is the most conservative estimate to use. Regardless of the adjustments, the starting point for all estimates is the output of the rating/scoring models and tools to satisfy the 'in use' test[13].

APRA has agreed that ANZ's Collective Provision is equal to the General Reserve for Credit Losses.

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[12] PD, LGD and EAD are explained in the following section.

[13] One of the key criteria for regulatory acceptance of a rating model is that the outputs must be used in a wide range of ongoing management activities, to demonstrate that the model is used in day to day management of exposures and not just for regulatory capital calculation.

Impairment Disclosures[14] [15]

The following tables disclose the past due and impaired assets broken down by industry and geography, in addition to a reconciliation of changes in the provisions for credit impairment.

Figure 7: Impaired Assets and Past Due Loans by Geography

Geographic Region	Impaired asssets $m	Past due loans ≥ 90 days $m	Individual provision balance $m	General reserve for credit losses $m
Australia	2,224	776	516	2,149
New Zealand	279	259	111	447
Other	170	25	48	225
Total	**2,673**	**1,060**	**675**	**2,821**

Figure 8: Impaired Assets and Past Due Loans by Industry[16]

Industry Sector	Impaired assets $m	Past due loans ≥ 90 days $m	Individual provision balance $m	Charges for individual provision $m	Write-offs $m
Agriculture, forestry, fishing & mining	121	39	50	55	20
Business Services	56	23	42	71	36
Construction	32	13	12	12	6
Entertainment Leisure & Tourism	30	20	18	15	6
Financial, Investment & Insurance	601	104	146	189	53
Government & Official Institutions	0	0	0	0	0
Manufacturing	161	19	67	44	44
Personal	230	458	127	349	367
Property Services	887	73	15	18	4
Retail Trade	37	30	20	7	9
Transport & Storage	54	7	24	33	19
Wholesale Trade	181	231	64	124	92
Other	283	43	90	115	43
Total	**2,673**	**1,060**	**675**	**1,032**	**699**

Figure 9: Reconciliation of Changes in Provisions for Credit Impairment

General Reserve for Credit Losses	$m
Balance at start of period	1,992
Total charge against profit and loss	818
Adjustments for exchange rate fluctuations and other	11
Total General Reserve for Credit Losses	**2,821**
Individual Provisions	
Balance at start of period	270
Net transfer from general reserve for credit losses	0
Total charge against profit and loss	1,032
Adjustments for exchange rate fluctuations	0
Discount Unwind	(28)
Write-offs	(699)
Recoveries	100
Total Individual Provision	**675**
Total Provisions	**3,496**

[14] General Reserve for Credit Losses is equivalent to Collective Provision.

[15] Past due loans larger than 90 days is made up of $945 million well secured loans.

[16] Impaired assets includes restructured items for customer facilities which for reason of financial difficulty have been re-negotiated on terms which the Bank considers as uncommercial but necessary in the circumstances, and are not considered non-performing. Includes both on and off balance sheet exposures.

Figure 10: Actual Losses During Reporting Period[17]

Basel Asset Class	Regulatory Expected Loss Estimate $m	Charges for individual provision $m	Write-offs $m
Corporate	1,097	480	160
Specialised Lending	590	0	0
Sovereign	10	0	0
Bank	91	45	6
Residential Mortgage	391	40	45
Qualifying revolving retail (credit cards)	363	219	270
Other retail	510	214	189
Total excluding standardised	**3,052**	**998**	**670**
Standardised	0	34	29
TOTAL	**3,052**	**1,032**	**699**

Regulatory Expected Loss adjustment to Capital	$m
Total Eligible Provisions	
Collective Provision Component	1,919
Other Eligible Provisions	799
less	
Regulatory Expected Loss Estimate	3,052
Net Surplus / (Deficit) applied to Capital (50/50 tier 1 / Tier 2)	**(334)**

[17] The Collective Provision Component comprises the Collective Provision balance $1,973 (net of tax), less the amount relating to Standardised exposures of $54 million (after tax).

Credit Risk (Advanced Internal Ratings-Based Approach)

Portfolios Subject to the AIRB Approach

The following table summarises the coverage of ANZ's AIRB portfolios:

IRB Asset Class	Borrower type	Rating Approach
Sovereign	Central governments Central banks Certain multilateral banks	AIRB
Bank	Banks[18] In Australia only, other authorised deposit taking institutions (ADI) incorporated in Australia	AIRB
Corporate	Corporations, partnerships or proprietorships that do not fit into any other asset class	AIRB
Specialised Lending	Income Producing Real Estate Project Finance Object Finance	AIRB - Slotting[19]
Residential Mortgages	Exposures secured by residential property	AIRB
Qualifying Revolving Retail	Consumer credit cards <$100k limit	AIRB
Other Retail	Small business lending Other lending to consumers	AIRB
Equity		AIRB – fixed risk weights
Other assets	All other assets not falling into the above classes e.g. margin lending, fixed assets etc	AIRB – fixed risk weights

In addition, ANZ has applied the standardised approach to some portfolio segments where currently available data does not enable development of advanced internal models for PD, LGD and EAD estimates. This is usually because the individual segments are small in volume e.g. new products, so that default and loss events are scarce and distinctive in nature and existing IRB models cannot be applied. ANZ applies its full normal risk measurement and management framework to these segments however the credit rating tools may not have received AIRB approval. Where possible, standardised segments will be migrated to AIRB.

Standardised segments make up approximately 2.5% of the Group's EAD and approximately 5% of RWA. The material standardised segments are Retail/Local corporate in Asia-Pacific. This segment is standardised due to data volume constraints for credit rating model validation.

ANZ has not applied the foundation IRB approach to any portfolios.

The ANZ Rating System

As an AIRB bank, ANZ's internal models generate the inputs into regulatory capital adequacy (to determine the risk weighted exposure calculations for both on and off-balance sheet exposures, including undrawn portions of credit facilities, committed and contingent exposures) and expected loss calculations. The Group's internal models are used to generate the three key risk components that serve as inputs to the IRB approach to credit risk, namely:

- PD;
- EAD; and
- LGD

Effective maturity is also calculated as an input to the risk weighted exposure calculation for bank, sovereign and corporate Basel asset classes.

[18] Excludes investment banks.

[19] Under 'slotting', ANZ uses its internal models to generate a PD, which is mapped to conservative regulatory risk weights used to calculate RWA for these exposures. The specific capital functions for slotted assets are used for regulatory capital calculation purposes.

PD is an estimate of the level of the risk of borrower default. Borrower ratings are derived by way of rating models used both at loan origination and for ongoing monitoring.

LGD is an estimate of the potential economic loss on a credit exposure, incurred as a consequence of obligor default and expressed as a percentage of the facility's EAD. When measuring economic loss, all relevant factors are taken into account, including material discount effects and material direct and indirect costs associated with collecting on the exposure, including realisation of collateral.

EAD is defined as the expected facility exposure at the date of default.

ANZ's rating system has two separate and distinct dimensions that:

1. Measure the PD, which is expressed by the Customer Credit Rating (CCR), reflecting the ability to service and repay debt; and
2. Measure the LGD as expressed by the Security Indicator (SI) ranging from A to G. The SI is calculated by reference to the 'percentage of loan covered' by tangible security which the Bank can realise in the event of default. This calculation uses standard ratios to adjust the current market value of collateral items to allow for historical realisation outcomes. Besides the tangible security-related SIs, there is a range of specialised SIs also available, covering such factors as cash cover, mezzanine finance, intra-Group guarantees and sovereign backing as ANZ's LGD research indicates that these transaction characteristics have different recovery outcomes.

ANZ's corporate PD masterscale is made up of 27 rating grades. Each level/grade is separately defined and has a range of default probabilities attached to it. The PD masterscale enables ANZ's rating system to be mapped to the gradings of external rating agencies, using the PD as a common element after ensuring that default definitions and other key attributes are aligned. The following table demonstrates this alignment:

ANZ CCR	Moody's	Standard & Poor's	PD Range
0+ to 1-	Aaa to <Aa3	AAA to <A+	0.00-0.03%
2+ to 3+	A1 to <Baa2	A+ to <BBB	0.03-0.16%
3= to 4=	Baa2 to < Ba1	BBB to <BB+	0.16-0.51%
4- to 6-	Ba1 to <B1	BB+ to <B+	0.51-3.49%
7+ to 8+	B1 to <Caa	B+ to <CCC	3.49-10.09%
8=	Caa	CCC	10.09-99.99%
8-, 9 and 10	Default	Default	100%

In the retail asset classes, most facilities utilise credit rating 'scores'. The scores are calibrated to PD, so the PD masterscale gives ANZ a common language to understand and discuss credit risk. For retail asset class exposures, the LGD dimension is recognised through the process of pooling retail exposures into homogenous groups.

ANZ also uses two specialised PD masterscales for the mapping of sovereign and bank PDs to external rating agency ratings.

Use of Internal Estimates Other Than For Regulatory Capital Purposes

ANZ's rating system is a fundamental part of credit management and plays a key role in:

- Lending discretions;
- Minimum origination standards;
- Concentration limits;
- Portfolio reporting;
- Customer profitability measurement;
- Collective provision measurement;
- Management of deteriorating customers (where certain CCR/SI combinations trigger increasing scrutiny); and
- Pricing decisions.

PD/LGD/EAD are used in the calculation of economic capital and in the collective provisioning process. However, there are some differences between the factors used for regulatory and economic capital processes despite being calculated from the same data sources and starting from the same basis. This is because for regulatory capital purposes, several aspects of ANZ's rating system are adjusted in accordance with APRA requirements. The most material of these are the use for regulatory capital purposes of downturn LGDs, the imposition of a 20% LGD for exposures secured by Australian residential real estate and the mandatory use of

the supervisory slotting approach for project finance and most commercial real estate exposures. These all have the effect of increasing regulatory capital to reflect APRA imposed requirements.

Controls Surrounding the Ratings System

All material aspects of the rating system and credit risk estimates are governed by the Board's Risk Committee and the CTC. These committees receive reporting on the operation of the rating system. Risk grades are an integral part of reporting to the Board and executives.

ANZ's rating systems are governed by a comprehensive framework of controls that operate at the business unit and back-office levels, and through central audit and validation processes.

All policies, model designs, model reviews, methodologies, validations, responsibilities, systems and processes supporting the ratings systems are documented.

Credit risk models are subjected to regular monitoring by the relevant business and validated on an annual basis by a specialist Group-level function that is independent of the business units. This unit is responsible for overseeing the design, implementation and performance of all credit risk rating models in the Group.

Rating Process by Asset Class

ANZ categorises the risk of customers over a wide range of market segments encompassing both Retail and Wholesale. The Retail segment comprises the traditional Credit Cards, Personal Loans, Mortgages, Asset Finance, Consumer Overdrafts, Micro/Small Business and Rural sub-segments. The Wholesale segment comprises traditional larger Business Bank customers and the Corporate and Institutional sub-segments as well as the specialised sub-segments including Project Finance.

Building reliable and accurate rating tools is a challenging process where many factors must be balanced, such as data availability (external data may be used in some circumstances, where it is relevant), the size of the segment (the larger the segment, the more likely that statistically reliable models can be built), and the need to be able to validate the model. Within ANZ, the rating tool approaches include:

- Statistical models producing a PD/LGD;
- Statistical models producing a rating;
- Hybrid statistical and expert models producing a rating; and
- Expert models/processes that produce a rating, including external rating agency replication models.

Ongoing data collection and testing processes ensure enhanced or new models are introduced regularly to improve the accuracy and reliability of rating processes.

Regardless of what credit risk rating tool is used, lending staff rating a customer are expected to review the model generated PD (or CCR) and take into account any out-of-model factors or policy overlays to decide whether or not to override the model rating. Overrides of a rating model to a better rating require dual approval with the independent credit stream. The significance of 'the model' for risk grading varies with the customer segment: models will dominate risk grading of homogenous, simple and data-rich segments such as in Retail, however for complex, specialised business segments expert knowledge and the highly customised nature of transactions will influence the rating outcome.

The following table summarises the types of internal rating approaches used in ANZ:

IRB Asset Class	Borrower type	Rating Approach
Sovereign	Central governments Central banks Certain multilateral banks	External rating and review of all relevant and material information
Bank	Banks In Australia only, other ADIs incorporated in Australia	Statistically-based external rating agency replication models Review of all relevant and material information including external ratings
Corporate	Corporations, partnerships or proprietorships that do not fit into any other asset class	Mainly statistical models Some use of expert models and policy processes
Specialised Lending[20]	Income Producing Real Estate Project Finance Object Finance	Hybrid statistical and expert model Expert models
Residential Mortgages	Exposures secured by residential property	Statistical models
Qualifying Revolving Retail	Consumer credit cards <$100k limit	Statistical models
Other Retail	Small business lending Other lending to consumers	Statistical models

For the retail asset class (residential mortgages, qualifying revolving retail and other retail exposures) the large number of relatively homogenous exposures enable the development of statistically robust application scoring models for use at origination and behavioural scoring for ongoing management. LGD is recognised through the process of pooling retail exposures into homogenous groups.

Estimation of LGD and EAD

ANZ's LGD modelling takes into account the following main factors:

- Secured recovery rates;
- Unsecured recovery rates and debt seniority;
- Geography; and
- Internal management costs.

LGD estimates have been based on several major data sources. Internal data is used as the basis for LGD estimation in the retail asset class, and is supplemented by external data for the corporate asset class. Given the scarcity of internal data for bank and sovereign asset classes, LGD modelling for these classes is primarily based on external data.

EAD is defined as the expected facility exposure at the date of default, including post-default drawings for facilities where the additional post-default drawings were legally committed to prior to default. This reflects the possibility of additional drawings by the borrower up to and after the time a default event is triggered for some product types. Uncommitted post default drawings are netted against cash recoveries and are included in the LGD estimates.

In simple terms, EAD consists of the current outstandings and accrued interest and fees, plus an adjustment factor for the undrawn component of the facility.

[20] Note that Specialised Lending exposures are rated with internal rating tools to produce a PD and LGD. These are used in internal processes, but not for regulatory capital purposes where the exposures are mapped to supervisory risk weight categories.

The following table discloses total advanced exposures by Basel asset class. Securitisation, other assets and equity are excluded.

Figure 11: Advanced IRB Regulatory Credit Exposure[21]

Advanced IRB	Regulatory Credit Exposure $m
Corporate	225,169
Sovereign	9,350
Bank	50,799
Residential Mortgage	186,287
Qualifying revolving retail (credit cards)	23,458
Other retail	26,708
Total Advanced IRB	**521,771**

The following table discloses total exposures by PD band for the non-retail portfolios subject to AIRB.

Figure 12: Credit Risk Disclosures Subject to IRB – Non Retail[21] [22]

	AAA < A+	A+ < BBB	BBB < BB+	BB+ < B+	B+ < CCC	CCC	Default
Regulatory Credit Exposure	$m	$m	$m	$m	$m	$m	$m
Corporate	17,321	39,769	58,273	73,003	3,706	2,097	1,829
Sovereign	6,892	658	2	1,768	26	0	4
Bank	43,064	3,313	2,083	1,959	244	35	101
Total	**67,277**	**43,740**	**60,358**	**76,730**	**3,976**	**2,132**	**1,934**
Undrawn commitments (inc above)							
Corporate	4,738	16,277	15,664	15,415	529	462	217
Sovereign	651	125	2	105	0	0	1
Bank	3,342	251	42	61	6	1	85
Total	**8,731**	**16,653**	**15,708**	**15,581**	**535**	**463**	**303**
Exposure average EAD							
Corporate	1.436	2.081	0.689	0.315	0.321	0.178	0.701
Sovereign	16.890	14.008	0.666	41.118	0.494	0.000	0.185
Bank	13.896	2.152	2.902	1.555	1.296	0.262	20.125
Exposure-weighted average LGD							
Corporate	62.1%	58.5%	49.4%	39.5%	40.5%	48.0%	47.7%
Sovereign	3.3%	4.3%	2.0%	58.5%	58.8%	0.0%	59.0%
Bank	62.8%	64.4%	64.8%	56.9%	55.1%	67.6%	64.2%
Exposure weighted-average risk weight							
Corporate	19.6%	37.1%	57.0%	84.3%	135.2%	227.3%	258.1%
Sovereign	0.6%	2.2%	1.6%	110.3%	168.0%	0.0%	710.9%
Bank	17.1%	27.1%	62.4%	119.7%	180.4%	328.6%	160.5%

[21] Specialised lending is included in the corporate asset class in Figure 11, but excluded from Figure 12 as it follows the regulatory slotting treatment. A specialised lending breakdown is shown in Figure 15a.

[22] Exposure average EAD is calculated as total EAD divided by the total number of credit risk generating exposures.

The following table discloses total exposures by PD band for the retail portfolios subject to AIRB.

Figure 13: Credit Risk Disclosures Subject to IRB – Retail[23]

	0.00% < 0.11%	0.11% < 0.30%	0.30% < 0.51%	0.51% < 3.49%	3.49% < 10.09%	10.09% < 100.00 %	Default
Regulatory Credit Exposure	$m	$m	$m	$m	$m	$m	$m
Residential Mortgage	1,524	110,113	25,807	38,639	5,772	3,633	799
Qualifying revolving retail (credit cards)	10,556	2,155	2,018	5,439	2,203	947	140
Other retail	1,259	2,714	1,425	15,420	4,865	634	391
Total	**13,339**	**114,982**	**29,250**	**59,498**	**12,840**	**5,214**	**1,330**
Undrawn commitments (inc above)							
Residential Mortgage	244	11,218	2,608	2,390	206	93	10
Qualifying revolving retail (credit cards)	8,368	1,837	1,392	2,789	766	126	19
Other retail	409	701	805	1,537	452	48	8
Total	**9,021**	**13,756**	**4,805**	**6,716**	**1,424**	**267**	**37**
Exposure average EAD							
Residential Mortgage	0.025	0.177	0.115	0.157	0.163	0.158	0.196
Qualifying revolving retail (credit cards)	0.010	0.010	0.008	0.007	0.007	0.006	0.006
Other retail	0.030	0.023	0.005	0.019	0.010	0.006	0.018
Exposure-weighted average LGD							
Residential Mortgage	20.0%	20.1%	21.9%	20.9%	20.6%	20.6%	21.3%
Qualifying revolving retail (credit cards)	73.9%	79.4%	74.1%	74.3%	73.7%	73.7%	73.9%
Other retail	22.4%	19.9%	35.1%	38.0%	46.1%	54.4%	51.6%
Exposure weighted-average risk weight							
Residential Mortgage	5.1%	6.9%	14.6%	30.5%	74.6%	112.0%	267.6%
Qualifying revolving retail (credit cards)	4.9%	8.4%	13.9%	39.0%	111.4%	207.1%	846.3%
Other retail	4.2%	9.1%	23.6%	51.2%	72.1%	129.3%	348.8%

[23] Exposure average EAD is calculated as total EAD divided by the total number of credit risk generating exposures.

Credit Risk Mitigation

The Main Types of Collateral Taken by ANZ

Collateral is used to mitigate credit risk, as the 'second way out' in case the counterparty cannot meet its contractual obligations of principal and interest payments[24].

Types of collateral typically accepted by ANZ include, but are not limited to:

- Real estate security over residential, commercial, industrial or rural property;
- Fixed and floating charges over business assets;
- Security over specific plant and equipment;
- Charges over listed shares, bonds or securities;
- Charges over cash deposits; and
- Guarantees and pledges.

In some cases, such as where the customer risk profile is considered very sound (or by the nature of the product, for instance small limit products such as credit cards), a transaction may not be collateralised.

Credit policy sets out the acceptable types of collateral, and also has a process by which additional instruments and/or asset types can be considered for approval.

ANZ's credit risk modelling areas use historical internal loss data and other relevant external data to help determine acceptable asset types, and the discount that these asset types would be expected to incur in a forced sale. These discounts are used to scale the value of collateral items pledged; the discounted value is used in determining the SI for LGD purposes.

Besides tangible security and guarantee support as described above, credit risk mitigation also can be furthered by prudent transaction structuring and restrictions on the term of loans. For example, in project finance, risk can be mitigated by lending covenants, loan syndication and political risk insurance.

Policies and Processes for Collateral Valuation and Management

ANZ has well established policies and processes around collateral valuation and management. The concepts of legal enforceability, certainty and accurate valuation are central to collateral management.

In order to achieve legal enforceability and certainty, ANZ has standard collateral instruments, and where possible, security interests are registered. The use of collateral management systems also provides certainty that the collateral has been properly taken, registered and stored.

In order to rely on the valuation of collateral assets, ANZ has developed comprehensive rules around acceptable types of valuations (including who may value an asset), the frequency of revaluations and standard extension ratios for typical asset types. Upon receipt of a new valuation, the information is used to recalculate the SI (or to reassess the adequacy of the provision, in the case of an impaired asset), thereby ensuring that the exposure has an updated LGD attached to it for risk quantification purposes.

Guarantee Support

Guarantee support for lending proposals are an integral component in transaction structuring for ANZ. The guarantee of a financially strong party can help improve the risk grading rating of a transaction through its explicit support of the borrower.

Guarantees that are recognised for risk grading purposes may be provided by parties that include, but are not limited to, associated entities, banks, sovereigns or individuals. Credit policy provides threshold parameters to determine acceptable entities to achieving risk grade enhancement of the transaction where guarantees are provided by other banks.

The suitability of the guarantor is determined by risk grading the guarantor and not all guarantees are recognised for risk grade enhancement purposes.

[24] Note that for some products, the collateral provided is fundamental to its structuring so is not strictly the 'second way out'. For example, lending secured by trade receivables is typically repaid by the collection of those receivables.

Use of Credit Derivatives for Risk Mitigation

Within ANZ, the use of 'bought' credit derivatives helps to mitigate credit risk by lowering exposures to reference entities that:

- Generate high concentration risk exposures; or to,
- Improve risk return performance.

Only certain credit derivatives such as 'plain vanilla' credit default swaps (CDS) are recognised for regulatory capital purposes. A CDS entails the payment by one party in exchange for credit default protection payment if a credit default event on a reference asset occurs. Standard, legally enforceable documentation applies.

In addition, ANZ only recognises protection using credit derivatives where they meet several policy hurdles around the strength of the protection offered (such as being irrevocable).

A CDS may only be transacted with bank counterparties, ANZ-related conduits and non-bank financial institutions that have been credit assessed and approved by a specific specialist credit point. All parties must meet minimum credit standards and be allocated a related credit limit.

Concentrations of Credit Risk Mitigation

Taking collateral raises a theoretical possibility that a bank may inadvertently increase its risk by becoming exposed to collateral concentrations. For example, in the same way that an over-exposure to a particular industry may mean that a bank is more sensitive to the fortunes of that industry, an over-exposure to a particular collateral asset type may make a bank more sensitive to the performance of that asset type.

ANZ does not believe that it has any material concentrations of collateral types, given the well diversified nature of its portfolio and conservative asset extension ratios.

The Use of On-balance Sheet and Off-balance Sheet Netting

Netting is a form of credit risk mitigation in that it reduces EAD, in simple terms by offsetting a customer's positive and negative balances with the Group.

In order to apply on-balance sheet netting, the arrangement must be specifically documented with the customer and meet a number of legally enforceable requirements – reliance on ANZ's common law right of set off is not sufficient to be recognised for regulatory capital purposes.

Netting is also used for the credit exposure that arises from off balance sheet market related transactions. For close-out netting to be utilised with counterparties, a legally enforceable eligible netting agreement (in an acceptable jurisdiction) must be in place. This means that each transaction is aggregated into a single net amount and transactions are netted to arrive at a single overall sum.

The following table discloses the amount of total exposure covered by eligible financial collateral or other eligible collateral for standardised exposures.

Figure 14a: Credit Risk Mitigation[25] [26]

	Total Exposure $m	Eligible Financial Collateral $m	Other Eligible Collateral $m	% Coverage
Standardised				
Corporate	15,467	640	0	4.1%
Sovereign	0	0	0	0.0%
Bank	28	0	0	0.0%
Residential Mortgage	994	18	0	1.8%
Total	**16,489**	**658**	**0**	**4.0%**

The following table discloses the amount of total exposure covered by guarantees or credit derivatives.

Figure 14b: Credit Risk Mitigation[27] [28]

	Total Exposure $m	Exposures Covered by Guarantees $m	Exposures Covered by Credit Derivatives $m	% Coverage
Standardised				
Corporate	15,467	0	0	0.0%
Sovereign	0	0	0	0.0%
Bank	28	0	0	0.0%
Residential Mortgage	994	0	0	0.0%
Other retail	0	0	0	0.0%
Total	**16,489**	**0**	**0**	**0.0%**
Advanced IRB				
Corporate	227,266	7,720	821	3.8%
Sovereign	8,912	58	0	0.7%
Bank	49,961	0	0	0.0%
Residential Mortgage	186,287	0	0	0.0%
Qualifying revolving retail (credit cards)	23,458	0	0	0.0%
Other retail	26,708	0	0	0.0%
Total	**522,592**	**7,778**	**821**	**1.6%**

[25] In order to show the cover provided by the disclosed mitigants, the exposure amount is prior to the application of eligible risk mitigation. Excluding mitigants, the standardised exposure amount is $15,831m.

[26] In addition to financial collateral, the range of collateral recognised in the Standardised approach is very limited, for example, real estate security and charges over company assets are excluded.

[27] Guarantee coverage for corporate exposures can originate from corporate, sovereign or bank counterparties. Figure 14b shows the original exposure amount by asset class prior to the impact of the guarantee; for example, a corporate exposure guaranteed by a bank is shown above as a corporate, however it will appear in other tables in this document as a bank exposure i.e. post the effect of the guarantee.

[28] The total exposure amount in Figure 14b has been grossed up for the mitigant value of CDS.

Credit Risk (Standardised)

ANZ has not used external ratings as an input into risk weighting for portfolios under the standardised approach. This is because customers that are externally rated (banks, sovereigns, and large corporates) will typically be rated by our internal models and treated under an IRB approach.

Figure 15a: Credit Risk Disclosures for Portfolios subject to the Standardised Approach and Supervisory Risk Weights in the IRB Approaches[29] [30]

Risk weight	Regulatory credit exposure $m
Standardised approach exposures	
0%	0
20%	1,845
35%	971
50%	23
75%	0
100%	12,992
150%	0
>150%	0
Capital Deductions	0
Total	**15,831**
Other Assets	
0%	0
20%	0
35%	0
50%	0
75%	0
100%	2,654
150%	0
>150%	0
Capital Deductions	0
Total	**2,654**
Specialised lending exposures subject to supervisory slotting	
0%	125
70%	9,794
90%	9,667
115%	6,866
250%	2,719
Total	**29,171**
Equity exposures	
300%	0
400%	286
Total	**286**

Figure 15b: Standardised Credit Exposure

Standardised	Regulatory Credit Exposure $m
Corporate	14,827
Sovereign	0
Bank	28
Residential Mortgage	976
Other retail	0
Total Standardised	**15,831**

[29] Other assets category is in line with the definition of other assets per APS 113 attachment E paragraphs 5, 9, 10 & 13.

[30] Standardised exposures to all private sector counterparties (other than banks and residential mortgages) have been classified in the 'Corporate' category as they do not meet the requirements for other AIRB asset classes. The main categories of the exposures are Business Lending, Margin Lending and Other Personal Lending.

Market Related Counterparty Credit Risk

Definition of Market Related Counterparty Credit Risk

Counterparty credit risk in this context refers to the credit risk present in market instruments (derivatives and forward contracts), arising from settlement risk (default at the end of the contract) or market replacement risk (default at any time during the life of the contract). Actual and potential market movements determine the replacement rate or ANZ credit exposure, so in the AIRB setting for credit risk, counterparty credit risk requires a different way to calculate EAD.

The markets covered by this treatment include interest rate, foreign exchange, equity and commodities.

Market Related Counterparty Credit Risk Governance

The Market Risk unit is responsible for the methodology and day-to-day capture of relevant transactions in the counterparty credit risk management system and the calculation of counterparty credit risk.

As described in Chapter 7, Market Risk provides regular reporting to the CTC, ANZ's most senior executive credit and trading risk committee.

Market Related Counterparty Credit Risk Measurement and Reporting

As noted above, the treatment for counterparty credit risk is to provide the EAD for exposures, which is used with the other factors e.g. the customer's PD, in the AIRB credit model for capital calculations.

For counterparty credit risk, in simple terms the general approach is to calculate the exposure as the sum of the mark-to-market value of the exposure, plus the sum of the notional principal multiplied by the potential credit risk exposure (PCRE) for the exposure.

- The mark-to-market is essentially the current replacement cost of the contract, and can be positive or negative. Where it is positive, i.e. 'in the money', ANZ has a credit exposure against the counterparty; if it is negative i.e. 'out of the money', the value used in the calculation is zero; and
- The PCRE factors recognise that prices change over the remaining period to maturity, and that risk increases with time. The PCRE factors are mandated for regulatory capital purposes. For internal economic capital purposes, more granular PCRE factors, based on observed historic volatilities are used. The economic capital treatment also takes concentrations into account.

For certain non-standard products where regular PCRE factors do not apply, ANZ uses a specialist credit system to apply a Monte Carlo simulation to calculate the potential credit exposure.

The PCRE factors are also used by lending officers when they establish limits for their customers, to ensure that credit assessment recognises the potential volatility of the transactions.

In terms of reporting, counterparty credit risk is calculated daily and excesses above approved limits are reported to account controllers and risk officers for action.

ANZ's measurement process for counterparty credit risk also recognises the possibility of 'wrong way' risk arising. Wrong way risk emerges when a counterparty's probability of default is positively correlated with market risk factors. For example, fluctuations in interest rates will cause changes in the value of interest rate derivatives and potentially also impact the creditworthiness of counterparties.

Counterparty Credit Risk Mitigation

ANZ's primary tools to mitigate counterparty credit risk are netting, collateral and a rigorous control system.

Close-out netting agreements reduce the risk of loss by reducing all eligible transactions with a single counterparty to a single net figure i.e. both in and out of the money positions.

In some transactions, the counterparty may be required to lodge collateral. Standard market documentation governs the amount of collateral required and the re-margining frequency between counterparties. There is a link between the amount of collateral required and external ratings, in that thresholds and minimum transfer amounts are linked to external ratings. This means that in the event that ANZ's external rating was downgraded, ANZ would be likely to need to lodge additional collateral with counterparties to support the transactions. The amount required would depend upon the underlying instruments and the state of the markets, so would be different at each re-margining interval.

The control system, with the system of counterparty limits and independent calculation and reporting of excesses, has been described above.

Securitisation

Definition of Securitisation

Securitisation is a financing technique whereby a Special Purpose Vehicle (SPV) holds assets (or interests in assets) and issues debt instruments (notes) to investors, supported by the value and cash flows from those assets. The effect is to insulate the assets from the bankruptcy of the seller or servicer of those assets. Principal and interest are paid to the investors from realisation (or regular cash flows) of the assets held in the SPV. The notes are commonly referred to as asset backed securities (ABS) and residential mortgage backed securities (RMBS).

Besides 'traditional' securitisations as described above, there are also 'synthetic' securitisations. A synthetic securitisation is a structure with at least two different stratified risk positions or tranches that reflect different degrees of credit risk where credit risk of an underlying pool of exposures is transferred, in whole or in part, through the use of funded e.g. credit-linked notes or unfunded e.g. credit default swaps, credit derivatives or guarantees that serve to hedge the credit risk of the portfolio.

Regulatory Capital Approaches Used in ANZ's Securitisation Activities

For securitisation exposures held in ANZ's banking book[31], ANZ applies an Internal Ratings-Based approach (as outlined in APS 120 Capital Adequacy: Securitisation) to determine the regulatory capital charge related to banking book securitisation exposures.

For securitisation exposures held in ANZ's trading book, regulatory capital is calculated under market risk rules.

ANZ's Involvement in Securitisation Activities

ANZ is involved in four main types of securitisation activities:

- Securitisation of ANZ-originated assets - The securitisation of ANZ-originated assets provides diversity in the funding base of the Group and may be traditional or synthetic. Such securitisations may or may not involve the transfer of credit risk and as such, may or may not provide regulatory capital relief;
- Securitisation of third-party originated assets;
- Facilities and services provided to securitisations - ANZ provides various facilities to securitisations, including: liquidity; funding; credit support; and services including structuring and arranging, conduit management and (via ANZ Capel Court Limited) trust management; and
- Investment in securities - ANZ purchases notes issued from securitisation programs for trading or liquidity purposes.

Governance of Securitisation Activities

ANZ's Board Risk Committee's risk appetite for securitisation is encompassed within the credit risk and market risk frameworks.

The range of securitisation activities means that there are potentially many ANZ areas involved in securitisation activities. For origination and structuring, ANZ has a specialist securitisation team with independent risk personnel overseeing operations. Credit decisions require joint risk and business approval. The securitisation team must be involved in all non-trading securitisation transactions, which ensures consistent expert treatment.

When ANZ is investing in securitisations, the Markets division manages them as they do any other part of the trading or liquidity portfolios.

Risk Measurement of Securitisation Exposures

In accordance with APS 120, ANZ has a hierarchy of approaches that can be used to quantify the credit risk of securitisation exposures in the banking book. The most common approach used is the Internal Assessment Approach, whereby ANZ uses a rating agency-type methodology which takes into account historical performance of assets and other (asset-specific) considerations such as underwriting standards.

From an economic capital perspective, the rating derived from the above processes is used, together with a conservative LGD and EAD.

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[31] Bank exposures are classified into either the trading book or the banking book. In general terms, the trading book consists of positions in financial instruments and commodities held with trading intent or in order to hedge other elements of the trading book. In simple terms, the banking book contains all other exposures. Banking book exposures are typically held to maturity, in contrast to the shorter term, trading nature of the trading book.

All facilities for securitisation vehicles are reviewed at least annually, including the risk grade. The reliance on external rating agency ratings and/or methodology means that ANZ must periodically review the methodology to ensure that it remains appropriate.

Reporting of Securitisation Exposures

The type and frequency of reporting for ANZ's securitisation exposures is a function of the nature of those exposures:

- Facilities to securitisation vehicles are reported using standard credit reporting systems, distinguished by appropriate product codes. The regular reporting frequency for most of these systems is monthly;
- In addition, all exposures to SPVs are reported to the CTC on a six-monthly basis. Utilisation of liquidity facilities are reported internally on a weekly basis;
- Securitised exposures are reported to the trust managers; and
- Investments in securitisations will be reported through the trading book or other investment reporting systems.

ANZ's Accounting Policies for Securitisation Activities

Where the Group has established securitisation SPVs which are controlled by the Group to facilitate transactions undertaken for Group purposes, these are consolidated in the Group's financial statements. Control is assessed under the requirements of AASB Interpretation 112 Consolidation – Special Purpose Entities, which is based on the concepts of risk and rewards.

Financial instruments held and issued from SPVs which are consolidated by the Group are valued using the principles of AASB 139 Financial Instruments: Recognition and Measurement. In the case of a synthetic securitisation, any transferred credit exposure is recognised through the fair value measurement of the segregated embedded or stand-alone credit derivative established within the structure.

Where a securitisation SPV is not consolidated, derecognition of any ANZ originated assets transferred is determined based on the derecognition principles of AASB 139 using a risks and rewards model.

External Rating Agencies

ANZ uses Standard & Poor's, Moody's Investor Services and Fitch Ratings for securitisations. These rating agencies are used across a variety of asset classes.

Aggregate exposures to securitisations are broken into traditional and synthetic methods by type of underlying asset. The following tables disclose aggregate, traditional and synthetic methods:

Figure 16: Traditional securitisations

Underlying asset	ANZ originated $m	Third party originated $m	Other Services $m	Regulatory credit exposure Facilities provided $m
Residential mortgage	371	0	0	3,467
Credit cards and other personal loans	0	0	0	0
Auto and equipment finance	0	0	0	1,480
Commercial loans	0	0	0	807
Other	0	0	0	6,819
Total	**371**	**0**	**0**	**12,573**

Figure 17: Synthetic securitisations

Underlying asset	ANZ originated $m	Third party originated $m	Other Services $m	Regulatory credit exposure Facilities provided $m
Residential mortgage	0	0	0	0
Credit cards and other personal loans	0	0	0	0
Auto and equipment finance	0	0	0	0
Commercial loans	2,200	0	0	0
Other	0	0	0	1,667
Total	**2,200**	**0**	**0**	**1,667**

Figure 18: Aggregate of traditional and synthetic securitisations[32]

Underlying asset	ANZ originated $m	Third party originated $m	Other Services $m	Regulatory credit exposure Facilities provided $m
Residential mortgage	371	0	0	3,467
Credit cards and other personal loans	0	0	0	0
Auto and equipment finance	0	0	0	1,480
Commercial loans	2,200	0	0	807
Other	0	0	0	8,486
Total	**2,571**	**0**	**0**	**14,240**

Figure 19: Impaired and Past Due Loans relating to ANZ Originated Securitisations

Underlying asset	Value as at 30th September 2008			Half year value
	ANZ originated $m	Impaired $m	Past due $m	Losses recognised $m
Residential Mortgage	371	0	0	0
Credit cards and other personal loans	0	0	0	0
Auto and equipment finance	0	0	0	0
Commercial loans	2,200	0	0	0
Other	0	0	0	0
Total	**2,571**	**0**	**0**	**0**

Figure 20: Securitisation Exposure by Facility[33]

Facilities provided	Regulatory credit exposure $m
Liquidity facilities	5,732
Funding facilities	5,792
Underwriting facilities	0
Lending facilities	0
Credit enhancements	122
Holdings of securities (excluding trading book)	2,639
Other	0
Total	**14,285**

Figure 21: Securitisation by Risk Weight

Securitisation risk weights	Regulatory credit exposure $m	Risk weighted assets $m
≤ 25%	11,569	1,528
>25 ≤ 35%	736	257
>35 ≤ 50%	137	64
>50 ≤ 75%	1	1
>75 ≤ 100%	1,644	1,643
>100 ≤ 650%	183	778
1250% (Deduction)	15	0
Total	**14,285**	**4,271**

[32] Total regulatory credit exposure of synthetic and traditional securitisation tables varies from total regulatory credit exposure for securitisation presented in remaining tables by $45 million. Where the asset is ANZ originated and disclosed within the ANZ originated component of the table, regulatory credit exposure is not additionally disclosed in the 'Facilities Provided' column.

[33] These exposures are second loss facilities and benefit from credit enhancement provided by a third party first loss provider.

Disclosure of ANZ originated securitisations where deductions from capital have been applied is not applicable to ANZ. Additionally, disclosure relating to early amortisation treatment and to securitisations calculated under the standardised approach is not applicable. ANZ has no exposures meeting any of these criteria.

Figure 22: Securitisation activity by Underlying Asset Type – Half Year to Date (Apr 08 to Sept 08)[34]

Underlying asset	Original value securitised		
	ANZ originated $m	Third party originated $m	Recognised gain or loss on sale $m
Residential mortgage	0	0	0
Credit cards and other personal loans	0	0	0
Auto and equipment finance	0	2,041	0
Commercial loans	0	0	0
Other	0	4,833	0
Total	**0**	**6,874**	**0**

Figure 23: Securitisation activity by Facilities Provided – Half Year to Date (Apr 08 to Sept 08)

Facilities provided	Notional amount $m
Liquidity facilities	334
Funding facilities	2,902
Underwriting facilities	0
Lending facilities	0
Credit enhancements	0
Holdings of securities (excluding trading book)	0
Other	0
Total	**3,236**

[34] Note that the value above in the "Third Party Originated" column represents the total original assets of the securitisation and is not representative of ANZ's exposure.

Chapter 6. Operational Risk Management

Definition of Operational Risk

Within ANZ, operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, and the risk of reputational loss[35] or damage arising from inadequate or failed internal processes, people and systems, but excludes strategic risk.

Regulatory Approval to use the Advanced Measurement Approach

ANZ has been given approval by APRA to use the Advanced Measurement Approach (AMA), under APS 115 Capital Adequacy: Advanced Measurement Approaches to Operational Risk.

The approved AMA applies across all of ANZ and does not comprise 'partial use'.

Operational Risk Appetite

The ANZ Board has set a 'Low' risk appetite for operational risk, meaning there is a low tolerance of operational risk exposure. Management discretions, accountabilities and approval structures are formalised to ensure timely escalation of operational risk events, significant risks and supporting treatment plans.

Compliance

The ANZ Board requires regular reviews and reports on the effectiveness of the ANZ compliance program. The Board requires business units to identify all regulatory compliance obligations, and to escalate when breaches occur.

Operational Risk Governance and Structure

The ANZ Board Risk Committee oversees risk management, supported by executive level risk committees which co-ordinate each area of risk management. The Operational Risk Executive Committee (OREC) undertakes oversight of operational risk. In addition to OREC, ANZ divisional and business unit level risk committee charters include operational risk. These risk committees manage and maintain oversight of operational risks supported by thresholds for escalation and monitoring.

Personnel who undertake operational risk activities are located within business units to assist them to fulfil their accountability for day-to-day management of operational risk. This includes implementation of the operational risk framework and involvement in decision making processes concerning all material operational risk matters. Divisional risk personnel provide oversight of operational risk undertaken in the business units.

Group Operational Risk are responsible for exercising governance over operational risk through the management of the operational risk framework, policy development, framework assurance, operational risk measurement and capital allocation, fraud strategy and reporting of operational risk issues to executive committees.

Operational Risk Principles

ANZ has developed a comprehensive framework to manage operational risk which includes the following operational risk management principles:

- Operational risk is recognised as a primary risk within ANZ and has a governance structure responsible for maintaining oversight;
- ANZ will create a culture that recognises operational risk as everyone's responsibility with roles and responsibilities clearly articulated at all levels in the organisation;
- ANZ will create an environment for sound, transparent decision-making that includes a framework to identify, assess, control and monitor ANZ's operational risks;
- Key decisions within ANZ will be informed by balancing operational risk with reward;
- ANZ will continuously monitor the effectiveness and relevance of its framework for managing operational risk;
- ANZ will monitor its exposure to operational risk and changes to its operational risk profile; and
- ANZ will learn from losses arising from operational risk by identifying and improving the underlying root cause.

The framework is supported by a comprehensive set of policies and guidelines.

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[35] Regulatory Capital is calculated in accordance with the definition of Operational Risk outlined in APS 115 Capital Adequacy: Advanced Measurement Approaches to Operational Risk and therefore excludes reputational risk considerations.

Operational Risk Management

Given the wide scope of operational risk, a robust operational risk management framework and sound internal control environment are essential to risk management. ANZ manages operational risk with a logical and thorough approach as summarised below:

1. Identification of potential risks;
2. Analysis of identified risks, including assessing the inherent risk without controls in place and residual risk when the controls are in place. This requires analysis of the potential consequences of failing to deal with the risks, the likelihood of the risks being realised and the effectiveness of the key controls in place to prevent or mitigate the risk;
3. Evaluation of the risk to determine whether it is within the risk appetite;
4. Identification and implementation of risk treatment options to improve the key controls over the risk for those risks that are outside the risk appetite. When the preferred risk treatment option is selected the risk treatment plan is documented; and
5. Monitoring and review of treatment plans, operational risks and controls, including testing the key controls and reporting on the current operational risk profile.

Operational Risk Mitigation

Business disruption is a critical risk to a bank's ability to operate, so ANZ has comprehensive business continuity, recovery and crisis management plans. The intention of the business continuity and recovery plans is to ensure critical business functions can be maintained, or restored in a timely fashion, in the event of material disruptions arising from internal or external events.

Crisis management planning at Group and country levels supplement business continuity plans in the event of a broader Group or country crisis. Crisis management plans include crisis team structures, roles, responsibilities and contact lists, and are subject to testing.

In line with industry practice, ANZ obtains insurance cover from third party and captive providers to cover those operational risks where cost-effective premiums can be obtained. In conducting their business, business units are advised to act as a prudent uninsured entity and not use insurance as a guaranteed operational risk mitigant. Adopting a conservative approach, ANZ's AMA operational risk regulatory capital calculation does not utilise insurance as a risk mitigation.

Operational Risk Reporting

ANZ's operational risk management includes internal loss capture, case management and reporting. Operational risk and compliance events (including actual losses, near misses and breaches) are recorded and managed to ensure timely, complete and accurate reporting.

The divisions, business units and risk functions prepare reporting. Given the Board's low risk appetite for operational risk, the reporting thresholds are set relatively low for escalation to OREC. OREC's role is to review, and if appropriate, approve the risk mitigation and monitor associated action plans.

ANZ's AMA model

Group Operational Risk is responsible for maintaining ANZ's AMA for operational risk measurement and capital allocation.

A Loss Distribution Approach (LDA) is used to determine operational risk regulatory and economic capital. The data inputs to the LDA include:

- Historical internal losses captured and reported in an internal loss database;
- Relevant external losses, sourced from a reputable industry supplier. This data is suitably scaled using internally developed rules to ensure relevance to ANZ's scale and operations; and
- Scenario analysis data for severe but plausible events, elicited in workshops with risk and business professionals.

Operational risk capital is derived using probability distributions and calculated using Monte Carlo simulations. The initial capital number is calculated at the group level (as a result, correlation effects between risk event types are implicitly recognised) and then distributed down to the business unit level after adjusting for business environment and internal control factors using a Risk Drivers and Controls Approach (RDCA) methodology. The RDCA is a risk and control self-assessment system which:

- Assesses the level of the Banking Group's exposure to specified drivers of risk;
- Assesses the scope and quality of the Banking Group's internal control environment, key operational processes and risk mitigants; and
- Directly links these assessments to operational risk capital.

The LDA calculation is conducted annually, with the RDCA scorecard process undertaken half-yearly.

Chapter 7. Market Risk Management

Definition of Market Risk

Within ANZ, market risk is defined as the risk to the Group's earnings arising from changes in interest rates, currency exchange rates, credit spreads, or from fluctuations in bond, commodity or equity prices.

Market risk arises through the Group's trading and balance sheet activities. This chapter focuses on market risk management of traded market risk; a subsequent chapter on interest rate in the banking book outlines market risk management of non-traded market risk.

Regulatory Approval to use the Internal Models Approach

ANZ has been given approval by APRA to use the Internal Models Approach (IMA), under APS 116 Capital Adequacy: Market Risk for all trading portfolios except for interest rate risk – specific risk, equity trading and electricity trading. ANZ uses the standardised approach to market risk capital for these three segments.

The calculation of regulatory capital for interest rate risk in ANZ's banking book is discussed in Chapter 8.

Market Risk Appetite

The Board's appetite for market risk is 'Medium', meaning that there is to be low/moderate proprietary trading, the books are to remain as fully hedged as practicable, and there is a low tolerance for losses from Treasury.

Market Risk Governance

As described in Chapter 4, the Board's Risk Committee oversight of market risk is supported by the Credit and Traded Risk Committee (CTC) and the Group Asset & Liability Committee (GALCO). The CTC is the senior executive management forum responsible for the oversight and control of credit and trading risk and, as a delegation from the GALCO, non-traded risk.

Market Risk is the specialist risk management unit that is responsible for the operation of the Traded Market Risk Management Framework, including exposure measurement and limit monitoring. This risk management function is independent of the business.

Traded Market Risk Management Framework

As with the other key risks within ANZ, market risk is managed under a comprehensive framework. Key aspects of the traded market risk management framework include:

- A clear definition of the trading book;
- A comprehensive set of market risk policies that promote the proactive identification and communication of risk;
- A robust Value at Risk (VaR) quantification approach that captures all sources of material market risk, supplemented by comprehensive stress testing;
- A comprehensive market risk limit framework that controls all material market risks;
- An independent Market Risk function which actively monitors market risk exposure, compliance with limits and risk policies, as well as the ongoing effectiveness and appropriateness of the risk management framework; and
- Regular and effective reporting of market risk to Executive Management and the Board.

Market Risk Measurement

The Group uses fair value accounting for all trading books and fair value and amortised cost accounting for non-trading books (depending on their classification) in line with Australian Accounting Standards.

As noted above, ANZ's traded market risk management framework incorporates a risk measurement approach to quantify the magnitude of market risk within trading books. This approach and related analysis identifies the range of possible outcomes that can be expected over a given period of time and establishes the relative likelihood of those outcomes.

ANZ's key tools to measure and manage traded market risk on a daily basis are VaR estimates and sensitivities measures. VaR is calculated using historical changes in market rates and prices over the previous 500 business days. The confidence interval for traded VaR is calculated at 97.5% (for trading activities) and 99% (for the calculation of regulatory market risk capital, and for Market Risk's daily monitoring) for a one-day holding period. The confidence levels mean that there is 97.5% or 99% chance that the loss will not exceed the VaR estimate on any given day. All material market risk factors and all trading portfolios (with the exception of electricity trading, which is treated as standardised until APRA approval) are captured within the VaR model.

As VaR is driven by historical observations, it alone is not sufficiently reliable to estimate the maximum loss ANZ could suffer in an extreme market event. To complement VaR analysis, ANZ therefore also undertakes a wide range of stress tests to the trading portfolio, both on individual portfolios and at the Group level. Standard stress tests are applied on a daily basis and measure the potential loss impact arising from applying the largest market movements during the previous seven years. Harsher stress tests are applied monthly and measure the potential loss arising as a result of scenarios generated from major financial market events.

All VaR models used within the Group for the purposes of measuring exposure against limits are evaluated against actual and hypothetical profit and loss. Back testing is conducted daily, and outliers are analysed to understand if the issues are the result of trading decisions, systemic changes in market conditions or issues related to the VaR model i.e. historical data or model calibration.

The following table discloses the high, mean and low VaR values over the reporting period and at period end, and a comparison of VaR estimates with actual gains/losses over the reporting period:

Figure 24: VaR Values over the Reporting Period

Value at Risk (VaR)	Mean value $m	Maximum value $m	Minimum value $m
Equities	0.00	0.00	0.00
Interest Rate	1.92	3.59	1.21
Foreign exchange	0.85	2.45	0.38
Commodity	0.97	1.51	0.41
Credit	1.04	2.64	0.60

Comparison of VaR estimates to Actual Gains/Losses[36]

Back testing involves the comparison of calculated VaR exposures with profit and loss data to identify the frequency of incidents when trading losses exceed the calculated VaR. As a probabilistic measure of potential future gains or losses, it is expected that results exceed VaR a proportion of the time. For APRA purposes, VaR is calculated at the 99% confidence interval with a one day holding period. Therefore, over the long-run we would expect one back testing outlier each 100 days.

ANZ uses actual profit and loss data and hypothetical profit and loss data. Hypothetical profit and loss data is designed to remove the impacts of intraday trading and sales margins. It is calculated as the difference between the value of the prior day portfolio at prior day closing rates and the value at current day closing rates. Markets Finance calculates actual profit and loss while Market Risk calculates hypothetical profit and loss.

As at 30 September 2008, based on the prior 250 business days, there were 20 hypothetical and four actual genuine negative outliers compared to seven hypothetical and five actual genuine negative outliers as at 28 September 2007. Increased volatility in markets as a result of the current credit crisis has had an impact on the back testing outliers for the reporting period.

The back testing model performance is consistent with the experience of other global and local banks. Given the VaR model is based on 500 days of actual historical volatility and given the impact of increased market volatility during the last 12 months, the higher than normal outliers from back testing results are expected and indicate that the VaR model continues to be an appropriate model to use for Market Risk calculations.

Market Risk Reporting

Market Risk conducts daily VaR and stress testing and reports the results to Market Risk management, senior executives and trading management. In the event of breaches, Market Risk will escalate details of the breach to the appropriate discretion holder within Market Risk and Group Risk. All breaches are reported to CTC on a monthly basis.

Market Risk monitors and analyses back testing results on a daily basis and reports quarterly results to CTC.

[36] VaR is calculated at 97.5% confidence level for a one-day holding period. Reporting period is from 1 October 2007 to 30 September 2008.

Market Risk Mitigation

ANZ's system of market risk quantification is fundamental to how market risk is mitigated. The results are compared to established limits and breaches are reported immediately to management who instruct on the appropriate action in accordance with authorised delegations. All breaches are subsequently reported to senior executive Risk committees i.e. CTC monthly.

ANZ also uses standard market documentation in order to reduce potential exposures by techniques such as netting. In the event of a default, netting agreements are designed to reduce amounts owed to and from counterparties to a single net figure.

The Market Risk group is also an important factor in how ANZ mitigates its market risk. It is a unit independent of the dealing, processing/settlements operations and manages the day-to-day risk management function. It also conducts ad hoc reviews of the various offshore points of ANZ to ensure market risk controls are working effectively in those sites.

Besides market risk itself, there is a high degree of operational risk arising from market risk activities. This is mitigated by strict application of ANZ's overarching Segregation of Duties policy, which prescribes that dealing, confirmation, settlement, accounting, risk management and reconciliation duties in the Group Treasury and Financial Markets areas are to be segregated. In all cases, the confirmation, accounting, settlement and reconciliation functions are performed outside the administrative control of all front office staff.

Market Risk (Standardised)

ANZ uses the standardised approach to measure market risk capital for interest rate risk – specific risk[37], equity trading and electricity trading.

ANZ is in dialogue with APRA concerning approval of an internal model for electricity trading, and is building a history of results using our internal equity model in preparation for an application to APRA for internal model recognition. For interest rate risk – specific risk, ANZ's internal VaR model captures general interest rate risk for all products but not the credit spread risk associated with individual issuers of interest rate products.

Figure 25: Regulatory Capital Required for ANZ's Standardised Market Risk Exposures

Market Risk under standardised approach	Capital Requirements $m
Interest rate risk	167
Equity position risk	2
Foreign exchange risk	0
Commodity risk	6

[37] Specific risk is the risk that the value of a security will change due to issuer-specific factors. It applies to interest rate and equity positions related to a specific issuer.

Chapter 8: Interest Rate Risk in the Banking Book

Definition of Interest Rate Risk

Interest rate risk in the banking book (IRRBB) relates to the potential adverse impact of changes in market interest rates on the Group's future net interest income. The risk arises from the following principal sources:

- Repricing and yield curve risk is the risk to earnings or market value as a result of changes in the overall level of interest rates and/or the relativity of these rates across the yield curve;
- Basis risk is the risk to earnings or market value arising from volatility in the interest margin applicable to banking book items; and
- Optionality risk is the risk to earnings or market value arising from the existence of standalone or embedded options in banking book items.

Regulatory Capital Approach to Interest Rate Risk in the Banking Book

ANZ has received approval to use the Internal Model approach for the calculation of regulatory capital for IRRBB, under APS 117 Capital Adequacy: Interest Rate Risk in the Banking Book (Advanced ADIs).

Risk Appetite

The Board has a moderate appetite for IRRBB: the Group's balance sheet will always have interest rate risk, as a result of the mismatch between the repricing characteristics of customer loans and deposits and the investment of capital in interest bearing assets.

Governance of Interest Rate Risk in the Banking Book

As described in Chapter 4, the Board's oversight of IRRBB is supported by the Group Asset & Liability Committee (GALCO) to manage the strategic position and oversee the interest rate risk (IRR) arising from the discretionary position. Markets manage the IRR arising from the discretionary position with the primary aim of providing economic value/value add gains over the current financial year. GALCO has delegated responsibility for monthly monitoring of IRRBB to the CTC .

Market Risk is the independent unit responsible for monitoring and measuring IRRBB and have designed and implemented policies and procedures to ensure that IRRBB exposure is managed within the limit framework set by the Board.

Measurement of Interest Rate Risk in the Banking Book

ANZ uses four principal techniques to quantify IRRBB:

- Interest Rate Sensitivity – this is an estimate of the change in economic value of the banking book due to a 1 basis point move in a specific part of the yield curve;
- Earnings-at-Risk (EaR) – this is an estimate of the amount of income that is at risk from interest rate movements over a given holding period, expressed to a 97.5% or 99% level of statistical confidence;
- Value-at-Risk (VaR) – this is an estimate of the impact of interest rate changes on the banking book's market value, expressed to a 97.5% or 99% level of statistical confidence for a given holding period; and,
- Stress testing – Standard and extraordinary tests are used to highlight potential risk which may not be captured by VaR, and how the portfolio might behave under extraordinary circumstances.

The Head of Market Risk has the delegated authority to determine the methodology for the above.

The calculations above require assumptions to be made about the repricing term of exposures that do not have a contractually defined repricing date (such as deposits with no set maturity dates, and prepayments). Changes to these assumptions require GALCO approval.

Where relevant, IRRBB techniques recognise foreign currency effects as all measures are expressed in Australian dollars.

Basis and Optionality risks are measured using Monte Carlo simulation techniques, to generate a theoretical worst outcome at a specified confidence level (typically 99%) less the average outcome.

Embedded losses and gains in the banking book are also calculated. This is calculated as the economic value of the banking book using wholesale market rates (typically the Interest Rate Swap curve is used).

Reporting of Interest Rate Risk in the Banking Book

The output from ANZ's VaR and EaR are analysed by Market Risk on a daily basis, against Board-approved limits. Excesses are reported immediately to the Group Treasurer, Head of Market Risk and the Head of Markets. Stress tests are calculated monthly and reported to CTC, GALCO and the Risk Committee of the Board.

IRRBB is calculated monthly and reported to Group executives.

Details of the Group's risk exposures, stress tests and compliance with limits are reported to the CTC (acting on delegated authority from GALCO) on a monthly basis, and to the Board's Risk Committee at least quarterly.

Management of Interest Rate Risk in the Banking Book

As described in the preceding sections, ANZ has IRRBB measurement and reporting framework which provides the basis to manage IRRBB. This framework quantifies the magnitude of risks, and controls the potential impact that changes in market interest rates can have on the net interest income and balance sheet fair value of the Group.

This is all underpinned by ANZ's Funds Transfer Pricing (FTP) framework, which ensures that all banking book transactions have an FTP rate which is used in the above calculations.

As noted above, day-to-day management of IRRBB is undertaken by a team in Market Risk, an independent risk management unit.

ANZ's Capital Requirement for Interest Rate Risk in the Banking Book

The IRRBB Regulatory Capital Requirement is $325 million.

The capital requirement includes a value for repricing and yield curve risk, basis and optionality risks based on a 99% confidence interval, one year holding period and a six year historical data set.

Embedded losses also make up the capital requirement and are calculated as the difference between the book value of banking book items and the current economic value.

Results of Standard Shock Scenario

The Basel II framework sets out a standard shock scenario of a 200 basis point parallel shift change in interest rates, in order to establish a comparable test across banks.

The table below shows the results of this test by currency of the exposures outside the trading book.

Figure 26: Standard Shock Scenario

Stress Testing: Interest rate shock applied	Change in Economic Value $m
AUD	
200 basis point parallel increase	(66)
200 basis point parallel decrease	71
NZD	
200 basis point parallel increase	(69)
200 basis point parallel decrease	67
USD	
200 basis point parallel increase	(23)
200 basis point parallel decrease	25
GBP	
200 basis point parallel increase	(5)
200 basis point parallel decrease	5
SGD	
200 basis point parallel increase	(1)
200 basis point parallel decrease	0

Chapter 9. Equities

Categorisation of Equity Investments Held in the Banking Book

Equity exposures in the banking book are primarily categorised as follows:

- Equity investments on which capital gains are expected - These transactions are originated and managed by dedicated equity finance teams. These transactions represent funding solutions for known customers of ANZ and are governed by specific policies. ANZ ensures that the investment in these entities does not constitute a controlling interest in the relevant business;
- Equity investments that are taken for strategic reasons - These transactions represent strategic business initiatives and include ANZ's investments in wealth management joint ventures with ING in Australia and New Zealand and partnership arrangements with financial institutions in Asia. These investments are undertaken only after extensive analysis and due diligence; and
- Equity investments made as the result of a work out of a problem exposure - From time to time, ANZ will take an equity stake in a customer as part of a work out arrangement for problem exposures. These investments are made only where there is no other viable option available and form an immaterial part of ANZ's equity exposures.

Valuation of and Accounting for Equity Investments in the Banking Book

The accounting treatment of equity investments, other than for joint ventures, depends on whether ANZ has significant influence over the investee, as described in AASB 128 Investment in Associates. Where significant influence is assessed, the investment is classified as an Investment in Associates in the financial statements. The Group adopts the equity method of accounting for associates and the Group's interest in joint venture entities. The Group's share of results of associates and joint venture entities is included in the consolidated income statement. Shares in associates and joint venture entities are stated in the consolidated balance sheet at cost plus the Group's share of post acquisition net assets. Interests in associates and joint ventures are reviewed annually for impairment, primarily using a discounted cash flow methodology. In the course of completing this impairment review other methodologies are considered to determine the reasonableness of the valuation, including the multiples of earnings methodology.

As required by APS 111 Capital Adequacy: Measurement of Capital, equity accounted earnings from strategic investments in joint ventures and partnerships are excluded from regulatory capital until received in the form of a dividend.

Where ANZ does not have significant influence over the investee, the investment is classified as 'available for sale'. The investment is initially recognised at fair value plus transaction costs. Subsequent gains or losses arising from changes in fair value are included as a separate component of equity in the 'available for sale revaluation reserve', with any impairment recognised in the income statement. When the asset is sold the cumulative gain or loss relating to the asset held in the available for sale revaluation reserve is transferred to the income statement.

Figure 27: Equity Investments[38]

Equity investments	Balance sheet value $m	Fair value $m
Value of listed (publicly traded) equities	1,993	2,059
Value of unlisted (privately held) equities	2,935	3,757
Total	**4,928**	**5,816**

Gains (losses) on equity investments from 1 October 2007 to 30 September2008	$m
Cumulative realised gains (losses) from disposals and liquidations in the reporting period	159
Total unrealised gains (losses)	(56)
Total unrealised gains (losses) included in Gross Tier 1/Tier 2 capital	0

	Risk Weighted Assets $m
Equity investments subject to a 300% risk weight	0
Equity investments subject to a 400% risk weight	1,146
Total minimum capital requirement by equity asset class	**1,146**

Aggregate amount of equity investments subject to:	
Supervisory provisions	n/a
Grandfathering provisions	n/a

[38] The market value of listed equities is considered to be the fair value for all but one security. In this case, the intrinsic value of the instrument at 30 September 2008 is considered to best represent the fair value. The market value of this instrument at 30 September 2008 was $65 million and the fair value was $56 million.

Appendix 1. APS 330 Reference

APS 330 Table Number	APS 330 Table Name	ANZ reference
1b	Aggregate amount of undercapitalisation of non-consolidated subsidiaries that are required to be deducted from capital	Not applicable – refer p8
2b-d	Regulatory capital breakdown	Figure 1
3b-g	Risk weighted assets by risk type	Figure 2
4b	Credit risk exposure by asset class	Figure 3
4c	Credit risk exposure by geography	Figure 4
4d	Credit risk exposure by industry	Figure 6
4e	Credit risk exposure by residual contractual maturity	Figure 5
4f	Impaired and past due exposures by industry	Figure 8
4g	Impaired and past due exposures by geography	Figure 7
4h	Movements in provisions for impairment	Figure 9
4i	Credit risk exposure by Basel II approach	Figures 11, 15b
5b	Standardised, specialised lending and equity exposures	Figure 15a
6d	Non-retail and retail credit risk exposure by asset class and PD	Figures 12-13
6e-f	Historical losses by asset class	Figure 10
7b-c	Credit risk mitigation by Basel II approach	Figures 14a-b
9d-e	Securitisation exposures by underlying asset type	Figures 16-19
9f	Securitisation exposures by facility type	Figure 20
9g	Securitisation exposures by risk weighting	Figure 21
9h	Securitisation exposures subject to early amortisation	Not applicable – refer p35
9i	Securitisation risk weighted assets under the Standardised approach	Not applicable – refer p35
9j	Current year securitisation activities	Figures 22-23
10	Capital requirements for market risk components under standardised approaches	Figure 25
11	Value at risk analysis for market risk	Figure 24
13b-f	Equity investment disclosures	Figure 27
14	Effect of standard rate shock on interest rate risk in the banking book	Figure 26

Glossary

ADI – Authorised Deposit Taking Institution (pg 23)

AIRB – Advanced Internal Ratings-Based (pg 17)

AMA – Advanced Measurement Approach (pg 38)

APRA – Australian Prudential Regulation Authority (pg 2)

CCR – Customer Credit Rating (pg 24)

CDS – Credit Default Swaps (pg 30)

CTC – Credit and Trading Risk Committee (pg 16)

EAD – Exposure at Default (pg 5, 20)

EaR – Earnings at Risk (pg 43)

EL – Expected Loss (pg 8)

ELE – Extended Licensed Entity (pg 12)

GALCO – Group Asset and Liability Committee (pg 16)

ICAAP – Internal Capital Adequacy Assessment Process (pg 7)

IMA – Internal Models Approach (pg 40)

IRB – Internal Ratings-Based (pg 17)

IRR – Interest Rate Risk (pg 15)

IRRBB – Interest Rate Risk in the Banking Book (pg 15)

LGD – Loss Given Default (pg 20)

OREC – Operational Risk Executive Committee (pg 16)

PCR – Prudential Capital Ratio (page 8)

PD – Probability of Default (pg 20)

RWA – Risk Weighted Assets (pg 6)

RBNZ – Reserve Bank of New Zealand (pg 7)

SI – Security Indicator (pg 24)

SPV – Special Purpose Vehicle (pg 34)

VaR – Value at Risk (pg 40)

Page numbers reference the first appearance of the acronym within the document.