

Question 1

- a) *Explain the impetus for Basel II being formalised in the Australian market by APRA. Also provide details of the three major pillars of Basel II Framework.*

The Basel II framework is a multilateral framework that is built entirely on three cross pollinating pillars that seek to further align the capital requirements of financial institutions on an international level. The existing 1998 Basel Capital Accord¹, while undoubtedly effective in increasing the standards adopted by institutions in the international market place, has had many criticisms that the Basel Committee on Banking Supervision have attempted to rectify in the new structure. The most virulent criticisms of the existing Basel I framework include the imbalance in the precise amount of capital needed for any particular institution and the failure of operational risks to be reflected in the capital adequacy ratio. Furthermore, it has also been commented² that the existing risk classifications and the current 8% capital adequacy ratio, are not indicative of the current banking environment.

Therefore, the adoption of Basel II has been driven by the “*ongoing explosive growth in the financial market activities of banks and exciting developments in risk management practices*”³. The Basel Committee have ensured that the Basel II framework has remained distinctly more open in its development compared to the Basel I implementation, which has allowed financial institutions to comment and integrate themselves into the frameworks core development. It is in this manner, that Basel II has become more flexible in its requirements of financial institutions while still ensuring that strict regulation is maintained in respect of the new capital adequacy standards.

The three guiding principles of the framework, or as previously mentioned ‘Pillars’, are the basis of the new Basel II framework. Each ‘Pillar’ seeks to encompass a specific aspect of the three main tiers involved in prudential regulation and these include capital adequacy, supervisory review and market discipline. The ‘First Pillar’ is perhaps the most discussed pillar in the international marketplace because it specifies the *minimum capital requirements* to be held by financial institutions. It expands on the weakness of the Basel I 8% risk weighted asset system and allows financial institutions to make substantial changes to their calculations of credit risk by

¹ Bank for International Settlements, Revised 2006, <http://www.bis.org>, Viewed 15th April 2006

² Hogan, Avram, Brown, Degarbrielle, Ralston, Skully, Hempel, Simonson, Sathye, Management of Financial Institutes, John Wiley & Sons, 2001, Pg 45

³ Kevin Davis (2005), “*Basel II*”, Journal of Banking and Financial Services v119 n3, June/July 2005, pg 7 - 9

an incorporation of credit risk ratings into their calculations⁴. It has also introduced operational risk into the reporting requirements and the possibility of interest rate risk if demanded by prudential authorities. Interestingly, it has left market risk unchanged. For both credit and operational risks, it now provides three approaches that financial institutions can use to measure and report these risks. These three approaches are tiered according to the complexity of the financial institution and the level of reporting required.

The ‘Second Pillar’ encompasses the *Supervisory Review Process* and “*places much more emphasis on regulator inspection of risk management systems.*”⁵ It provides the regulatory principles that financial institutions must abide by in assessing their capital adequacy requirements under Pillar One, and allows for adjustment of any other risks that are not incorporated in Pillar One’s calculations. More importantly to the Australian financial environment, it allows APRA to review the capital adequacy requirements of financial institutions, and intervene if their calculations appear dubious. The last and final ‘Third Pillar’ looks at *Market Discipline* and how to enforce the preceding two pillars. The specific purpose of the final pillar is to increase the reporting transparency by financial institutions and allow for higher disclosure of their capital, risk exposures and risk assessment procedures.

The Australian Prudential Regulatory Authority (APRA) is responsible for the Basel II implementation into the Australian financial environment, and has undertaken the integration of the framework into their current prudential obligations. They have provided Australian Depository Institutions (ADI’s) three years to integrate the structure into their operational processes which will allow for infrastructure enhancements and Basel II calculation preparations – both of which are extremely complex tasks. According to a recent article published in the Australian Financial Review, “*The Basel II banking accord has emerged as a \$500 million headache for the big four banks. Project costs at Westpac and National Australia Bank have doubled as compliance programs enter their fourth year*”⁶. This makes it distinctly apparent that the implementation of the Basel II framework is a large scale undertaking for financial institutions, and many have criticised APRA as to its

⁴ Basel Committee on Banking Supervision (2004), Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework, BIS, Updated November 2005, Pg 12

⁵ Ibid 2, Pg 46

⁶ Emma Connors with Eric Johnston, Banks double Basel II spending, Australian Financial Review, 11 April 2006

necessity. Consulting firm Accenture have estimated “*Most banks worldwide are expected to spend about US \$60 million to comply with the new accord, compared with just US \$2 million it costs for companies to comply with the US Sarbanes-Oxley regulations*”.⁷ While the original intention of implementing the accord in the Australian market place was to give Australian banks capital relief by reducing the amount of tier-one capital they have to retain to hedge against unplanned losses, the realised costs of instigating the accord have by far out-weighed these benefits albeit for the short term.

APRA’s justification for both the high implementation costs and the accord itself were outlined in Bernie Egan (Program Director Basel II) speech at the Australian Financial Review’s 5th Annual BankTech Conference in September 2004⁸. Mr Egan stated that the integration of the Basel II framework was justified on the grounds that the parameters set in the Basel I are too restrictive, and “*Basel II is intended to be more risk sensitive than Basel I. Some banks hold less regulatory capital because the Basel I methodology overstates their actual risks, while others will hold more because Basel I understates their risks*”. He implied that this mismatch is not acceptable in the Australian regulatory environment, and the implementation of the Basel II framework will help to solve this problem by “*providing incentives to institutions to reduce risk and to better measure and manage it*”⁹. Furthermore, he sought to imply that the costs of implementing the accord would be an expensive exercise but one that is warranted since the failings of the “*one size fits all approach of Basel I will be eliminated*”¹⁰. He also suggested that if banks claimed that the “*development costs are excessive, (then it) suggests to me that the internal models of some banks were not nearly as well developed as was previously asserted*”¹¹. Mr Egan concluded by stating that the benefits associated to ADI’s in more accurate pricing of risk will guarantee cost savings into the future.

It is in the authors opinion that while it is still arguable whether these cost benefits will ever be truly realised if the introduction of a future Basel framework occurs, the increased transparency in risk reporting by financial institutions coupled with the new capital adequacy reporting procedures will lead towards a stronger and more efficient

⁷ Ibid 4

⁸ Bernie Egan, APRA Update: Basel II Implementation in Australia, Australian Prudential Regulatory Authority, 14th September 2004, Pg 3

⁹ Ibid 6, Pg 7

¹⁰ Ibid 6, Pg 7

¹¹ Ibid 6, Pg 7

market. It is in this regard that the Basel II implementation does provide significant merit in dealing with financial institutions risk weighted reporting measures.

Conversely, APRA's justification and insistence on the implementation of the Basel II framework to the all Australian depository institutions comes at a significant cost that it does not have to directly bear. While this is undoubtedly the greatest disadvantage of implementing such a large scale prudential regulatory system, it is one that is both unavoidable and justifiable, and one that must be born by all Australian financial institutions to make the Australian marketplace more fair, orderly and transparent.

b) *Define credit risk and market risk and explain how these are dealt with under the current capital adequacy requirements for Australian banks.*

Credit Risk is defined as the “*risk due to uncertainty in a counterparty's ability to meet its obligations.*”¹² Its definition is fundamental to the Basel II framework and its principles define how the risk-weighted capital ratios are calculated. The denominator of the risk-weighted capital ratio encompasses both on and off balance sheet items, and its application to financial institutions is such that “*businesses with a high credit risk should attract a higher capital charges than low credit risk business*”¹³. Thus, for on balance sheet items this means applying the respective counterparty risk weights as defined by an external agency or, for Australian financial institutions, means as set out by APRA in its Australian Prudential Statement 112¹⁴. A positive relationship exists between the degree to which risk weighted assets are calculated compared to the overall capital charge. Thus, low risk assets are generally given risk weights less than 50% - which implies that these assets can be funded by around 4% capital - while high risk assets are given a larger counterparty risk weight - which implies their gross on-balance sheet weight is heavier and requires a higher amount of capital funding. Off-balance sheet credit risk items are calculated according to the “*nature of the product as well as the counterparty*”¹⁵. Typically, they are converted to on balance sheet assets by using relevant credit-conversion factors¹⁶.

Market Risk is the risk that is associated with changing market conditions and the adverse effects this can have on a financial institutions capital arrangements. Market risk is associated to the price fluctuations or volatility increases and decreases in the

¹² Credit Risk Explained, Revised 2003, http://www.riskglossary.com/link/credit_risk.htm, Viewed 16th April 2006

¹³ Ibid 2, Pg 35

¹⁴ APRA, Australian Prudential Statement 112, 1, September 2000

¹⁵ Ibid 2, Pg 37

¹⁶ Ibid 2, Pg 37

day-to-day market. It has a direct effect on both on and off balance sheet arrangements and its importance in effective capital adequacy management cannot be under estimated. Typically, Market Risk is further defined into four areas¹⁷ which seek to refine and proportionate relevant areas of the market environment into their own separate risk categories. The calculations surrounding Market Risk are divided into different methods, namely Standard Methodology and Internal Rating Based Approach¹⁸.

The Standard Methodology typically generates higher values for capital adequacy than that of the Internal Model Approach due to the fact that the Standard Methodology tends to be more conservative in its approach. The Standard Methodology assigns capital charges for each specific risk in a similar fashion to the counterparty risk-weighting procedures as outlined above. That is, *“a percentage of capital requirements are defined depending on the creditworthiness of the issuer and the maturity of the security”*. Conversely, the Internal Rating Based Approach tends to lead to a more advantageous situation for banks because it allows them to use their own ‘internal model’ which is based off value-at-risk principles. The choice of the most appropriate model is entirely up to the respective financial institution however the Internal Rating Based Approach is more advantageous for larger banks albeit that it must meet APRA requirements.

In conclusion, it is apparent that all Australian Banks must comply with risk-weighted capital requirements, and the calculations associated with Credit Risk and Market Risk are integral to this. Any additional charges resulting from Market Risk will force banks to increase the amount of balance sheet capital in order to meet APRA requirements. Under the new Basel II framework, the Market Risk charge may become lower because of the new credit risk rankings that will push these charges down.

¹⁷ Refer Appendix A 1.1

¹⁸ Ibid 2, Pg 43

- c) *Explain the standardised approach to measuring credit risk under Pillar 1 of Basel II and the alternative internal ratings based approach (IRB). Which method do you expect an Australian bank would prefer to use (note please discuss in relation to both large and small banks). What factors should bank management consider before deciding which method to adopt?*

As previously indicated, the First Pillar of the new Basel II framework specifies the minimum capital requirements that financial institutions must retain in respect of their capital to risk weighted assets. Capital adequacy is measured by

Total capital (unchanged)

Credit risk + market risk + operational risk = the bank's capital ratio (minimum 8%)

with the respective risk calculations being individualised as a component of the denominator. This is consistent with the fact that as a banks risk factors decreases, the denominator becomes smaller and therefore raises the banks capital ratio¹⁹. In calculating the Credit Risk component that is present in the denominator of the Capital Adequacy equation, there are two main approaches that are presented under the new Basel II Framework.

The first approach to measuring Credit Risk is the Standardised Approach, which although similar to the current framework, is more risk sensitive²⁰ and can therefore give a better indication of Credit Risk values. As outlined previously, the Standardised Approach allocates a risk-weight to on-and-off-balance sheet assets which then formulates an aggregated sum of risk-weighted asset values. The guide²¹ published by APRA relating to standard risk-weightings has offered some guidance into their expectation of relative risk-weightings, and reiterates the previously established view that a positive correlation is evident between the degree to which risk weighted assets are calculated compared to the overall capital charge. Therefore, a risk weight of 50% means that asset exposure is included in the risk weighted calculation at half of the assets value. This implies that the capital charge equated to this asset would be at 4%. The main difference between the new framework and the existing framework is that the risk weights are now rated by external credit agencies that have stricter guidelines²². Therefore, it would be prudent to suggest that banks of a smaller nature would adopt the standardised approach particularly because it is similar to the current framework which ensures that integration is easier, and more importantly

¹⁹ The reverse is also true

²⁰ Secretariat of the Basel Committee on Banking Supervision, The New Basel Capital Accord: and explanatory note, BIS, January 2001, Pg 3

²¹ Ibid 14

²² Ibid 20

because it costs significantly less than the second approach which has a higher cost of implementation and complexity.

The second approach is the Internal Ratings Based (IRB) approach, which as previously indicated, allows the banks to use their own internal framework to assess the credit risk associated with counterparties in accordance with predefined standards dictated by APRA. This will allow banks to predetermine the risk associated with counterparties and forecast their relative credit risk ratings. Furthermore, the IRB approach has also been split into two distinct categories which include the *Foundation Method* and the *Advanced Methodologies* method. In the first method banks estimate the probability smiles of defaults with supervisors providing all other details, and in the second method banks must develop a complex internal capital allocation system²³. Clearly, the adoption of either method is driven on the size of the banks balance sheet, the degree to which it wishes to fully analyse its risk portfolio and the amount of capital funding it is willing to invest in implementing the framework. It would be these three factors that would drive management into choosing one particular method over another.

- d) *Select a 2005 annual report from an Australian bank. Estimate the risk-weighted value of its on-balance sheet assets using the Basel II standardised approach. Clearly show how you have derived these estimates and any assumptions you need to make. Contrast your result with the 2005 value for risk-weighted assets given in the annual report.*

The National Australia Bank 2005 Annual report, while complex, provided an interesting medium to analyse the new Basel II Standardised Approach. Risk weightings were given proportionate values according to the Statement of Financial Position, and the Loans and Advances component of this report has been drilled down further. The use of the APRA Standardised Approach to Credit Risk²⁴ combined with the International Convergence of Capital Measurement and Capital Standards²⁵ report, has allowed the analysis of the new Basel II Standardised Risk Measurements possible.

²³ Ibid 20, Page 4

²⁴ Ibid 14

²⁵ Ibid 4

The National Australia Bank Statement of Financial Position provided the following figures for their Assets as at September 30 2005. The allocated risk weights according to the above-mentioned reports have also been included in this table to show the overall Basel II risk-weighted amounts.

Assets	Note	Risk Weights	2005	Risk-weighted amount (millions)		Average Risk-weighted Figures
Cash and liquid assets	1	0.00%	8,430	\$	-	0.00%
Due from other financial institutions	2	5.00%	15,477	\$	773.85	0.01%
Due from customers on acceptances	3	15.00%	27,627	\$	4,144.05	0.20%
Trading securities	4	20.00%	15,957	\$	3,191.40	0.21%
Trading derivatives	5	75.00%	13,959	\$	10,469.25	2.56%
Available for sale securities	6	50.00%	3,857	\$	1,928.50	0.31%
Investment securities	7	25.00%	7,466	\$	1,866.50	0.15%
Investments relating to life insurance business	8	30.00%	50,500	\$	15,150.00	1.48%
Loans and advances	9	98.95%	260,053	\$	257,322.44	82.90%
Regulatory deposits	10	0.00%	118	\$	-	0.00%
Property, plant and equipment	11	10.00%	1,974	\$	197.40	0.01%
Income tax assets	12	0.00%	1,530	\$	-	0.00%
Goodwill	13	10.00%	522	\$	52.20	0.00%
Other assets	14	100.00%	12,043	\$	12,043.00	3.92%
Total Assets			419,588		307,138.59	91.75%

Note

1. The Cash and Liquid assets totalled \$8,430 million and the risk weightings assigned to these extremely liquid and low volatile assets is 0%. The justification behind this assigning is the fact that cash holds no risk on the balance sheet and its Risk Weight under the new Basel II policies accurately reflects this fact.
2. The total amount Due from other financial Institutions typically includes assets such as money market loans and similar derivatives, and its risk assigned weighting is 5%. These assets are highly liquid (which is reflected on their high position on the balance sheet) and there overall risk weight to the NAB is extremely low since they are always highly secured short term loans and can almost always be disposed of prior to maturity.
3. The total amount Due from Customers on acceptances includes assets such as very short term loans which are highly secured and therefore carry low risk – the author has assigned a risk weighting of 15%. This is to primarily reflect the fact that this type of asset is only ever provided to other highly credit proven customers in Australian currency.

4. Trading Securities are securitized investments that are assumed to be publicly traded. These assets would include highly securitized assets as well as assets that exhibit some degree of market risk. The overall assigning of risk is 20% which accurately reflects the requirements that are set out in APS 116 Capital Adequacy: Market Risk²⁶ as well as the Basel II Standardised Risk Weightings.
5. Trading derivatives has a risk weighted value of 75% of its 2005 balance due to the risk and volatility aspects associated with trading derivatives, and also the added risk weighting due to the \$360 Million Trading Scandal that occurred in the National Bank during 2004. It should be noted that this figure may reduce as the NAB completes its new APRA requirements for Securities Analysis.
6. The Total Amount Available for the Sale of Securities involves a number of different components that are complex in nature. Risk factors included in the sale of securities include country risk, exchange rate & currency risk, liquidity risk, interest rate risk and commodity risk. It is therefore expected that these assets will demand a higher amount of risk weighted proportioning on the balance sheet. A 50% risk weighting has been assigned for these types of assets since there are a mixture of complex risk weights.
7. Investment Securities has been assigned a risk weighting of 25% which is concurrent with the fact that Investment securities are longer term than assets in the Available for Sale Securities portfolio. This reduces the overall amount of risk since there liquidity horizon is much longer and allows for deeper analysis before sale. Conversely, Investment Securities may also contain overseas unlisted assets which still do retain a higher risk proportion of Note 6 risk factors and therefore increases the overall risk weighting of this section more.
8. Investments relating to life insurance business are quite a substantial part of the NAB's Asset portfolio at \$50,500 million, and an overall Risk Weighting of these assets is allocated at 30%. While the Standardised approach indicates that insurance should be allocated a 20% overall risk weighting, the higher volatility of the life insurance industry and a higher allocation for unrated claims (which are judged at a higher risk level) increased the overall risk weighting of these assets.
9. *See Next Page*
10. Regulatory deposits carry a 0% risk allocation since they are held for the RBA and regulatory authorities around Australia.
11. Property, plant and equipment have been assigned a lower risk weighting of 10% since they are highly securitized assets that contain a mortgage over the asset itself. The risk weighting of 10% is reflective of credit default and market risks factors such as depreciation and lower liquidity.

²⁶ APRA, Australian Prudential Statement 116: Market Risk, 1, September 2000

12. Income tax assets bear no risk as they are assets that are guaranteed by the RBA and therefore are at 0%.
13. Goodwill has been allocated a 10% risk weighting due to the fact that the only true risk that it presents is the risk that it is overstated. Its overall proportion of the Average-Risk weighting is extremely low at 0.00% as can be seen above.
14. Other Assets has been assigned a risk weight of 100% as per the requirement set out in the new Basel II framework. This is indicative of the fact that these assets include claims held from Australian and international corporate counterparties (including insurance and securities companies) and commercial public sector entities.

Note 9

		Risk			
Australia	Note	Weights	2005	Risk-weighted amount	Average Risk-weighted Figures
Overdrafts	9.01	75.00%	5,036.00	3,777.00	1.32%
Credit card outstandings	9.02	75.00%	4,194.00	3,145.50	1.10%
Lease finance	9.03	75.00%	9,488.00	7,116.00	2.50%
Housing loans	9.04	45.00%	105,419.00	47,438.55	9.98%
Other term lending	9.05	100.00%	43,113.00	43,113.00	20.16%
Other lending	9.06	150.00%	3,367.00	5,050.50	3.54%
				0.00	0.00%
				0.00	0.00%
Overseas					
Overdrafts	9.07	100.00%	7,266.00	7,266.00	3.40%
Credit card outstandings	9.08	100.00%	2,575.00	2,575.00	1.20%
Lease finance	9.09	100.00%	6,418.00	6,418.00	3.00%
Housing loans	9.10	75.00%	34,062.00	25,546.50	8.96%
Other term lending (1)	9.11	150.00%	41,631.00	62,446.50	43.79%
Total Loans and Advances				213,892.55	98.95%

Subnote

- 9.01 The risk weighting for overdrafts has been allocated at 75% of the retail portfolio which is a requirement of the Basel II regulatory retail portfolio. This figure represents 1.54% of the total Average Risk-weight of the Loan and Advances portfolio.
- 9.02 Credit card out standings has also been allocated a 75% risk weighting according to the Basel II regulatory retail portfolio requirements regarding revolving credit and lines of credit.
- 9.03 Lease Financing retains considerable weight in the NAB's lending portfolio which is mainly due to the companies' strong position within the Car Leasing Industry. This portfolio is also allocated a 75% risk weighting of NAB's overall lending position as per the Basel II requirements.
- 9.04 Housing Loans are the largest component of the NAB's lending portfolio at \$105,419 million and have been allocated a 45% risk weighting. While it could be assumed that this entire portfolio is secured by mortgages on residential property that will/or are occupied by the borrower (or are rented) themselves and assigned a 35% risk weighting as stated in the Basel II requirements - the author has not done so. It would not

be sensible to make such an assumption of the NAB's largest portfolio, and a further 10% (at a minimum) must be assigned to this category to include borrowers that retain a higher credit risk, and for loans that are not completely secured by mortgages.

- 9.05 Other Term lending has been allocated a 100% risk weighting to encompass commercial loans secured by mortgages and other product loans included in the NAB's product line. This is concurrent with the Basel II requirements and is reflective of the problems associated with Commercial Lending in the past, as well as encompassing a higher level risk allocation for other NAB product lines.
- 9.06 Other Lending is allocated a risk weighting of 150% due to the fact that it is not known fully what it is. This is concurrent with the Basel II guidelines and may encompass past due lending and other higher-risk categories.
- 9.07 Overseas Overdrafts retain a 100% risk allocation because of the high risk involved in overseas lending and market risk factors.
- 9.08 Overseas Credit Cards outstanding retain a 100% risk allocation because of higher risk of the counterparty defaulting and the difficulty involved in recovering this debt. Market risk factors are more volatile in overseas credit card lending which must also be reflective in this risk weighting.
- 9.09 Overseas Lease Finance retains a 100% risk allocation because of the assumed difficulty involved in securing the asset base as well as market risk factors.
- 9.10 Overseas Housing Loans have been allocated a 75% risk weighting due to the fact that not all lending activity in this portfolio will be secured by mortgages. The higher risk of counterparty defaulting and the market, currency, exchange rate and interest rate risks involved in securing these assets increase the risk of this type of lending substantially.
- 9.11 Overseas Other Term Lending has been allocated a 150% risk weighting due to the fact that this type of lending is not only unknown, but also contains substantial market, currency, interest rate and exchange rate risks. This represents the largest risk weighting the NAB's portfolio and reflects a 43.79% average risk-weighted component of the NAB's lending portfolio.

Thus, it can be seen that the predicted total increase of \$64,964.59 million is expected under the new Basel II framework compared to the current risk-asset weightings.

	Risk-weighted amount (millions)	
National Australia Bank 2005 Total Risk-Weighted Assets	\$	242,174.00
Basel II NAB Risk-Weighted Assets	\$	307,138.59
Total Increase under Basel II Framework	\$	64,964.59

It should be noted that this figure will be substantially different from the figure that is ultimately derived by the NAB, due to the fact that they will undertake the IRB approach which is significantly more accurate in its calculation of risk-weighted assets. However, it is clearly seen in the above derivation of the balance sheet that the Basel II framework seeks to increase the total amount of risk-weighted assets and lower the NAB's current Capital Adequacy Ratio. By doing this, it will require the NAB to increase its overall asset base to ensure that its capital adequacy ratio remains at the 8% as is the minimum APRA requirement.

- e) *For operational risk measurement under Basel II explain the difference between the standardised approach and the advanced measurement approach.*

The new Basel II framework has introduced an Operational Risk component into the Capital Adequacy requirements. There are three methods to calculate Operational Risk within the new framework which include the Basic Indicator Approach, Standardised Approach, and Advanced Measurement Approach (AMA). In comparing the Standardised Approach to the AMA, it would be prudent to analyse the Basic Indicator Approach to begin with since both other methods are derived off this initial method. The Basic Indicator Approach measures the operational risk and capital charge together to form a single figure which is consequently, the banks gross annual revenue²⁷. The capital charge figure is calculated by averaging the last three years figures as a fixed percentage of positive gross annual income²⁸.

The Standardised Approach is a variation of the Basic Indicator Approach in that it uses a similar calculation but divides the activities of the banks into eight distinct business lines²⁹. Within each business line, the capital charge is measured by multiplying a fixed percentage business line indicator (specified by Basel II) by its annual gross income. The total capital charge then becomes the three-year average of these calculations. Like capital losses, negative capital charges can be offset against

²⁷ Ibid 4, Pg 140

²⁸ The calculation ignores years that are null or negative.

²⁹ Ibid 4, Pg 142

positive charges but they do not extend across a financial year. While the Basic Indicator Approach and the AMA complement each other, the AMA is significantly different.

Under this approach, the banks internal risk calculation uses both quantitative and qualitative measurements to determine the capital charge³⁰ and requires significantly more infrastructure requirements. The bank needs to ensure that it meets the minimum regulatory requirements preset by APRA, as well as satisfying the board and senior management that the bank has adequate operational management systems in place to ensure that it can use the AMA effectively in all business lines and audit functions. The AMA has significantly more reporting and supervisory aspects than the Standardised Approach and would only be used by banks that wish to adopt in-depth operational risk methodology.

Consequently, the main differences between the Standardised and AMA's include the level of regulatory monitoring and the degree to which the AMA is credible and appropriate. A bank that adopts the AMA must also have a complex yet flexible infrastructure system in place to ensure that it can estimate unexpected losses on internal and external data, as well as scenario and internal risk factor analysis – a distinct difference from the Standardised Approach³¹. It must also be capable of supporting operational risk factors across all business units in a manner that creates incentives to improve the business line operational risk management system as a whole.

f) *Based on your results from section (d) and other material, please comment on the likely impact of Basel II implementation on Australian banks.*

The likely impact of the Basel II implementation in Australia is two-fold. Firstly, it is apparent that the larger and more sophisticated risk measurements of larger banks in the IRB approach will mean that they have a stronger view of their risk portfolio levels and will allow them to move towards true pricing of risk. This will permit these banks to increase their lending to higher risk borrowers at higher level interest rates. It must be noted that this in itself is a fundamental flaw of the Basel II Framework because this may not be an option for smaller providers that cannot afford the infrastructure costs involved in implementing the IRB approach, and it will result in

³⁰ Ibid 4, Pg 143

³¹ Ibid 4, Pg 146

forcing these providers into using the only other approach offered by Basel II – namely, the Standardised Approach as seen in *section d* of this paper.

Since this approach is more conservative than the IRB approach, it will mean that these smaller providers will not be able to lend capital to higher risk customers because their risk analysis systems will not be specific enough to encompass the breakdown required. The degree to which this may drive competition wedges in the Australian banking environment is unknown. In a review of Mr John Laker's comments presented to the London School of Economics on the 6th April 2006³², he suggested³³ that the introduction of Basel II will not affect the competitive landscape of smaller and larger lending providers and that there have always been differences in ADI capital ratios in Australia. While Mr Laker's comments are undoubtedly true, he failed to note whether the implementation of the Basel II framework will increase this gap even further, and cause a direct change to the competitive environment in Australia.

The implementation of the Basel II framework into Australia is more than likely to ensure that banks will have to more stringently meet their capital adequacy capitalisation requirements, and ensure that their underlying credit risks are within the predefined regulatory limits. While this is definitely a positive step in prudential regulation, it may also have the more serious impact of creating a highly pronounced business cycle. It must be noted that in Mr Laker's speech highlighted previously, he does not consider this aspect at all. On review of the credit risk model³⁴ proposed in the Basel II framework, it suggests that compliance with Pillar 1 must use a one year time cycle. The consequence of this is that it means banks will have to reduce (increase) their lending during a downturn (upturn) in the business cycle, and forecast higher losses (gains) which may further increase the length of the downturn (upturn). If this is not encompassed by APRA within the Standardised or IRB Approaches, then it could extend the overall business cycle in Australia and be detrimental to the financial environment as a whole.

Despite these concerns, the overall implementation of the Basel II framework should be seen as a positive step for the Australian financial system and this is the entire

³² John F Laker, Basel II – Observations from Down Under, APRA, 6th April 2006

³³ Refer to Appendix 1.2 And

³⁴ Ibid 4, Pg 79 - 82

purpose of its implementation. The changes that have taken place so far in the integration of the Basel II framework are a positive direction for Australian banks, and should not be seen as a tool to increase overall lending capabilities because of increased risk management. It will be APRA's responsibility to ensure that Pillar One obligations are strongly regulated by policies set in place in Pillar Two and Pillar Three. It is only through this stringent prudential regulation that the Basel II framework will prove decisively successful, and ensure that its fundamental purpose of increasing overall risk management will properly occur.

Appendix A

1.1

Four Areas of Market Risk³⁵

1. *Exchange Rate Risk* - The uncertainty of transactions that occur in foreign currency and the risk associated with their conversion back into the Australian dollar. This is particularly important for Australian banks that have large amount off-balance sheet assets as they must maintain and convert any profits into our currency. The more volatile the exchange rate risk for an Australian financial institution between the Australian dollar and the counterparty currency, the greater the risk of exchange rate difference eroding balance sheet value.
2. *Commodity Price Risk* – The risks associated with commodity pricing levels and the banks subsequent commodity position on its balance sheet. Typically, this is composed of derivative instruments where the underlying product is the commodity, but in the Australian environment the physical commodity is also regularly held because of the strong agricultural market. Any substantially volatility in the price of commodity will affect the balance sheet.
3. *Equity Price Risk* – The financial institutions underlying portfolio of financial instruments and the associated change in market value of these instruments. Direct correlation between the market value and the institution equity portfolio will affect the balance sheet.
4. *Interest Rate Risk* – The change in yields associated with debt instruments is indicative of interest risk. The effect of these instruments on the balance sheet is adverse if interest rates rise, vice-versa if they fall.

1.2

John F Laker, Basel II – Observations from Down Under, APRA, 6th April 2006, Pg 4
“Many smaller ADIs have expressed concerns that this outcome will, nonetheless, change their competitive position vis-à-vis the larger banks. We in APRA, however, do not view Basel II as a vehicle for changing the competitive landscape but rather as an opportunity to better align regulatory capital with the risks that ADIs assume and how well those risks are managed. It is also worth noting that there have long been differences in the average capital ratios of different sectors of the ADI industry in Australia.”

³⁵ Ibid 2, Page 42

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