Case study on Basel III Capital, Buffers and Leverage Ratio

The case study on Basel III Capital, Buffers and Leverage Ratio consists of four tasks. Working in groups, you are required to focus on the issues raised in each task.

Task 1

Trust Bank is the largest bank in Moonland. The Supervisory Authority of Moonland has recently given directions to all banks operating in the country to implement Basel III. The Head of Supervision has asked the department to prepare bank-wise analysis of the impact of Basel III implementation. The senior analyst in the supervision department has compiled the following data in respect of Trust Bank.

Table 1

Particulars	Amount (millions of Moonland Dollars)
Common Equity Tier 1[1]	110
Additional Tier 1[2]	110
Tier 2 capital instruments (as shown in Balance Sheet)	240
Risk-weighted Assets	5,000
Total Assets (as shown in Balance Sheet)	14,000
Goodwill (as shown on the balance sheet)	20

(A) Basel II Capital Ratios

Based on the above information, please calculate:

(i) Basel II capital ratios *if there is no goodwill*

(i) Basel II capital ratios *after taking into account goodwill shown on the balance sheet*

Please use Table 2 for the following calculations under Basel II:

- (a) Core capital ratio or CET1 ratio
- (b) Additional Tier 1 capital ratio
- (c) Total Tier 1 capital ratio
- (d) Tier 2 capital ratio
- (e) Overall Basel II capital ratio

(B) Basel III Capital Ratios:

(i) Please use Table 3 for calculating the following ratios as per **Basel III definition of capital:**

- (a) CET1 ratio
- (b) Additional Tier 1 ratio
- (c) Total Tier 1 ratio
- (d) Tier 2 ratio
- (e) Overall Basel III capital ratio
- (f) Leverage Ratio

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[1] Basel II does not use the term CET1. Instead, it uses the term "Core capital (basic equity or Tier 1)"

[2] The term used in Basel II text for Additional Tier 1 is "Subordinated Term debt (limited to 50%) of Tier 1"

(ii) According to you, which business activities of banks are most likely to be impacted by the Leverage ratio requirement?

Table 2

	Amount (USD Mn) as shown on balance sheet	Basel II capital & ratios (assuming no goodwill)		Basel II capital & ratios (with goodwill)	
		Amount	Ratio	Amount	Ratio
CET1	110				
Additional Tier 1	110				
Total Tier1 Capital	220				
Tier 2 capital	240				
Total Capital					
Risk weighted Assets	5,000				
Total Assets (As per B/S)	14000				
Goodwill	20				

Table 3

	Amount shown on balance sheet	Basel III capital (Amount)	Basel III capital (Ratios)
CET1	110		
Addl. T1	110		
Total Tier 1	220		
Tier 2 capital	240		
Total capital			
Leverage Ratio			
Risk weighted Assets	5000		
Total Assets (As per B/S)	14000		
Goodwill	20		

Task 2

ABC Bank is one of the very well managed banks in Moonland. It follows prudent policies and it prides itself on the high-quality capital that it maintains on an ongoing basis. ABC Bank has a CET 1 ratio of 8% and its total capital ratio is also 8%. ABC Bank's capital consists of only CET1 elements. Moonland has implemented Basel III framework. The details of the capital conservation buffer regime in Moonland are given below:

Table 4: Individual bank minimum capital conservation standards

Amount by which a Bank's capital exceeds the minimum requirement in terms of a percentage of the size of the conservation range	Common Equity Tier 1 Ratio	Minimum Capital Conservation Ratios (as % of earnings)
Within first quartile of buffer [< 25%]	4.5% - 5.125%	[100%]
Within second quartile of buffer [25% - 50%]	> 5.125% - 5.75%	[80%]
Within third quartile of buffer [50% - 75%]	> 5.75% - 6.375%	[60%]
Within fourth quartile of buffer [75% - 100%]	> 6.375% - 7.0%	[40%]
Above top of buffer [> 100%]	> 7.0%	[0%]

Given the fact that the overall Basel III capital ratio of ABC Bank is 8% (in the form of CET1), can it be subjected to any restrictions on distributions under the capital conservation buffer regime, (requiring CET1 level of only 7%)? Please give reasons in support of your answer.

Task 3

During on-site exams in March 2020, the Inspecting Officer of Prudent Bank observes that the bank has a CET1 ratio of 6.5% as against the reported CET1 ratio of 7.1%. What supervisory action, if any, will you take? Is there any supervisory action that needs to be taken in the year 2021?

If the macroprudential authority had put in place a countercyclical capital buffer requirement of 2.5%, what impact will it have on Prudent Bank?

Task 4

Reliance Bank has its Head office in Moonland. The Macroprudential Authority of Moonland has implemented a countercyclical capital buffer (CCyB) of 2%. Reliance Bank operates in several other countries, two of which have imposed a countercyclical capital buffer requirement of 1% (Sunland) and 1.5% (Marsland). The private sector risk-weighted assets of Reliance Bank together with the buffer requirements in respective counties is given in Table 5.

Table 5

	Moonland	Sunland	Marsland	Total
Private sector credit (RWA) (Including non-bank financial sector)	60	25	15	100
CCyB Buffer	2%	1%	1.5%	?

Please answer the following:

1. What is the total countercyclical capital buffer requirement for Reliance Bank?

2. Can Marsland prescribe a CCyB of 3.5% (The upper limit is 2.5% as per Basel III)? If your answer is yes, what would be the implications for Reliance Bank?

3. What should the Moonland Authority do as the home supervisor for Reliance Bank, if Marsland raises CCyB buffer to 2.5% but does not pre-announce it by 12 months?