

Bank & Financial Institution Modeling

– Certification Quiz Questions

Module 1 – Bank Overview: Accounting, Valuation, and Regulations

1. The following two questions are based on the screenshot shown below this question. Please review this bank’s simplified Balance Sheet and make the required calculations.

QUESTION #1: What is the correct value for the Net Interest Income at the top of the company’s Income Statement? Use the Beginning balances in the calculations.

Commercial Bank - Balance Sheet:				
ASSETS:	Beginning:		Interest Rate:	Risk Weight:
Cash:	\$ 150.0		0.0%	0.0%
Available for Sale Securities:	250.0		3.0%	100.0%
Other Securities:	175.0		2.0%	100.0%
Gross Loans:	1,500.0		8.0%	90.0%
Allowance for Loan Losses:	(15.0)			
Net Loans:	1,485.0			
Goodwill & Other Intangible Assets:	110.0		0.0%	0.0%
Other Assets:	100.0		4.0%	100.0%
Total Assets:	\$ 2,270.0			
LIABILITIES & EQUITY:	Beginning:		Interest Rate:	
Liabilities:				
Deposits:	\$ 1,500.0		2.0%	
Senior Debt:	250.0		4.0%	
Subordinated Notes:	50.0		8.0%	
Other Borrowings:	100.0		5.0%	
Convertible Bonds:	50.0		0.0%	
Total Liabilities:	1,950.0			
Equity:				
Common Stockholders' Equity:	300.0			
Preferred Stock:	20.0		10.0%	
Total Equity:	320.0			
Total Liabilities & Equity:	\$ 2,270.0			

- a. \$84.0 million.
 - b. \$86.0 million.
 - c. \$74.0 million.
 - d. \$72.0 million.
2. For reference, the screenshot from the previous question is shown below this question as well. Please use this same image to answer this question:

QUESTION #2: Calculate the bank's Common Equity Tier 1 (CET 1), Tier 1 Capital, and Tier 2 Capital, and select the correct values from the choices below. Assume that 50% of the bank's Allowance for Loan Losses qualifies for inclusion in Tier 2 Capital.

Commercial Bank - Balance Sheet:				
ASSETS:	Beginning:		Interest Rate:	Risk Weight:
Cash:	\$ 150.0		0.0%	0.0%
Available for Sale Securities:	250.0		3.0%	100.0%
Other Securities:	175.0		2.0%	100.0%
Gross Loans:	1,500.0		8.0%	90.0%
Allowance for Loan Losses:	(15.0)			
Net Loans:	1,485.0			
Goodwill & Other Intangible Assets:	110.0		0.0%	0.0%
Other Assets:	100.0		4.0%	100.0%
Total Assets:	\$ 2,270.0			
LIABILITIES & EQUITY:	Beginning:		Interest Rate:	
Liabilities:				
Deposits:	\$ 1,500.0		2.0%	
Senior Debt:	250.0		4.0%	
Subordinated Notes:	50.0		8.0%	
Other Borrowings:	100.0		5.0%	
Convertible Bonds:	50.0		0.0%	
Total Liabilities:	1,950.0			
Equity:				
Common Stockholders' Equity:	300.0			
Preferred Stock:	20.0		10.0%	
Total Equity:	320.0			
Total Liabilities & Equity:	\$ 2,270.0			

- a. CET 1 = \$210.0 million; Tier 1 = \$210.0 million; Tier 2 = \$107.5 million.
 - b. CET 1 = \$190.0 million; Tier 1 = \$210.0 million; Tier 2 = \$57.5 million.
 - c. CET 1 = \$190.0 million; Tier 1 = \$210.0 million; Tier 2 = \$115.0 million.
 - d. CET 1 = \$190.0 million; Tier 1 = \$210.0 million; Tier 2 = \$107.5 million.
3. A bank's CET 1 Ratio is 10.0%, its Liquidity Coverage Ratio (LCR) is 105.0%, and its Net Stable Funding Ratio (NSFR) is 95.0%. What's the BEST way for this bank to solve this problem?

- a. Raise additional Equity via a follow-on offering; such a deal would boost all three ratios.
 - b. Issue 10-year Subordinated Notes and keep the proceeds in Cash; this would boost the LCR and NSFR.
 - c. Divest Loans and Deposits simultaneously; this would boost all three ratios.
 - d. Solicit additional Deposits from customers and keep the proceeds in Cash; this would boost the NSFR and might increase the LCR slightly.
4. Consider the screenshot shown below this image, which shows a bank's Beginning and Ending Loan Loss Reserve.

In this same period, the bank also issues \$103.0 in new Gross Loans. Which of the following statements is TRUE regarding the bank's presentation of these results on its financial statements?

Loan Loss Reserve Calculations:	
Annual Period:	
Beginning Reserve Balance:	\$ 15.0
Net Charge-Offs Calculation:	
(-) Gross Charge-Offs:	(7.0)
(+) Recoveries:	4.0
Net Charge-Offs:	(3.0)
(+) Additions to Provisions:	8.0
Ending Reserve Balance:	\$ 20.0

- a. The Net Charge-Offs appear on the Income Statement as an expense in the current period.
- b. The Gross Loans balance on the Balance Sheet increases by \$103.0 since it reflects the previous balance plus all Loan issuances in this period.
- c. The Net Loans balance on the Balance Sheet increases by \$95.0 since it reflects the Loan issuances, Net Charge-Offs, and Additions to Provisions.

- d. Both the Net Charge-Offs and Additions to Provisions appear as explicit non-cash add-backs on the Cash Flow Statement.
 - e. The “Additions to Provisions” line item is embedded within Net Charge-Offs on the Income Statement, but it’s a non-cash add-back on the Cash Flow Statement.
5. You’re valuing a commercial bank. Currently, it has a Return on Tangible Common Equity (ROTCE) of 10% and trades at a P / TBV multiple of 1.5x. The median ROTCE for this bank’s peer companies is between 9% and 11%, and the median P / TBV multiple is between 2.0x and 2.5x. Why can you NOT necessarily conclude that this bank is undervalued?
- a. The bank you’re valuing might have a significantly lower CET 1 Ratio than its comparable public companies.
 - b. The bank you’re valuing might have a different business model than the peer companies (e.g., it might be more or less dependent on Net Interest Income).
 - c. The bank you’re valuing might have a much lower Dividend Payout Ratio than the comparable public companies.
 - d. All of the above.