

THE HONG KONG POLYTECHNIC UNIVERSITY  
HONG KONG COMMUNITY COLLEGE

**Subject Title** : Financial Markets and Institutions      **Subject Code** : CCN2114

**Session** : Semester Two, 2017/18

**Numerical Answers**

**Question C1**

There would be no impact on net interest income during the first year. However, net interest income would decrease in the second year:

Year 1 interest income = \$50m x .10 =	\$5.0m
Year 1 interest expense = \$50m x .08 =	\$4.0m
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Net interest income	\$1.0m
Year 2 interest income = \$50m x .10 =	\$5.0m
Year 2 interest expense = \$50m x .09 =	\$4.5m
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Net interest income	\$0.5m (reduced 50%) < \$1.0m

**Question C2**

Combined ratio (after dividends) = 65.5% + 22.3% + 15.0% = 102.80%.  
In order to be profitable, the yields on investments have to be greater than 2.80%.

**Question C3**

- (a) Financing gap = average loans - average deposits (0.5) = \$40m - \$20 m = \$20 million.
- (b) Financing requirement = financing gap + liquid assets (0.5) = \$20m + \$12 m = \$8 million

**Question D2**

- (a) CET1 ratio = (total capital)/risk-weighted assets  
= (20+5)/ ((10+10) x 0%+ 15x20%+ 20x50%+(110+90+150)x100%)  
= 25/363  
= 6.89%  
which is greater than 6.5% as required – well capitalized
- (b) Tier 1 ratio = (25 + 0 (PS))/ RWA 363 = 6.89%
- (c) Tier II capital = 0

(d) Total capital ratio =  $25 + 0 \text{ (PS)} + 0 \text{ (Sub Deb)} / \text{RWA } 363 = 6.89\%$

(e) Leverage ratio = total capital/ (Total assets + **OBS items**)  
=  $(20+5)/(255+150)$   
= 6.2%

(f) 6.2% >5% adequately capitalized