

Reading: Odomirok.19-RBC
Model: n/a
Problem Type: Calculate RBC charges R_1 and R_2

(RBC - R1 R2) 1a-Question

Given **Fixed Income Assets**

| asset | amount issued by | | | RBC factor |
|-----------------------------|------------------|---------------|-----------|------------|
| | amount | TOP 10 issuer | # issuers | |
| cash & equivalents | 1,890 | 0 | 0 | 0.0030 |
| mortgage bonds | 3,500 | 0 | 28 | 0.0500 |
| U.S. government | 53,900 | 10,800 | 51 | 0.0000 |
| class 01 unaffiliated bonds | 303,400 | 121,400 | 300 | 0.0030 |
| class 02 unaffiliated bonds | 0 | 0 | 0 | 0.0100 |
| class 03 unaffiliated bonds | 37,900 | 30,300 | 91 | 0.0200 |
| class 04 unaffiliated bonds | 3,000 | 1,800 | 40 | 0.0450 |
| class 05 unaffiliated bonds | 2,400 | 1,900 | 23 | 0.1000 |
| class 06 unaffiliated bonds | 1,000 | 400 | 13 | 0.3000 |

Equity Assets

| asset | amount issued by | | | RBC factor |
|------------------------------------|------------------|---------------|-----------|------------|
| | amount | TOP 10 issuer | # issuers | |
| other admitted unaff. common Stck. | 0 | 0 | -- | 0.1500 |
| Schedule BA assets | 7,600 | 0 | -- | 0.2000 |
| real estate | 2,800 | 1,100 | -- | 0.1000 |
| class 01 unaffiliated Prfd. Stck. | 240 | 190 | -- | 0.0030 |
| class 02 unaffiliated Prfd. Stck. | 40 | 0 | -- | 0.0100 |
| class 03 unaffiliated Prfd. Stck. | 250 | 100 | -- | 0.0200 |
| class 04 unaffiliated Prfd. Stck. | 430 | 260 | -- | 0.0450 |
| class 05 unaffiliated Prfd. Stck. | 330 | 70 | -- | 0.1000 |
| class 06 unaffiliated Prfd. Stck. | 110 | 0 | -- | 0.3000 |

Hint *Items highlighted in red are NOT subject to the ACC or BSF.*

$$R_1 = 3,819$$

$$R_2 = 2,022$$

| | | | | | | |
|-------|---|-------|----------------------------|-----|---|-----|
| R_1 | = | basic | + | BSC | + | ACC |
| | = | 2,524 | + | 418 | + | 877 |
| | = | 3,819 | <== final answer for R_1 | | | |

$$\text{basic} = \text{SUM [(asset values subject to basic charge) x (RBC factor)]}$$

$$= 2,524$$

$$\text{BSC} = \text{BSF} \times (\text{total R1 charges for bonds subject to BSF charge})$$

$$= 0.178 \times 2,343$$

$$= 418$$

BSF calc:

| # issuers = 467 | # issuers (1) | weights (2) | (3)=(2)x(1) |
|--------------------|------------------|----------------|--------------|
| first 50 | 50 | 2.5 | 125.0 |
| next 50 | 50 | 1.3 | 65.0 |
| next 300 | 300 | 1.0 | 300.0 |
| > 400 | 67 | 0.9 | 60.3 |
| total | 467 | | 550.3 |

$$\text{BSF} = \frac{550.3}{467} - 1$$

$$= 0.178 \quad <== \text{substitute this value above as shown}$$

$$\text{ACC} = \text{SUM [(asset values subject to ACC for TOP 10 issuers) x (RBC factor)]}$$

$$= 877$$

| | | | | |
|-------|---|-------|----------------------------|-----|
| R_2 | = | basic | + | ACC |
| | = | 1,891 | + | 131 |
| | = | 2,022 | <== final answer for R_2 | |

$$\text{basic} = \text{SUM [(asset values subject to basic charge) x (RBC factor)]}$$

$$= 1,891$$

$$\text{ACC} = \text{SUM [(asset values subject to ACC for TOP 10 issuers) x (RBC factor)]}$$

$$= 131$$

Reading: Odomirok.19-RBC
Model: n/a
Problem Type: Calculate RBC charges R_1 and R_2

(RBC - R1 R2) 2a-Question

Given **Fixed Income Assets**

| asset | amount issued by | | | RBC factor |
|-----------------------------|------------------|---------------|-----------|------------|
| | amount | TOP 10 issuer | # issuers | |
| cash & equivalents | 1,620 | 0 | 0 | 0.0030 |
| mortgage bonds | 2,900 | 600 | 43 | 0.0500 |
| U.S. government | 50,500 | 0 | 80 | 0.0000 |
| class 01 unaffiliated bonds | 375,000 | 225,000 | 380 | 0.0030 |
| class 02 unaffiliated bonds | 43,700 | 35,000 | 190 | 0.0100 |
| class 03 unaffiliated bonds | 31,300 | 6,300 | 116 | 0.0200 |
| class 04 unaffiliated bonds | 0 | 0 | 0 | 0.0450 |
| class 05 unaffiliated bonds | 2,100 | 800 | 37 | 0.1000 |
| class 06 unaffiliated bonds | 1,000 | 800 | 12 | 0.3000 |

Equity Assets

| asset | amount issued by | | | RBC factor |
|------------------------------------|------------------|---------------|-----------|------------|
| | amount | TOP 10 issuer | # issuers | |
| other admitted unaff. common Stck. | 0 | 0 | -- | 0.1500 |
| Schedule BA assets | 5,800 | 1,200 | -- | 0.2000 |
| real estate | 2,500 | 500 | -- | 0.1000 |
| class 01 unaffiliated Prfd. Stck. | 160 | 30 | -- | 0.0030 |
| class 02 unaffiliated Prfd. Stck. | 30 | 10 | -- | 0.0100 |
| class 03 unaffiliated Prfd. Stck. | 180 | 0 | -- | 0.0200 |
| class 04 unaffiliated Prfd. Stck. | 440 | 0 | -- | 0.0450 |
| class 05 unaffiliated Prfd. Stck. | 320 | 0 | -- | 0.1000 |
| class 06 unaffiliated Prfd. Stck. | 100 | 80 | -- | 0.3000 |

Hint *Items highlighted in red are NOT subject to the ACC or BSF.*

$$R_1 = 3,641$$

$$R_2 = 1,786$$

| | | | | | | |
|-------|---|-------|---|-----|---|-----|
| R_1 | = | basic | + | BSC | + | ACC |
| | = | 2,848 | + | 207 | + | 586 |
| | = | 3,641 | <i><== final answer for R_1</i> | | | |

$$\text{basic} = \text{SUM [(asset values subject to basic charge) x (RBC factor)]}$$

$$= 2,848$$

$$\text{BSC} = \text{BSF} \times (\text{total R1 charges for bonds subject to BSF charge})$$

$$= 0.077 \times 2,698$$

$$= 207$$

BSF calc:

| # issuers = 735 | # issuers (1) | weights (2) | (3)=(2)x(1) |
|--------------------|------------------|----------------|--------------|
| first 50 | 50 | 2.5 | 125.0 |
| next 50 | 50 | 1.3 | 65.0 |
| next 300 | 300 | 1.0 | 300.0 |
| > 400 | 335 | 0.9 | 301.5 |
| total | 735 | | 791.5 |

$$\text{BSF} = \frac{791.5}{735} - 1$$

$$= 0.077 \quad \text{\textit{<== substitute this value above as shown}}$$

$$\text{ACC} = \text{SUM [(asset values subject to ACC for TOP 10 issuers) x (RBC factor)]}$$

$$= 586$$

| | | | | |
|-------|---|-------|---|-----|
| R_2 | = | basic | + | ACC |
| | = | 1,496 | + | 290 |
| | = | 1,786 | <i><== final answer for R_2</i> | |

$$\text{basic} = \text{SUM [(asset values subject to basic charge) x (RBC factor)]}$$

$$= 1,496$$

$$\text{ACC} = \text{SUM [(asset values subject to ACC for TOP 10 issuers) x (RBC factor)]}$$

$$= 290$$