Wilfrid W. Csaplar Jr. Money and Banking Review Sheet for Exam 3

This review sheet is intended to cover everything that could be on the exam; however, it is possible that I will have accidentally left something off. You are still responsible for everything in the chapters covered except anything that I explicitly say you are not responsible for. Therefore, if I left something off of this sheet, it can still be on the exam. There will be no multiple-choice questions. Most of the questions will be like the ones in the homework assignments. However, given the large number of types of securities, financial institutions, and terms, I will probably have a question like: (4 points each) Define five of the following terms.

The review session will be Monday 4/29, starting at 6:00 in Old Main 107.

Chapter 12: Know the following terms: **report of condition** (balance sheet), **report of income** (income statement), **retail banks, wholesale banks,** and **correspondent banks.** Most of the items on **Table 12-1** are fairly easily understood. The most important lines are the ones where they have a summation of other numbers. Those are the ones in italics. (Note that lines 17 and 33 should be in italics.) Some of the more important terms which you have not had before are **net write-offs, earning assets, wholesale CDs, negotiable instrument, brokered deposits,** and **core deposits** vs. **purchased funds**. **Table 12-2** of off-balance-sheet activities should be understood. Note that line 4 should have added to it the words "with recourse." Understand what each of them mean and why they are listed there. Know **trust services** and **processing services.** **Table 12-5** on Page 394 is the most important part of this chapter. It lists the eight most important ratios. They are **ROE, ROA, equity multiplier, profit margin, asset utilization, net interest margin, spread** and **overhead efficiency.** *The two ROX are return (a.k.a., net income) ÷ X, where X is either equity or assets.* Equity multiplier is how many times equity is multiplied to get total assets. *Profit margin is basically the profits as a percentage of income.* Asset utilization is the income generated as a percentage of assets. Note that these calculations above include both interest and non-interest income while the calculations below include only one type of income. Which type is included should be easy to tell, if it says interest, then it is interest otherwise, it is not. *Net interest margin is (interest income-interest expense) ÷* ***earning assets*****.** Earning assets are securities and net loans & leases. *The spread is the unusual calculation because it is two ratios subtracted from each other. The easy way to remember it is that interest income is divided by what is generating it (earning assets) and interest expense is divided by what is causing it (interest-bearing liabilities.)* Overhead efficiency is non-interest income /non-interest expense. For each of the calculations, be able to do the calculation from a spreadsheet and understand what a change in the statistic would normally indicate. Generally bigger is better, but could mean more risk.

Chapter 13: Know in general what the **2010 Wall Street Reform and Consumer Protection Act** does. I won't ask you to list what it did, but I could ask you why it did something listed in the next sentence. (It established a new Financial Oversight Council, gave the Fed more powers, closed loopholes in chartering, gave SEC more powers, increased requirements for transparency, and gave government more power over nonbank financial institutions.) What are **universal financial institutions, commercial banks,** and **investment banks**? Why have they been separated in the past? What is a **Section 20 affiliate**? What is a **nonbank bank**? Why are their incomes restricted? How does a **multi-bank holding company** help get around the **McFadden Act**? How did **Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994** almost eliminate the McFadden Act? What are **regulator forbearance** and **financial disintermediation**? How did they contribute to the **Savings & Loan Crisis** in the 1980s? What is the **FDIC** and what was **FSLIC**? Bank regulators have several types of regulations. For example, the **bank liquidity requirement** is seen through the **required reserve ratio.**

Capital adequacy (leverage) is seen through the **capital-asset ratio (leverage ratio)**. It is core capital ÷ assets. If it is >5% the bank is well capitalized, between 4% and 5%, it is adequately capitalized, otherwise it is not adequately capitalized. If it goes <2% they should go into receivership immediately However, there are potential problems with this. There are several risks. The **market value risk** is that the net worth could be negative at that point in time. The **asset risk** is that using total assets in the leverage ratio ignores different interest rates on different assets. **Off-balance sheet risk** because this analysis ignores off-balance sheet items. For **risk adjusted assets**, just know why they do that, but not how they do it. (The book does not go into detail.)

Chapter 14: What are **thrift institutions**? Mortgage related assets must be ≥ 65% of assets. What caused the **Savings & Loan (S&L) Crisis** in the 1980s? Understand the many factors which played a role in the crisis ranging from the increase in interest rates, the fact their assets were mortgages, regulator forbearance and disintermediation (both in Chapter 13), and FSLIC insurance played their roles. How is a **mutual savings bank** different from the other thrifts? Know what the **Office of Thrift Supervision (OTS)** is. For **credit unions**, know how they are different from other thrifts, why they pay on average higher interest rates and charge lower interest rates. What are **NCUA** and **NCUSIF**. *Obviously, NCU is National Credit Union and all abbreviations ending in IF are Insurance Fund. Therefore, you just need to remember Administration and Share. Like the OTS, their names describe what they do.* How do the following make their money and what do they do? **Sales finance institutions, personal credit institutions, business credit institutions, subprime lender,** and **loan shark**? What is meant by **factoring**? What are **home equity loans** and **securitized mortgage assets**?

Chapter 19: This chapter is summarized in Table 19-1. There it lists 10 risks faced by financial institutions. Much of this chapter is review and all of it is relatively easy to figure out. **Credit risk** is the risk that loans and other securities may not be paid in full. **Liquidity risk** is the risk that if there are an abnormally large number of withdrawals, then some assets may have to be liquidated at lower than normal prices. **Interest rate risk** is for interest rate changes when the assets and liabilities have mismatched maturities. *Note, that could be a problem that if the assets mature quickly, the proceeds may not be able to be reinvested at the same rate. It could also be the problem of interest rates increasing if your liabilities are variable rate or interest rates decrease if your assets are variable rate.* **Market risk** comes from actively trading securities. **Off-balance sheet risk** wee have talked about a lot. **Foreign exchange risk** we discussed when we discussed foreign exchange swaps. **Country or sovereign risk** is due to potential laws and regulations changing in other countries and/or the government defaulting. **Technology risk** is that the technology used is not good for the purposes it was bought. **Operational risk** is that your technology or support systems fail. **Insolvency risk** is that the other nine risks could combine to make the bank insolvent.

Chapter 20: For credit analysis, understand **gross debt service ratio** including how it is calculated and **total debt service ratio** including how it is calculated. *Note the former is new debt and taxes because of the mortgage/gross income. The latter is the same but adds in all other annual debt payments.* For the **credit scoring of a real estate loan** on Pages 601 - 602 and the description of the **FICO score** on Pages 602-603, understand why each of those characteristics are important to the calculation. Know what is meant by the **five C's of credit**, character, capacity, collateral, conditions, and capital. Note how they relate to the firms wanting to borrow money. *The only one which is not obvious what it means is conditions. That is the local and national economic conditions and how that will affect the profit of the firm.* For the following ratios, I will give you the name and how it is calculated. You will have to tell me why that ratio is important (does it measure liquidity, asset management, etc.), whether a big number is

better or worse and why. (See Questions #1 & #7 below.) The ratios are the **current ratio, quick ratio, number of days sales in receivables, number of days in inventory, sales to working capital, sales to fixed assets, sales to total assets, debt-to-asset ratio, times in interest earned ratio, cash-flow-to-debt ratio, gross margin,** and **operating profit margin.** Know what **EBIT** and **EAT** mean. *E is "earnings" and T is "taxes" in both. BI is "before interest and" and A is "after."* The book lists ROE and ROA again here mentioning EAT. How redundant. Know the **dividend payout** is dividends/EAT. For calculating Altman's Z-Score, I will give you the formula $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$ and I will tell you what every X_i means. See Question #2 for an example of a question I might ask.

Non-graded Homework Assignment #8A to be reviewed with Assignment #8.

1) (10 points) The *number of days sales in receivables* is calculated as $\frac{accounts.receivable \times 365}{credit.sales}$ and in the example in the book is 54.21 days. What is that measuring? Is a bigger number generally better or worse? Explain your logic.

2) (15 points) Altman's Z-Score is $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$ where X_1 is working capital/total assets. X_2 is retained earnings/total assets. X_3 is EBIT/total assets. X_4 is market value of equity/book value of long-term debt. X_5 = sales/total assets. Why do we care about X_5? Why is it less important than X_3? Explain your logic.

3) (10 points) How are the *gross debt service* and *total debt service* calculated? Suppose that a potential borrower passed one test but failed the other test. Which test would you say is the more important one to look at? Explain your logic.

4) (10 points each) In the example of a type of credit scoring for a real estate loan, the book assigns points for various different characteristics. For each of the following characteristics, explain which is better and why.
A) Relations with financial institution: none, checking account, savings account, both.
B) Age: <25, 25 - 60, >60.

5) (10 points each) For each of these factors, explain how an increase in it would affect your FICO score.
A) Ratio of balances to available credit line.
B) Time at present address.

6) (10 points) One of the five C's of credit is *conditions*. What does that mean and how will that affect the bank's willingness to loan to the company?

7) (15 points) The *current ratio* is current assets/current liabilities. In the book's example, that was 1.38 times. What are *current assets* and *current liabilities*? What is the reason we look at this ratio? Is a bigger number generally better or worse? Explain your logic.