Name: ______________________

Quiz 2
266: Fi. Markets and Institutions
Spring 2014
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DIRECTIONS: We are looking for concise answers. To the extent possible, write the answers in the space provided. Put your name on the quiz.

NOTE: All parts have equal value (**4** points each).

1 [**Do 4 of 5**] Definitions/concepts.

1.1 Net worth.

Answer/comment
Net Worth = Assets − Liabilities

1.2 Net interest margin (of a bank).

Answer/comment

$$\text{Net Interest Margin} = \frac{\text{Interest Income - Interest Expense}}{\text{Assets}} \tag{1}$$

1.3 Put option.

Answer/comment
Put Option is having the right (but not the obligation) to sell the underlying asset to another agent at fixed price known as the “strike price”.

1.4 Buy limit order (for a stock).

Answer/comment
Buy limit order is to buy the stated number of shares at the stated price or lower.

1.5 Market capitalization of a firm. **Answer/comment**

Market Capitalization (i.e. "Market Cap") is what it would cost to buy all the shares in the company. For a publicly traded firm, it is defined as

$$\text{Market Cap} = \text{Share Price} \times \text{Assets} \tag{2}$$

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2 **[Do all of these]** Magnitudes and Empirical Facts.

2.1 What is the approximate value of assets of largest U.S. bank?

Answer/comment
It is 1.9 trillion US $s for JPMorgan & Chase.

2.2 What is the approximate return on equity of U.S. banks in the years before the Great Recession? Pick one: [0-4][5-10][11-17] (all in percent)

Answer/comment
11-17 %.

2.3 The total (notional) value of outstanding derivatives such as swaps is [smaller than—roughly the same as—much larger than] the total value of the underlying securities from which the derivatives are derived? (pick one)

Answer/comment
much larger than.

2.4 The typical or average level for the price-earnings ratio for the S&P 500 is what?

<u>Answer/comment</u>
about 17.

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3 [**Do 2 of 3**] Short Answer.

3.1 Name two major asset categories and two major liability categories of commercial banks.

<u>Answer/comment</u>
Assets: Loans and Securities.

Loans: Deposits and Borrowings.

3.2 What distinguishes a defined benefit from a defined contribution pension plan?

<u>Answer/comment</u>
In the defined benefit plan, you know what payments you will receive during the retirement with certainty. In the defined contribution plan, however, the payments depend on the investment outcome, so they are not known with certainty.

3.3 Suppose that a bank says that its value at risk (VaR) due to trading activities is \$20 million. There are 2 key parameters or values that you need to know to understand the meaning of this VaR value. What are these? And, given these 2 additional parameters, what does this VaR value mean regarding possible losses?

<u>Answer/comment</u>
These key parameters are the "time horizon" (e.g. 1 day) and "probabilistic value" (e.g. 95 %). Given these two parameters, VaR is defined as the dollar value , say \$V, such that you have only a chance of 1-probabilistic value (e.g. if probabilistic value = 95%, $1 - 0.95 = 0.05$ or 5%) chance of loosing more than or equal to $\$V$ in the relevant time horizon (e.g. 1 day).
