

Business: time value of money and income statement essay sample

[Finance](#)



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1) Which of the following organization forms accounts for the greatest number of firms? A) Limited Partnership B) " S" Corporation
C) " C" Corporation D) Sole Proprietorship

Section: 1. 1 The Four Types of Firms

2) The person charged with running the corporation by instituting the rules and policies set by the board of directors is called A) the Company President.
B) the Chief Operating Officer.
C) the Chief Executive Officer. D) the Chief Financial Officer. Section: 1. 2

Ownership Versus Control of Corporations

3) You overhear your manager saying that she plans to book an Ocean-view room on her upcoming trip to Miami for a meeting. You know that the interior rooms are much less expensive, but that your manager is traveling at the Company's expense. This use of additional funds is best described as: A) a publicity problem. B) an agency problem.
C) an adverse selection problem. D) a moral hazard.

Section: 1. 2 Ownership Versus Control of Corporations

4) What is the role of an auditor in financial statement analysis?

Section: 2. 1 The Disclosure of Financial Information

5) An agency problem can be alleviated by:
A) requiring all firms to be sole proprietorships.
B) compensating managers in such a way that acting in the best interest of shareholders is also in the best interest of managers. C) asking managers to take on more risk than they are comfortable taking. D) A and B.

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Section: 1. 2 Ownership Versus Control of Corporations

6) Accounts payable is a

- A) Current Asset. B) Long-term Asset.
C) Current Liability. D) Long-term Liability.

Section: 2. 2 The Balance Sheet

7) Dustin's Donuts experienced a decrease in the value of the trademark of a company it acquired two years ago. This reduction in value results in A) an impairment charge. B) goodwill.

C) depreciation expense. D) an operating expense.

Section: 2. 2 The Balance Sheet

Use the following information for ECE incorporated:

Assets \$200 million

Shareholder Equity \$100 million

Sales \$300 million

8) If ECE's stock is currently trading at \$24.00 and ECE has 25 million shares outstanding, then ECE's market-to-book ratio is: Section: 2. 3 Balance Sheet Analysis

9) Which of the following statements regarding the income statement is incorrect? A) The last or "bottom" line of the income statement shows the firm's net income. B) The first line of an income statement lists the revenues from the sales of products or services. C) The income statement shows the earnings and expenses at a given point in time. D) The income statement

shows the flow of earnings and expenses generated by the firm between two dates. Section: 2. 4 The Income Statement

10) Which of the following is not an operating expense?

A) Depreciation and amortization B) Interest expense

C) Selling, general and administrative expenses D) Research and

development Section: 2. 4 The Income Statement

Use the table for the question(s) below.

Consider the following income statement and other information:

Luther Corporation Consolidated Income Statement Year ended December 31

(in \$ millions) | | 2009 | 2008 |

Total sales | 610. 1 | 578. 3 |

Cost of sales | (500. 2) | (481. 9) |

Gross profit | 109. 9 | 96. 4 |

Selling, general, and administrative expenses | (40. 5) | (39. 0) | Research and development | (24. 6) | (22. 8) |

Depreciation and amortization | (3. 6) | (3. 3) |

Operating income | 41. 2 | 31. 3 |

Other income | — | — |

Earnings before interest and taxes (EBIT) | 41. 2 | 31. 3 |

Interest income (expense) | (25. 1) | (15. 8) |

Pre-tax income | 16. 1 | 15. 5 |

Taxes | (5. 5) | (5. 3) |

Net income | 10. 6 | 10. 2 |

|||

Price per share| \$16| \$15|

Shares outstanding (millions)| 10. 2| 8. 0|

Stock options outstanding (millions)| 0. 3| 0. 2|

|||

Stockholders' Equity| 126. 6| 63. 6|

Total Liabilities and Stockholders' Equity| 533. 1| 386. 7|

11) Calculate Luther's return of equity (ROE), return of assets (ROA), and price-to-earnings ratio (P/E) for the year ending December 31, 2008. Section: 2. 5 Income Statement Analysis

12) If Luther's accounts receivable were \$55. 5 million in 2009, then calculate Luther's accounts receivable days for 2009. Section: 2. 5 Income Statement Analysis

Use the information for the question(s) below.

In November 2009, Perrigo Co. (PRGO) had a share price of \$39. 20. They had 91. 33 million shares outstanding, a market-to-book ratio of 3. 76. In addition, PRGO had \$845. 01 million in outstanding debt, \$163. 82 million in net income, and cash of \$257. 09 million.

13) Calculate Perrigo's return on equity (ROE).

Section: 2. 5 Income Statement Analysis

14) If Alex Corporation takes out a bank loan to purchase a machine used in production and everything else stays the same, its equity multiplier will

_____, and its ROE will _____. A) increase; decrease B) decrease; increase C) increase; increase D) decrease; decrease

Section: 2. 5 Income Statement Analysis

15) Which of the following is not a section on the cash flow statement? A) Financing activities B) Investing activities C) Operating activities D) Income generating activities

Section: 2. 6 The Statement of Cash Flows

16) In addition to the balance sheet, income statement, and the statement of cash flows, a firm's complete financial statements will include all of the following except: A) Notes to the financial statements

B) Securities and Exchange Commission's (SEC) commentary

C) Management discussion and Analysis

D) Statement of stockholders' equity

Section: 2. 7 Other Financial Statement Information

17) If the risk-free rate of interest (r_f) is 6%, then you should be indifferent between receiving \$250 in one year or A) \$235. 85 today. B) \$250. 00 today.

C) \$265. 00 today. D) None of the above

Section: 3. 2 Interest Rates and the Time Value of Money

18) Rearden Metal needs to order a new blast furnace that will be delivered in one year. The \$1, 000, 000 price for the blast furnace is due in one year when the new furnace is installed. The blast furnace manufacturer offers Rearden Metal a discount of \$50, 000 if they pay for the furnace now. If the

interest rate is 7%, then the NPV of paying for the furnace now is closest to:

A) (\$46, 729) B) (\$15, 421) C) \$46, 729 D) \$15, 421

Section: 3. 3 Present Value and the NPV Decision Rule

19) You are offered an investment opportunity in which you will receive \$25, 000 in one year in exchange for paying \$23, 750 today. Suppose the risk-free interest rate is 6% per year. Should you take this project? The NPV for this project is closest to: A) Yes; NPV = \$165 B) No; NPV = \$165

C) Yes; NPV = -\$165 D) No; NPV = -\$165

Section: 3. 3 Present Value and the NPV Decision Rule

20) Advanced Micro Devices (NYSE: AMD) is currently trading at \$20. 75 on the NYSE. Advanced Micro Devices is also listed on NASDAQ and it is currently trading on NASDAQ at \$20. 50. Does an arbitrage opportunity exist and if so how would you exploit it and how much would you make on a block trade of 1000 shares? Section: 3. 4 Arbitrage and the Law of One Price

21) Which of the following statements is false?

A) The NPV of trading a security in a normal market is zero. B) In normal markets, trading securities neither creates nor destroys value. C) We cannot separate a firm's investment decision from the decision of how to finance the investment. D) Financial transactions are not sources of value, but merely serve to adjust the timing and risk of the cash flows to best suit the needs of the firm or its investors. Section: 3. 5 No-Arbitrage and Security Prices

Use the table for the question(s) below.

Security | Cash flow today | Cash flow in one year |

A | 0 | 100 |

B | 100 | 0 |

C | 100 | 100 |

22) If the risk-free rate of interest is 7.5%, then the value of security "A" is closest to: Section: 3.5 No-Arbitrage and Security Prices

23) If the risk-free rate of interest is 7.5%, then the value of security "B" is closest to: Section: 3.5 No-Arbitrage and Security Prices

24) If the value of security "C" is \$180, then what must be the value of security "A"? Section: 3.5 No-Arbitrage and Security Prices

Use the information for the question(s) below.

An exchange traded fund (ETF) is a security that represents a portfolio of individual stocks. Consider an ETF for which each share represents a portfolio of two shares of International Business Machines (IBM), three shares of Merck (MRK), and three shares of Citigroup Inc. (C). Suppose the current market price of each individual stock are shown below:

Stock | Current Price |

IBM | \$121.57 |

MRK | \$36.59 |

C | \$3.15 |

25) Assume that the ETF is trading for \$366.00, what (if any) arbitrage opportunity exists? What (if any) trades would you make?

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Section: 3. 5 No-Arbitrage and Security Prices

Use the following information to answer the question(s) below.

Nielson Motors is considering an opportunity that requires an investment of \$1,000,000 today and will provide \$250,000 one year from now, \$450,000 two years from now, and \$650,000 three years from now.

26) If the appropriate interest rate is 10%, what is the NPV of this opportunity? Section: 4. 4 Calculating the Net Present Value

27) Consider the following timeline detailing a stream of cash flows:

If the current market rate of interest is 8%, what is the future value of this stream of cash flows? Section: 4. 3 Valuing a Stream of Cash Flows

Use the information for the question(s) below.

Suppose that a young couple has just had their first baby and they wish to ensure that enough money will be available to pay for their child's college education. Currently, college tuition, books, fees, and other costs, average \$12,500 per year. On average, tuition and other costs have historically increased at a rate of 4% per year.

28) Assuming that college costs continue to increase an average of 4% per year and that all her college savings are invested in an account paying 7% interest, then the amount of money she will need to have available at age 18 to pay for all four years of her undergraduate education is closest to: A) \$50,000 B) \$107,532 C) \$101,291 D) \$97,110

Section: 4. 5 Perpetuities, Annuities, and Other Special Cases

29) You are considering investing in a security that will pay you \$80 in interest at the end of each of the next 10 years. If this security is currently selling for \$588.81, then the IRR for investing in this security is closest to: A) 6.0% B) 7.0% C) 5.0% D) 6.5%

Section: 4. 7 Solving for Variables Other Than Present Value or Future Value

30) After your grandmother retired, she purchased an annuity contract for \$250,000 that will pay her \$25,000 at the end of every year until she dies. The appropriate interest rate for this annuity is 8%. The number of years that your grandmother must live in order to get more value out of the annuity than what she paid for it is (round to the full year: Section: 4. 7 Solving for Variables Other Than Present Value or Future Value

31) Which of the following equations is incorrect?

A) Interest Rate per Compounding Period =

B) $-1 = APR$

C) $1 + EAR =$

D) Equivalent n-Period Discount Rate = $(1 + r)^n - 1$

Section: 5. 1 Interest Rate Quotes and Adjustments

Use the following information to answer the question(s) below.

Rearden Metals is considering opening a strip mining operation to provide some of the raw materials needed in producing Rearden metal. The initial purchase of the land and the associated costs of opening up mining

operations will cost \$100 million today. The mine is expected to generate \$16 million worth of ore per year for the next 12 years. At the end of the 12th year Rearden will need to spend \$20 million to restore the land to its original pristine nature appearance.

32) The number of potential IRRs that exist for Rearden's mining operation is equal to: A) 1 B) 0 C) 2 D) 12

Section: 6. 2 The Internal Rate of Return Rule

33) Which of the following statements is false?

A) The IRR investment rule states you should turn down any investment opportunity where the IRR is less than the opportunity cost of capital. B) Since the IRR rule is based upon the rate at which the NPV equals zero, like the NPV decision rule, the IRR decision rule will always identify the correct investment decisions. C) There are situations in which multiple IRRs exist.

D) The IRR investment rule states that you should take any investment opportunity where the IRR exceeds the opportunity cost of capital. Section: 6. 2 The Internal Rate of Return Rule

34) Which of the following statements is false?

A) The profitability index is the ratio of value created to resources consumed. B) The profitability index can be easily adapted for determining the correct investment decisions when multiple resource constraints exist. C) The profitability index measures the "bang for your buck." D) The profitability index measures the value created in terms of NPV per unit of resource consumed. Section: 6. 5 Project Selection with Resource Constraints

Use the table for the question(s) below.

Consider the following zero-coupon yields on default free securities:

Maturity (years) | 1 | 2 | 3 | 4 | 5 |

Zero-Coupon YTM | 5.80% | 5.50% | 5.20% | 5.00% | 4.80% |

35) The YTM of a 3 year default free security with a face value of \$1000 and an annual coupon rate of 6% is (round to two decimals): Section: 8.3 The Yield Curve and Bond Arbitrage

36) What is the price today of a two-year, default-free security with a face value of \$1000 and an annual coupon rate of 5.75%? Does this bond trade at a discount, premium, or at par? Section: 8.3 The Yield Curve and Bond Arbitrage

37) Which of the following statements is false?

A) By consulting bond ratings, investors can assess the credit-worthiness of a particular bond issue. B) Because the cash flows promised by the bond are the most that bondholders can hope to receive, the cash flows that a purchaser of a bond with credit risk expects to receive may be less than that amount. C) A higher yield to maturity does not necessarily imply that a bond's expected return is higher. D) Because the yield to maturity for a bond is calculated using the promised cash flows, the yield of bond's with credit risk will be lower than that of otherwise identical default-free bonds. Section: 8.4 Corporate Bonds

Use the table for the question(s) below.

Consider the following yields to maturity on various one-year zero-coupon securities:

Security| Yield (%)|

Treasury| 4. 6|

AAA corporate| 4. 8|

BBB corporate| 5. 6|

B Corporate| 6. 2|

38) What is the credit spread of the BBB corporate bond ?

Section: 8. 4 Corporate Bonds

39) Explain why the expected return of a corporate bond does not equal its yield to maturity? Section: 8. 4 Corporate Bonds

Use the table for the question(s) below.

Consider the following two projects:

Project	Year 0Cash Flow	Year 1Cash Flow	Year 2Cash Flow	Year 3Cash Flow	Year 4Cash Flow	Discount Rate
A	-100	40	50	60	N/A	. 15
B	-73	30	30	30	30	. 15

40) What is the internal rate of return (IRR) for project A (round to one decimal)? Section: 6. 2 The Internal Rate of Return Rule

41) Show the three components that constitute the DuPont Identity.

Describe, in one sentence for each, component , what the component tells us. Section:

Use the following information to answer the question(s) below.

Maturity (years) | 1 | 2 | 3 | 4 | 5 |

Zero-Coupon YTM | 3. 25% | 3. 50% | 3. 90% | 4. 25% | 4. 40% |

42) Consider a four-year, default-free bond with an annual coupon rate of 4.5% and a face value of \$1000. What is the YTM on this bond? Section: 8. 3

The Yield Curve and Bond Arbitrage

1) D

2) C

3) B

4) Key points:

1. To ensure that the annual financial statements are prepared accurately.

2. To ensure that the annual financial statements are prepared according to GAAP.

3. To verify that the information used in preparing the annual financial statements is reliable. 5) D

6) C

7) A

8) 6%

9) C

10) B

11) $ROE = NI / \text{shareholder equity} = 10.2 / 63.6 = .160$ or 16.0% $ROA = NI / \text{total assets}$

Here total assets are not given, but we know that Total Assets = Total Liabilities + Shareholder Equity, so $ROA = 10.2 / 386.7 = .026$ or 2.6% $P/E = \text{price} / \text{EPS}$ or $\text{Market Cap} / \text{NI} = (8.0 \times \$15) / \$10.2 = 11.8$ 12) Accounts receivable days = = = 33.2 days

13) 17.2%

14) C

15) D

16) B

17) A

18) D

19) D

20) Yes, buy 1000 shares $\times 20.50$ and sell 1000 shares $\times 20.75 = \$250.00$

21) C

22) \$93.00

23) \$100.00

24) \$80

25) Value of ETF = $2 \times 121.57 + 3 \times 36.59 + 3 \times 3.15 = \362.36 , so an arbitrage opportunity exists. You should sell the EFT for \$366.00 and buy 2 shares of IBM, 3 shares of MRK, and 3 shares of C. 26) \$88,000

27) \$11,699

28) D

29) A

30) 21

31) B

32) C

33) B

34) B

35) 5.2%

36) \$1004.46

$P = 57.50 / 1.058 + 1057.50 / 1.0552 = 1004.46$ and since this is $>$ \$1000, the bond sells at a premium. 37) D

38) 1.0%

39) Because we calculate the yield to maturity using the promised cash flows rather than the expected cash flows. Since there is some non-zero probability of default, there is some chance that we will receive an amount less than the promised amount, thereby driving down the expected return below the YTM. 40) 21.6%