Finance 366: Investments (Joseph Farizo)
Homework 1

Version: 100

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Due: 9/04 @ 5pm

Print and write your answers (and *only* your answers) in the boxes below each question. On separate paper, neatly show your work for each question. No credit will be awarded if you provide an answer but show no work. When completed, use the Adobe Scan app (or other equivalent) to photograph and save as a single PDF file with this as the first page. Send as an email attachment to FIN366H.xq847raoceog7c1e@u.box.com. The subject line of the email and name of your PDF file should be *V#.pdf* where # is the version on the top right of this page. Example: *V9.pdf* for Version 9.

Question 1 You construct a price-weighted index of Costco, Berkshire, and Walmart. The time zero prices of these shares are \$80, \$30, and \$90, respectively. At time 1, the prices for these three firms (in the same order) are: \$90, \$80, \$130. Berkshire immediately has a three for one split, bringing its price to \$27. What is the divisor for this index after the split?

DIVISOR = 123.456

Question 2 You purchased an option that gives you the right but not obligation to purchase one share of Alaska Air Group Inc. At the time of purchase, the option had a strike price of \$240.00, a bid price of \$71.29, an ask price of \$74.69, with a 1/14/2021 expiration date. On the expiration date, the stock is trading at \$307.92. What is the profit on this option at the expiration date?

PROFIT = \$1 BILLION

Question 3 You construct a value weighted portfolio of three securities. At time 0 the prices of Uber, IBM, and Netflix are \$70, \$60, and \$175, respectively. The shares outstanding are 73, 74, and 81, with time 1 prices of \$80, \$10, and \$120, respectively. What is the percent change in a value weighted index of these shares from time 0 to time 1?

% Δ = 1,000%

Sample: do not submit like this.

Question 4 You invest $8000 to construct an equally weighted portfolio of three securities. At time 0 the prices of Uber, Lyft, and Netflix are $80, $60, and $175, respectively. At time 1, the prices are $80, $70, and $120, respectively. After rebalancing to keep equal weights in each company at time 1, how many shares do you hold of each stock?

UBER = 1 BILLION, LYFT = 2 BILLION, NETFLIX = 3 BILLION

Question 5 Jacob is looking over T-bill quotes online. They see a security with the following information: BID = 0.165, ASK = 0.134, and CHG = 0.005 on a T-bill with a face value of $20000 and 50 days to maturity. What is the Bid-Ask spread on this T-Bill?

BID-ASK SPREAD = 1 BILLION

Rate this homework from 1 to 5, with 1 being "very easy" and 5 being "very difficult." (circle one)

1 2 (3) 4 5

About how many minutes did you spend on this homework? (circle one)

<30 30 60 (90) >90

Sample: do not submit like this.

① COSTCO : $80 → 90
BERKSHIRE : $30 → 80
WMART : $150 → 27

d = ...

② $e = mc^2$

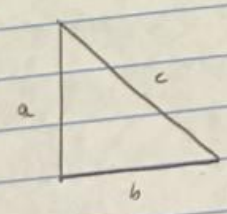
$E(R) = R_f + \beta(R_m - R_f)$

$A = \pi r^2$

PROFIT = $1 BILLION

Sample: do not submit like this.

③ $a^2 + b^2 = c^2$



} %Δ = 1,000%

④ $8,000 { UBER 80 → 80 ; LYFT 60 → 70 ; NFLX 175 → 120

REBALANCE

⋮

U = 1 BILL

L = 2 BILL

N = 3 BILL

⑤ BID = 0.165

ASK = 0.17

SPRD = 0.005

B-ASK → $1, BILL

Sample: do not submit like this.