Fin 730 Final Term 2016 paper solved
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!)
A 5-years semi-annual coupon bond with 8% coupon rate is currently priced at Rs. 960.44 while yield to maturity (YTM) is of 9%.If YTM decreases to 8.50% bond price will increase to Rs. 979.97 and if YTM increases to 9.50% bond price will decrease to Rs. 941.38. You are required to calculate the %age change in bond price for a 100 basis point change in rates.
Duration = (price if yield decline- price if yield rise) / 2(initial price)(change in yield in decimal)
D = (979.97-941.38) / 2(960.44)(0.005)
D = 38.59 / 9.6044
D = 4.02%
2)
Mr. Javed purchased 1000 shares of Alpha Company at Rs. 34 per share. He kept the stock for two years and received a dividend of Rs. 2 per share in each year. Thereafter, he sold the stock at Rs. 28 per share.
Requirement:
You are required to calculate for Mr. Javed:
a) The total return and relative return
TR = Income + (Ending value – beginning value) / beginning value
TR = 4 + (28 – 34) / 34
TR = -0.05882
RR = CF + Pe / Pb = 1 + Tr
RR = 4 + 28 / 34 = 1 + (-0.05882)
RR = 0.941 = 0.941
or
RR = 1+TR
RR = 1 + (-0.05882)
RR = 1 - 0.05882
RR = 0.941
b) Inflation-adjusted total return if inflation rate is 9%
Inflation adjusted total return = (1+TR) / (1+IF) – 1
TRi = [1+(-0.05882)] / (1+0.09) – 1
TRi = 0.941 / 1.09 – 1
TRi = -0.1367
standard deviation of the portfolio
Expected Return of Portfolio = E[rp] = Wa[ra] + Wb[rb]
= 60%(16.5) + 40%(20.5%)
= 9.9 + 8.2 = 18.1%
Variance of Portfolio = σ2p = w21 σ21 + w22 σ22 + 2 w1 w2 σ1 σ2(p)
= (60%)2(18%)2 + (40%)2(21%)2 + 2(60%)(40%)(18%)(21%)(40%)
= (0.36)(0.0324) + (0.16)(0.0441) + 0.0072576
= 0.011664 + 0.007056 + 0.0072576
Variance = 0.02598
0.02598 = 0.1612 = 16.12%√Standard Deviation of portfolio =
3)
Following data is related to stocks of different listed companies on a particular stock exchange:

As of December 31st
Company's Name Stock Price (Rs.) Shares Outstanding Market Value
Alpha 25 3,000 75000
Beta 20 2,500 50000
Star 30 1,000 30000
Styles 75 4,000 300000
E-Tech 80 5,000 400000
Total 855000
You are required to calculate:
a) Price weighted index of stocks
PWI = E stock price / n
25+20+30+75+80/5 = 46
Since E-Tech stock price received a greater weight in the index.
If Company E-Tech has a huge price increase, the index is more likely to increase even if the other stocks in the index decline in value at the same time.
b) Market capitalization weighted index if beginning index value is 100 and a base value is Rs. 150,000.
Formula = Market Value / Base Value * Begging index value
855000/150000*100 = 570

4)
A. Evaluate which research is better according to researchers Sharpe's RVAR analysis or Treynor's RVOL Analysis. Give your Answer with logical rationale.
B Consider the following scenario with two different stocks
Portfolio Forecasted Return Beta Standard Deviation
Alpha 0.18 0.5 0.26
Gamma 0.17 0.6 0.25

Risk free rate of return is 12%. On the basis of both ratios, rank which portfolio is better in performance?
Required: Evaluate which portfolio is performing better after doing a variability analysis with Sharpe Ratio
RVOL =
A: 0.18 – 0.12 / 0.5
0.12
B: 0.17 – 0.12 / 0.6
0.083
RVAR =
A: 0.18 – 0.12 / 0.26
0.23
B: 0.18 – 0.12 / 0.25
0.24
5)

Load wala q tha

6)

Bond choice wala tha

Baki yad nh