

NPTEL

Course Name: Security Analysis and Portfolio Management

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Session # 3: Risk and Return – I

Q. 1: Suppose one has bought a share of PQR Limited at Rs.224 one year back. Over the last year PQR has distributed dividend of Rs.8 per share. If the share of PQR sells at Rs.250 today, what is the return? If the share is trading at Rs.220 today, what is the return earned?

Ans.: The total return is Rs.34 that comprises of Rs.8 of dividend and Rs.26 (Rs.250 – Rs.224) in terms of appreciation in the market price of the share. Hence the % return is Rs.34/Rs.224 i.e. 15.18%. if the share is trading at Rs.220, return earned is: 1.79%.

Q.2: Suppose an investment provides the following periodic return over last four years as below:

Year	1	2	3	4
Return (%)	10	12	-6	12

What is the holding period return?

Ans. Holding period return = $(1.10 \times 1.12 \times 0.94 \times 1.12)^{1/4} - 1 = 0.0672 = 6.72\%$

Q.3: Consider the two assets A and B for which returns (%) under different conditions of economy are given as below. Find the expected return and risk (as measured by standard deviation of return) of each asset.

		Returns	
Condition of Economy	Prob.	Stock A	Stock B
Recession	0.10	-18.0	-10.0
Below avg.	0.20	-4.0	2.0
Average	0.40	12.0	8.0
Above avg.	0.20	24.0	12.0
Boom	0.10	30.0	18.0
	1.00		

Ans.:

Condition of Economy	Prob.	Return			Prob.*Return			Prob.*(Return - Exp. Return) ²	
		Stock A	Stock B		Stock A	Stock B		Stock A	Stock B
Recession	0.1	18.00	14.00		1.80	1.40		13.92	6.08
Below avg.	0.2	(4.00)	2.00		(0.80)	0.40		41.47	15.49
Average	0.4	12.00	8.00		4.80	3.20		30.98	14.40
Above avg.	0.2	24.00	12.00		4.80	2.40		15.49	9.25
Boom	0.1	30.00	18.00		3.00	1.80		11.24	5.48
				Exp. Return (%)	13.6	9.2	Variance (%Square):	113.10	50.70
							Standard Deviation (%):	10.63	7.12

Q.4: What are the different sources of risk?

Ans.: The different types of risks are as below (not an exclusive list):

- Business Risk
- Financial Risk
- Interest rate risk
- Liquidity risk
- Market risk
- Event Risk
- Exchange Rate Risk
- Purchasing-power risk
- Tax risk