

Chapter 10

- 1) Suppose the stock had initial price of \$87.00 per share, paid a dividend of \$2.15 per share during the year, and had an ending share price of \$98. Compute the percentage total return. What was the dividend yield? The capital gains yield?
- 2) Suppose you bought a bond with an annual coupon rate of 5.5% one year ago for 1017 dollars. The bond sells today for 1041 dollars.
 - A. Assuming a \$1000 face value what was the total dollar return on this investment over the past year?
 - B. What was the total nominal rate of return on this investment over the past year?
 - C. If the inflation rate last year was 3%, what was your total reiterated return on this investment?
- 3) You've observed the following returns on you Yamauchi corporation's stock over the past five years: dash 10%, 24%, 21%, 11%, and 8%.
 - A. what was the arithmetic average return on the stock over this five year.?
 - B. What was the variance of the returns over this? The standard deviation?
- 4) Using information for the above problem #3 suppose the average inflation rate over this period was 3.1% and the average T bill rate over the period was 4.1% .
 - A. What was the average real return on the stock?
 - B. What was the average nominal risk premium on the stock?
- 5) A stock has had the following prices at the end of each year for the last six year ÷\$64.10, \$74.05, \$67.61, \$76.25, \$82.70 and \$93.15. Over those same six years the dividends were \$0.00, \$1.10, \$1.25, \$1.45, \$1.60, and \$1.75. What is the arithmetic and geometric average return for this stock?
- 6) Using the table below for returns and inflation look at the period from 1973 through 1978.
 - A Period calculate that arithmetic average return for the large company stocks and T-bills over this time period.
 - B. Calculate the standard deviation of returns for large company stocks and T-bills over this time period.
 - C. Calculate the observed risk premium each year for large company stocks versus T-bills. What was the arithmetic average rich premium over this period? What was the standard deviation of the risk premium over this period?
 - D. Is it possible for the risk premium to be negative before an investment is undertaken? Can the risk premium be negative after the fact? Explain.
- 7) Suppose the returns on long term government bonds are normally distributed. Based on the arithmetic average and standard deviation in question 6 what is the approximate probability that your return on these bonds will be less than 3.24% in a given year? What range of return would you expect to see 95% of the time? What range would you expect to see 99% of the time?

Year	Large-Company Stocks	Long-Term Government Bonds	U.S. Treasury Bills	Consumer Price Index
1971	14.30	12.67	4.36	3.27
1972	18.99	9.15	4.23	3.41
1973	-14.69	-12.66	7.29	8.71
1974	-26.47	- 3.28	7.99	12.34
1975	37.23	4.67	5.87	6.94
1976	23.93	18.34	5.07	4.86
1977	- 7.16	2.31	5.45	6.70
1978	6.57	- 2.07	7.64	9.02
1979	18.61	- 2.76	10.56	13.29
1980	32.50	- 5.91	12.10	12.52
1981	- 4.92	- .16	14.60	8.92
1982	21.55	49.99	10.94	3.83
1983	22.56	- 2.11	8.99	3.79
1984	6.27	16.53	9.90	3.95
1985	31.73	39.03	7.71	3.80
1986	18.67	32.51	6.09	1.10
1987	5.25	- 8.09	5.88	4.43
1988	16.61	8.71	6.94	4.42
1989	31.69	22.15	8.44	4.65
1990	- 3.10	5.44	7.69	6.11
1991	30.46	20.04	5.43	3.06

1992	7.62	8.09	3.48	2.90
1993	10.08	22.32	3.03	2.75
1994	1.32	-11.46	4.39	2.67
1995	37.58	37.28	5.61	2.54
1996	22.96	- 2.59	5.14	3.32
1997	33.36	17.70	5.19	1.70
1998	28.58	19.22	4.86	1.61
1999	21.04	-12.76	4.80	2.68
2000	- 9.10	22.16	5.98	3.39
2001	-11.89	5.30	3.33	1.55
2002	-22.10	14.08	1.61	2.38
2003	28.68	1.62	1.03	1.88
2004	10.88	10.34	1.43	3.26
2005	4.91	10.35	3.30	3.42
2006	15.79	.28	4.97	2.54
2007	5.49	10.85	4.52	4.08
2008	-37.00	39.46	1.24	.09
2009	26.46	-25.61	.15	2.72
2010	15.06	7.73	.14	1.50
2011	2.11	35.75	.06	2.96
2012	16.00	1.80	.08	1.74
2013	32.39	-14.69	.05	1.50
2014	13.69	22.60	.03	.76
2015	1.41	-.64	.04	.74
2016	11.98	1.76	.21	2.11
2017	19.57	5.78	.75	1.58
