

1.6 Solving Investment Portfolio Problems p. 58

Name _____

Date _____

Goal: Analyze, compare, and design investment portfolios that meet specific financial goals.

1. **portfolio:** one or more investments held by an individual investor or by a financial organization.

Example 1: Determining the future value and doubling time of an investment portfolio (p.59)

Phyllis started to build an investment portfolio for her retirement.

- She purchased a \$500 Canada Savings Bond (CSB) at the end of each year for 10 years. The first five CSBs earned a fixed rate of 4.2%, compounded annually. The next five CSBs earned a fixed rate of 4.6% compounded annually.
 - Three years ago, she also purchased a \$4 000 GIC that earned 6%, compounded monthly.
- a. What was the value of Phyllis' portfolio 10 years after she started to invest?
 - b. Phyllis found a savings account that earned 4.9%, compounded semi-annually. She redeemed her portfolio and invested all the money in the savings account. About how long will it take her to double her money?

N =

I% =

PV =

PMT =

FV =

P/Y =

C/Y =

Example 3: Comparing the rates of return of two investment portfolios (p.62)

Jason and Malique are each hoping to buy a house in 10 years. They want their money to grow so they can make a substantial down payment.

- A 10-year \$2 000 GIC that earns 4.2%, compounded semi-annually
- A savings account that earns 1.8%, compounded weekly, where he saves \$55 every week
- A 5-year \$4 000 bond that earns 3.9%, compounded quarterly, which he will reinvest in another bond at an interest rate of 4.1%
- A tax-free savings account (TFSA) that earns 2.2%, compounded monthly, and has a current balance of \$5 600
- The purchase, at the end of each year, of a 10-year \$500 CSB that earns 3.6%, compounded annually
- A savings account that earns 1.6%, compounded monthly, where she saves \$200 every month

In 10 years, whose portfolio will have the greater rate of return on investment?

N =

I% =

PV =

PMT =

FV =

P/Y =

C/Y =

In Summary

Key Ideas

- Rate of return is a useful measure for comparing investment portfolios.
- An investment portfolio can be built from different types of investments, such as single payment investments (for example, CSBs and GICs) and investments involving regular payments. Some of these investments, such as CSBs, lock in money for specified periods of time, thus limiting access to the money, but offer higher interest rates. Other investments, such as savings accounts, are accessible at any time but offer lower interest rates. Investments that involve greater principal amounts invested or greater regular payment amounts when contracted tend to offer higher interest rates.
- The factors that contribute to a larger return on an investment are time, interest rate, and compounding frequency. The longer that a sum of money is able to earn interest at a higher rate compounded more often, the more interest will be earned. For investments involving regular payments, the payment frequency is also a factor.

Need to Know

- Financial applications on calculators or spreadsheets and online financial tools at banking websites are valuable tools for analyzing and comparing investment portfolios.

HW: 1.6 pp. 64-67 #3, 5, 6, 7, 8 & 10