

# UNIT

# 4

## Types and Characteristics of Derivative Securities

### LEARNING OBJECTIVES

*When you have completed this unit, you will be able to accomplish the following.*

- LO 4.a **Recognize** the common characteristics of all derivatives.
- LO 4.b **Identify** the difference between a put option and a call option and their strategies.
- LO 4.c **Contrast** calls, rights, and warrants.
- LO 4.d **Describe** the difference between futures and forwards contracts.
- LO 4.e **Identify** the costs, benefits, and risks of derivative securities.

Your exam will include approximately five questions from the topics covered in Unit 4.

### INTRODUCTION

This unit discusses both securities and nonsecurities derivatives. The term *derivative* is used to describe investment vehicles that derive their value from an underlying asset, whether that asset be a security, such as a stock, or a physical commodity, such as wheat.

### LESSON 4.1: WHAT ARE DERIVATIVES?

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#### **LO 4.a Recognize the common characteristics of all derivatives.**

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Options are **derivative securities**. That means they derive their value from an underlying instrument, such as a stock, stock index, interest rate, or foreign currency. Option contracts offer investors a means to **hedge**, or protect, an investment's value or speculate on the price movement of individual securities, markets, foreign currencies, and other instruments.

An **option** is a contract that establishes a price and time frame for the purchase or sale of a particular underlying instrument. Two parties are involved in the contract: one party receives the right to exercise the contract to buy or sell the underlying asset; the other is obligated to fulfill the terms of the contract.

In theory, options can be created on any item with a fluctuating market value. The most familiar options are those issued on common stocks; they are called **equity options**.

The exam is going to deal solely with standardized options traded on an exchange, such as the Chicago Board Options Exchange (CBOE), or Nasdaq. These options are issued and guaranteed by the Options Clearing Corporation (OCC). They are called standardized options because each option contract has three standardized terms:

- The underlying asset—That is, all options on XYZ stock are for 100 shares of the XYZ common stock
- The expiration date—All options that expire in June (or July or whatever month) have the same date and time of expiry
- The exercise or strike price—Strike prices are set at standardized intervals

It is this standardization that makes secondary trading in options possible.

### PRACTICE QUESTION



Your customer is long 10 ABC Jul 50 calls at 4.50. How many shares of stock will change hands if the option is exercised?

- A. 10
- B. 100
- C. 1,000
- D. 10,000

**Answer: C.** One of the three standardized terms of equity options is that each contract is for 100 shares. Therefore, the exercise of 10 calls (or puts, for that matter) will involve  $10 \times 100$  or 1,000 shares.

Later in this unit, we will discuss nonsecurities derivatives—*forwards* and *futures contracts*. These derive their value from an asset that is not a security, most commonly a commodity. The concept is the same: there are two parties (a buyer and a seller), and they can be used by speculators or those who wish to protect (*hedge*) their investment.

The two most important factors influencing the price of a derivative are the price movement of the underlying asset and the length of time until the contract expires (the longer the time, the greater the *time value*).

### KNOWLEDGE CHECK 4.1



1. The value of a derivative is based on
  - A. the value of the underlying asset.
  - B. the value set by the CBOE.
  - C. the face amount of the derivative.
  - D. the time until the underlying asset expires.
2. All of the following are standardized for equity options **except**
  - A. the size of the contract.
  - B. the expiration date.
  - C. the maximum profit.
  - D. the exercise or strike price.

## LESSON 4.2: EQUITY DERIVATIVES

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### LO 4.b Identify the difference between a put option and a call option and their strategies.

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#### Calls and Puts

There are two types of option contracts: **calls** and **puts**.

- A **call** option gives its holder the right to buy a stock for a specific price within a specified time frame. A call buyer buys the *right to buy* a specific stock, and a call seller takes on the *obligation to sell* the stock.
- A **put** option gives its holder the right to sell a stock for a specific price within a specified time frame. A put buyer buys the *right to sell* a specific stock, and a put seller takes on the *obligation to buy* the stock.

Each stock option contract covers 100 shares (a round lot) of stock. An option's cost is its **premium**. Premiums are quoted in dollars per share. Because a contract covers 100 shares, a premium of \$3 means \$3 for each share times 100 shares, which equals \$300.

#### PRACTICE QUESTION



Which of the following statements regarding derivative securities is **not** true?

- A. Derivatives can be sold on securities and nonsecurities.
- B. An option contract is a derivative security because it has no value independent of the value of an underlying security.
- C. An option contract's price fluctuates in relationship to the time remaining to expiration as well as with the price movement of the underlying security.
- D. An owner of a put has the obligation to purchase securities at a designated price (the strike price) before a specified date (the expiration date).

**Answer: D.** Although equity options are the most common derivative on the exam, derivatives can be sold on any asset. For example, there are options on foreign currency and commodity futures where the underlying asset is not a security. For this question, an owner of a put has the **right**, not the **obligation**, to sell, not purchase, a security at a designated price (the strike price) before a specified date (the expiration date). That makes choice D the untrue statement. It is only the seller of an option who has an obligation.

Here is another way that question might be asked:

#### PRACTICE QUESTION



A customer has the right to sell 100 shares of MNO at 60 any time between July and October. Which term best describes this situation?

- A. Long call
- B. Long put
- C. Short call
- D. Short put

**Answer: B.** The put buyer (long position) has the right to sell stock to a put writer who is obligated to buy that stock.

## Option Transactions

Because two types of options (calls and puts) and two types of transactions (buying and selling) exist, four basic transactions are available to an option investor:

- Buy calls
- Sell calls
- Buy puts
- Sell puts

Option buyers are *long* the positions; option sellers are *short* the positions.

An option conveys rights and obligations for a limited time. Therefore, each transaction has a beginning and an end—an open and a close. For instance, an option position opened by an investor buying a call is closed when the call is exercised, is sold, or expires. An option position opened by an investor selling a call is closed when the call is exercised, is bought, or expires.

The owner (long position) of a put or call option contract has three ways to close a position:

- sell the option contract before the expiration date;
- exercise the option to buy or sell the security specified in the contract; or
- let the option expire.

The simplest and most common way to close an option position is entering the transaction opposite of the opening transaction. The following table summarizes potential opening and closing positions.

To Open	To Close
Buy call	Sell call
Sell call	Buy call
Buy put	Sell put
Sell put	Buy put

## Exercising an Option

In some cases, the holder of the option (only owners can exercise—it is one of their “rights”) will decide to exercise the option. Exercising a call means purchasing the underlying stock at the strike price; exercising a put means selling the underlying stock at the strike price. For example, if you were long an ABC 50 call and the current market price of ABC is 60, you would be able to exercise and purchase stock worth \$60 per share at the exercise price of \$50. Or, if you were long an XYZ \$45 put and the current market price of XYZ is \$35, you might wish to purchase 100 shares of XYZ at \$35 per share and then exercise your option to “put” the stock at \$45. The test may ask you the difference between American- and European-style exercises. American style means the option can be exercised at any time the holder wishes, up to the expiration date. European-style options may only be exercised on the last trading day before the **expiration date**.



### TAKE NOTE

A tool for remembering the difference between American and European exercises is to look at the first letter.

**A** for American means **A**nytime

**E** for European means **E**xpiration date



### TEST TOPIC ALERT

Now that you have become so focused on the exercise date differences between American and European styles, be prepared for a question stem like "A European option is a derivative because," and the first answer choice will probably be "it can only be exercised on the expiration date." Although that is true about exercise, it has nothing to do with why options are derivatives. Please select an answer choice similar to "its value is based on some underlying asset."



### TAKE NOTE

Perhaps you noticed an inconsistency. First, we told you that European style means the option can only be exercised on the day prior to its expiration date. Then, we told you it is only exercised on its expiration date. In the industry, there seems to be much confusion about this, and for exam purposes, either statement is correct (and you won't have to choose between them).

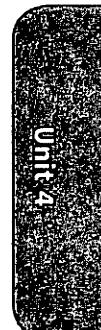
## Length of an Option Contract

Options are available that are issued with an expiration date of as short as one week to as long as three years. The short-term ones are called **weeklys**, and the long-term ones are known as **LEAPS** (Long-Term Equity Anticipation Securities). Most standard options are issued with an expiration length of a maximum of nine months.



### TEST TOPIC ALERT

You must remember that all options, regardless of their length, are derivative securities.



## Options Greeks

Many of our students tell us that when it comes to understanding options, "it is all Greek to me." Maybe that is why options strategists use a number of Greek letters to describe various properties of an option. There are four commonly used *Greeks*: **Delta**, **Gamma**, **Theta**, and **Vega**. It is highly unlikely that you will have to know anything about them, but we've given a short definition of each in the glossary.

## Options Strategies

Options strategies are either **bullish** or **bearish positions** on the underlying stock. Bulls believe the price of a security will go up, and bears believe the price of a security will go down. The primary reasons for buying or selling options are to profit from or hedge (protect) against price movement in the underlying security.

A bullish investor may buy calls seeking profit if the price of the underlying stock rises. A bearish investor buys puts seeking profit if the price of the underlying stock declines. Likewise, a bullish investor may write (sell) puts, which will make money if the stock price is stable or rises; and a bearish investor may write (sell) calls, which will make money if the stock price is stable or declines.

### Bullish and Bearish Options Positions

	Long	Short
Calls	Right to buy bullish	Obligation to sell bearish
Puts	Right to sell bearish	Obligation to buy bullish

(Buyer, Holder, Owner)    (Seller, Writer, Grantor)

#### TAKE NOTE



A phrase that is invaluable for figuring out options questions is “call up and put down.” That is, you would buy a call because you are hoping (or are afraid) the price of the stock will go up, and you would buy a put because you are hoping (or are afraid) the price of the stock will go down.

### Buying Calls

Investors expecting a stock to increase in value speculate on that price increase by buying calls on the stock.

By buying a call, an investor can profit from the increase in the stock’s price while investing a relatively small amount of money. The most a call buyer can lose is the money paid for the option. The most a call buyer can gain is unlimited because there is no limit to how high the stock price can go. Owners of options (puts or calls) do not receive dividends on the underlying stock.

As we will show you in Unit 21, buying calls is also a hedging (protection) strategy when the investor is afraid the stock price will rise.

#### TEST TOPIC ALERT



Remember those employee stock options we discussed in Unit 1? No, they are not at all like these puts and calls, but the employer (the company issuing the stock) might want to use call options to protect against market risk. You see, when granting employees the option (the right) to buy shares at a set price, the company is obligated to deliver the shares at that agreed-upon price. What happens if the company’s stock price soars, the employees exercise their options, and the company has to go out into the stock markets and buy stock at a price far in excess of what they’re going to be selling it for? That hurts. One way to protect the company is to buy call options on the stock so that if this were to happen, they could use their options to buy the stock at whatever exercise price was part of the contract.

## Writing Calls

A neutral or bearish investor can write (sell) a call and collect the premium. An investor who believes a stock's price will stay the same or decline can write a call and can:

- generate income from the option premium; and
- *partially protect (hedge)* a long stock position by offsetting any loss on the sale of the stock by the premium amount; or receive an exercise notice if the stock price increases.

A call option will generally be exercised anytime the underlying stock's price is above the strike price at expiration date. In addition to the premium received when the option was sold, the writer will be paid the strike price for the stock. If the option writer owns the stock on which the call is being written, it is known as a covered call and the risk is limited because no matter how high the stock price rises (meaning the call will certainly be exercised), the writer merely uses the stock already owned (which has been deposited with the broker-dealer) to make delivery. However, if the writer does not own the stock, the option is uncovered (usually referred to as naked in the industry). That's when the risk is unlimited, because the writer must pay the going market price (and there is theoretically no limit as to how high a stock's price can go) to acquire the stock needed to fulfill the obligation to deliver. That is why naked call writing is the most risky options strategy.

## Buying Puts

A **bearish investor**—one who believes a stock will decline in price—can speculate on the price decline by buying puts. A put buyer acquires the right to sell 100 shares of the underlying stock at the strike price before the expiration date.



### EXAMPLE

Here is how that might work. An investor following ABCD common stock believes that it is grossly overpriced at \$75 per share and when the next earnings report is released, the stock will drop at least 10 points. If the investor were to purchase an ABCD 75 put for a premium of \$3 and was correct, once the stock was at \$65 (the 10-point drop), a purchase could be made at that price for \$65 per share and then the put could be exercised at the \$75 per share strike price. This would give the investor a profit of \$7 per share (the \$10 difference between the cost of \$65 and the sale at \$75, minus the \$3 premium paid). A \$700 profit on a \$300 investment is a very handsome percentage return on investment.

As we will show you in Unit 21, buying puts is also a hedging (protection) strategy when the investor is afraid the stock price will fall.



## Writing Puts

Generally, investors who write puts believe that the stock's price will rise or remain stable. A put writer (seller) is obligated to buy stock at the exercise price if the put buyer puts it to the put writer. If a stock's price is above the put strike price at expiration, the put expires unexercised, allowing the put writer to keep the premium. Just as with writing calls, receiving that premium is a source of income. Put writers will lose if the stock price falls (the buyer "wins"), but the loss is limited because the stock price can never fall below zero.

## Straddles

When an investor is not sure which direction the market will move but has a strong opinion that there will be dynamic movement, a strategy that might be employed is the purchase of a straddle. This is the combining of a put and a call on the same stock with the same exercise price and expiration date. If the stock moves up, a profit is made on the call; if it moves down, a profit is made on the put.



### TEST TOPIC ALERT

Those who buy a straddle will profit from volatility, while those who sell a straddle will profit if the market is stable because the options will expire unexercised.

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## LO 4.c Contrast calls, rights, and warrants.

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Although generally treated as equity securities, in truth, rights and warrants are derivatives because their value is derived from the common stock, which they may acquire by exercising that right or warrant. Because rights and warrants give the holder the option (but not the obligation) to buy a stock at a specific price during a specific time period, they can be compared in most respects to a call option. There are some differences, however. Let's start with rights.

## Rights

A stock right, sometimes referred to as a preemptive right, is a privilege extended to existing holders of a company's common stock. When the company is going to issue additional shares of common stock, in order to prevent dilution of ownership by the current owners, they are given the right to preempt (come ahead of) any members of the general public and have the first shot at the new stock. The right permits them to purchase enough shares to keep their proportionate interest in the company. Here is a very simple example:

Steve has 100 shares of DEF Corporation common stock. DEF has 10,000 shares of stock outstanding, so it is clear that Steve owns 1% of the company ( $100/10,000 = .01$ ). DEF wishes to raise additional capital by issuing 5,000 new shares of stock. Steve will receive rights to purchase how many of those 5,000 shares?

In order to keep his 1% ownership, Steve will receive stock rights to purchase 50 shares of the new issue. As an incentive, rights offerings always have an exercise price slightly below the current market price of the existing stock. Also, because the company needs to raise the money, they limit the time in which you have to decide to exercise your right, usually no more than 45–60 days. If Steve decided he did not want to exercise his rights, he could sell them, and because the exercise price is below the market price, they would have a value.

The key points to remember about rights are:

- They are given (not sold) to existing holders of the common stock.
- They are exercisable at a price below the current market.
- They have a short lifespan—they will expire in no more than 45–60 days, sometimes less.
- They can be sold and then the buyer can exercise them.
- Although generally **unwise** to do, they can be left to expire.

## Warrants

Unlike rights, warrants have an exercise price above the current market price, and, unlike rights, they have no relationship to an existing stockholder's proportionate interest. Another difference is that warrants have a long expiration period, sometimes as much as 10 years. They are usually attached to a bond issue (their attractiveness *sweetens* the issue, frequently allowing for a lower interest rate on the bond) or are attached to a new stock offering where the package is considered a *unit*, such as 1 share of stock with a warrant to purchase another share. In most cases, warrants can be detached and sold separately.

The key points to remember about warrants are:

- They are exercisable at a price above the current market. Why would anyone be interested in that? Because you might have a five-year expiration period and have the right to buy the stock at \$45 when it is selling at \$40 today. If you think there is a chance that the stock's price will move more than 5 points in five years, you can make money—sometimes lots of money because of the leverage.
- Their "life" is considerably longer than rights and longer than call options as well.
- When detached, they can be traded like any other security (they are usually traded on the same exchange as the company's common stock).
- Most securities professionals view warrants as call options with a very long time to expiration.
- Warrants do not have voting rights, nor do they receive dividends—the same as any other derivative.

One major difference between call options and rights/warrants is that options originate on the exchange on which they are traded, whereas rights and warrants originate with the issuer of the stock. The effect of this is that new shares are issued when a warrant is exercised, while exercise of a call option requires the assigned seller to deliver existing shares.

### PRACTICE QUESTION



GEMCO Manufacturing Company, traded on the NYSE, has announced that it will be issuing 10 million new shares of common stock to raise new capital for the purchase of new equipment. Your client, owning 1,000 shares of GEMCO common stock, would probably receive

- A. an advance invitation to purchase some of the new shares.
- B. options to purchase some of the new shares.
- C. preemptive rights to purchase some of the new shares.
- D. warrants to purchase some of the new shares.

**Answer: C.** Commonly, when a publicly traded company issues new shares of common stock, existing shareholders receive rights, sometimes called stock rights, enabling them to purchase shares in proportion to their current ownership, usually at a reduced price. These rights rarely last longer than 45 days and must be exercised or sold within that time or they'll just expire worthless. Warrants are not sent to shareholders; they are either purchased in the open market or come attached to a new issue of securities as a "sweetener."



### KNOWLEDGE CHECK 4.2

1. Which of the following statements concerning put and call options is **not** correct?
  - A. One call option is an option to buy 100 shares of a particular common stock at a specified price.
  - B. A put option permits investors to speculate on a rise in the price of an underlying common stock without buying the stock itself, and a call option allows investors to speculate on a decline in the stock price without short selling the common stock any time prior to a specified expiration date.
  - C. One put option gives the buyer the right to sell 100 shares of a particular common stock at a specified price prior to a specified expiration date.
  - D. Options may be used as a hedge against a portfolio position by establishing an opposite position in the option contracts.
2. All of the following statements describe preemptive rights **except**
  - A. they are most commonly offered with debentures to make the offering more attractive.
  - B. they are short-term instruments that become worthless after the expiration date.
  - C. they are issued by a corporation.
  - D. they are traded in the secondary market.

## LESSON 4.3: FUTURES AND FORWARDS

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**LO 4.d Describe the difference between futures and forward contracts.**

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### Forward Contracts

Forward contracts were developed as a means for commodity users and producers to arrange for the exchange of the commodity at a time agreeable to both. Used in Europe as early as the Middle Ages, typically for agricultural items (grains and so forth), forward contracts evolved to eliminate the problem of finding a buyer or seller for an upcoming cash market transaction. They also reduce the price risk inherent in changing supply and demand relationships. How so? Because the seller knows exactly how much he will receive for his product. Of course, he may wind up contracting to sell too cheaply if market prices at delivery are much higher, but he is protected against receiving too little if the “harvest” is plentiful and prices plunge.

A forward contract is a direct commitment between one buyer and one seller. If the position is held until the closing date, the forward seller is obligated to make delivery; the forward buyer is obligated to take delivery. A forward contract is nonstandardized. Its unique terms are defined solely by the contract parties without third-party intervention. This arrangement ensures a ready market or supply source because it presumes delivery.

Because forward contracts are direct obligations between a specific buyer and seller (the user and producer), they are not easily transferred and are considered illiquid (there is no secondary market for forward contracts). Further, each party risks the credit and trustworthiness of the other. This is known as counterparty risk.

The five components of a typical forward contract are:

- quantity of the commodity;
- quality of the commodity;

- time of delivery;
- place for delivery; and
- price to be paid at delivery.

## Futures

In contrast to forward contracts, futures contracts are exchange-traded obligations. The buyer or seller is contingently responsible for the full value of the contract. That is, unlike with forwards, obligations are created only when the contract is exercised. A buyer goes long, or establishes a long position, and if the decision is made to exercise, is obligated to take delivery of the commodity on the future date specified. A seller goes short, or establishes a short position, and if an exercise notice is tendered, is obligated to deliver the commodity on the specified future date. If the seller does not own the commodity, his potential loss is unlimited because he has promised delivery and must pay any price to acquire the commodity to deliver. This is the same concept as writing an uncovered call.

As prices change, gains or losses are computed daily for all open futures positions on the basis of each day's settlement price. Gains are credited and losses are debited for each open position, long or short. All accounts for firms and traders must be settled before the opening of trading on the next trading day.

Buyers and sellers benefit from organizations that act as clearinghouses for the contracts. Clearinghouses enable futures positions to be offset easily prior to delivery. To offset, close, or liquidate a futures position before delivery, an investor must complete a transaction opposite to the trade that initiated (opened) the futures position. The offsetting transaction must occur in the same commodity, for the same delivery month, and on the same exchange. About 98% of futures contracts are offset before delivery. Futures may be highly leveraged.

If, at expiration, the settlement price is higher than the delivery price, a long position results in a profit while a short position loses. Conversely, if the settlement price is lower than the delivery price, shorts profit and longs lose.

Typically, there are five standardized parts to an exchange-traded futures contract:

- Quantity of the commodity (e.g., 5,000 bushels of corn or 100 ounces of gold)
- Quality of the commodity (specific grade or range of grades may be acceptable for delivery, including price adjustments for different deliverable grades)
- Delivery price (similar to exercise or strike price with options)
- Time for delivery (e.g., December wheat to be delivered)
- Location (approved for delivery)



### TEST TOPIC ALERT

Futures are most commonly used by speculators, while forwards are used by producers. That explains why such a small percentage of futures contracts ever end with delivery.

### PRACTICE QUESTION



Forwards are commonly used by producers (farmers) to hedge the risk of the price of the commodity falling before it is able to be harvested and sold. For example, if a farmer has planted soybeans and wishes to hedge against a possible decline in the spot or cash price at delivery, the farmer could

- A. buy forward contracts in a size equal to the amount of the soybeans expected to be harvested.
- B. buy futures contracts in a size equal to the amount of the soybeans expected to be harvested.
- C. sell forward or futures contracts in a size equal to the amount of the soybeans expected to be harvested.
- D. sell the soybeans for cash today.

**Answer: C.** Hedging a commodity yet to be harvested is done by selling a forward or a futures contract on that commodity. Invariably, producers will use forward contracts but could also use a futures contract. In that way, the price is guaranteed in the event of a market decline. However, the producer is giving up any potential gain in the event the prices rise above the futures/forward agreed-upon one.

### Regulation of Futures and Forwards

Because these are not securities, futures and forwards do not come under the jurisdiction of the SEC. The self-regulatory organization (SRO) that is in charge of regulating these markets and their participants is the Commodity Futures Trading Commission (CFTC).

### TEST TOPIC ALERT



As is the case, a clearing firm is the counterparty and guarantor of exchange-traded activity, acting as the buyer to all sellers and seller to all buyers. This eliminates counterparty risk when investing in futures contracts.

### Comparison: Forward Contracts and Futures Contracts

Forward Contracts	Futures Contracts
Highly customizable contracts	Standard contracts
Do not trade on an exchange	Trade on an exchange
Hedgers use forward contracts	Speculators use futures contracts (without contract negotiations)
Counterparty default risk	Payment is guaranteed by the exchange clearing house
Low liquidity	High liquidity
Not regulated	Regulated
Not actively traded	Actively traded
Specific grade and customized amounts	Range of grades and uniform amount
Customized delivery and dates	Standard delivery and dates regulated by exchange



### KNOWLEDGE CHECK 4.3

1. An investor takes a long position in a commodity forward contract at a forward price of \$105 when the spot price (current market price) is \$102. One month later, the spot price has increased to \$110. At that time, the forward price of the contract is
  - A. less than \$105.
  - B. \$105.
  - C. between \$105 and \$110.
  - D. greater than \$110.
2. A commodities speculator purchases a 1,000-bushel wheat futures contract for 80 cents per bushel. At expiration, the settlement price is 70 cents per bushel. This individual
  - A. has a \$100 gain.
  - B. has a \$100 loss.
  - C. must make delivery of the wheat.
  - D. effectively hedged the long wheat position.

## LESSON 4.4: BENEFITS AND RISKS OF DERIVATIVES

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### LO 4.e Identify the costs, benefits, and risks of derivative securities.

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Using derivatives can be a useful strategy for investors if the circumstances warrant it. There is no cost, *per se*, to open an options account, although, as we will learn in Unit 16, the account opening procedure is somewhat more involved than opening a regular account at a broker-dealer.

For those who buy options (long position), the only cost is the premium to purchase the option plus whatever the brokerage firm charges in commissions. With a very limited, and probably not tested, exception, options cannot be purchased on margin (covered in Unit 23) so, without any borrowed money, there is no interest charged.

Selling options (short position) brings in money from the sale, and the seller receives all of that premium, less the brokerage charges. If the call or put being written (sold) is uncovered, there is a margin requirement, but that is beyond the scope of the exam.

The costs to carry forwards and futures are much more complicated, and we are not aware of the topic ever being tested.

As with any investment, there are benefits and there are risks. We'll look at those most likely to be on your exam.

### Leverage

One of the key benefits to using derivatives is that of leveraging your investment. Because an option's cost is normally much less than the underlying stock's cost, option contracts provide investors with leverage: relatively little money allows an investor to control an investment that would otherwise require a much larger capital outlay. And, if you purchase a call and "guess right," the potential profit is unlimited (theoretically, there is no limit as to how high the stock's price can go).



### EXAMPLE

An investor can buy the common stock of RST Corporation for \$58 per share, investing \$5,800, or buy an RST 55 call for \$6, an investment of \$600. If RST's price increases to \$70, the stock investor will see a 20.7% profit ( $\$12 \text{ profit} \div \$58 \text{ investment}$ ), whereas the option investor, with the call worth a minimum of \$15 ( $\$70 - \$55$ ), will have more than doubled the investment ( $\$9 \text{ profit} \div \$6 \text{ investment} = 150\%$ ). The opposite is also true; if RST trades below \$55, say at \$48, when the option expires, the stock investor has a modest loss, but the option investor loses the entire investment. (What is the value of an option to buy stock at \$55 per share when it is currently available to anyone at \$48? Nothing.)

As you can see from the example, leverage works both ways—great when the stock is going your way, and a possible loss of everything when it doesn't. Of course, if, in the example below, RST had gone bankrupt, leaving the stock worthless, the investor holding 100 shares would have lost the entire \$5,800, while the option investor's loss would have been limited to the \$600 premium paid.

### Less Risk

When used properly, options can actually lower an investor's risk. The classic example is the covered call where the investor owns the stock and then writes a call option on it. Realize that there are only three things that can happen after you purchase a stock:

1. The stock can increase in price;
2. The stock can remain stable; or
3. The stock can decline in price.

If you think about it, two of those possibilities are unfavorable. Certainly, you don't want the stock to fall in price. Even if the stock remains level, you've suffered from opportunity cost (you could have put it in the bank with no market risk and earned interest). Only if the stock increases by more than the risk-free rate do you emerge a winner.

However, if you write a call on that stock, you wind up better for sure in cases 2 and 3 and perhaps even in case 1. Let's look at an example:

Meredith purchases 100 shares of ABC at \$50 per share. She then writes (sells) an ABC 50 call for a premium of 4 (\$400). If the stock goes down to \$47 by expiration date, the option she wrote will expire (who is going to call on her to sell stock at \$50 when it is available for \$47 in the marketplace?). In reality, though, she hasn't lost \$300 because she received \$400 when she sold the option—she is still \$100 ahead of the game, even though the stock dropped in price. It isn't until the stock falls below \$46 that she begins to lose money, but, no matter how far it falls, she will still be \$400 ahead of having just bought the stock without selling the option. If the stock price remains the same, the option will expire and she will still own the shares, but she will have \$400 in her account from the sale of the option. Only in the first choice is it possible for her to be a "loser," but even that wouldn't happen until the stock rose above \$54 per share. How is that? If the stock is \$53, yes, her option will be exercised, and she will have to sell her stock at the strike price of \$50. She paid \$50 for it but also received the \$4 premium, so the total received on the sale of the stock plus the option is \$54. Now, if the stock goes to \$60, she would have been better off never writing the option. That is a risk you take in exchange for the chance that you'll win if the stock's price only rises a little, stays the same, or falls.

## Alternative to Selling Short

As we will learn in Unit 23, one way to make money when an investor is of the belief that a stock's price will decline is to sell that stock short. At this juncture, to keep things simple, selling stock short involves putting up a deposit in a margin account and borrowing stock to sell, and carries with it the possibility of an unlimited loss. When you buy a put, you benefit when the stock's price declines, but all you pay is the premium and, if you guess wrong, that is all you can lose.

Having just mentioned the possibility of an unlimited loss when an investor sells a stock short, we would be remiss if we didn't discuss the parallel situation with options. When an investor writes an uncovered (naked) call option, the potential loss is unlimited. Here is how that works:

With the market price of ABC at \$50 per share, Manny writes a 50 call option for a premium of 3. Manny does not own any ABC but, as the seller of the call option, is obligated to deliver 100 shares of the ABC stock and receive \$5,000 if the option is exercised. We use the phrase "call-up" to help us remember our objective when we buy a call. If the price of ABC should go up, the option will be exercised, and Manny will have to buy it at its current market price and then deliver it. The question is, how high can it go? Theoretically (and that's the exam view), there is no limit—it can rise to infinity. That leaves Manny having to pay an infinite amount to buy stock for which he receives only the \$5,000 strike price plus the \$300 premium. Just in case you want to say, "But, because he receives \$5,300, his loss can't be unlimited," remember, infinity minus any other number is still infinity. We know this is just theoretical, but if you've watched some of the better-known companies over the past few years, some of the price increases have been astronomical.

## Hedging

In the example of writing the covered call, we showed one example of hedging (protecting) a position. In that case, the first 4 points of a market decline were absorbed by the premium received from the sale of the call. There is more to discuss on using options to hedge, and we're going to cover that in Unit 21.

## Time Decay

Have you ever heard an investor say, "I'm going to hold this stock until it gets back to what I paid for it"? We're not going to debate the logic of that statement other than to say, that doesn't work with options. They ultimately expire and, if the stock hasn't moved in the direction you're hoping for, you will run out of time. Time decay is the concept that as the time to expiration gets closer, the value of the option decreases.

## Taxation

In most cases, any profits realized from buying or selling options is considered a short-term capital gain. As we will learn in Unit 15, short-term gains are taxed as ordinary income, a much higher rate than long-term gains.

Much of what we've shown you here applies to forwards and futures as well, but other than some very basic questions, we don't expect the kind of detail we've presented here for options.

**PRACTICE QUESTION**

**Here is the type of question that is basically easy, but, if you don't read carefully, you will waste time trying to figure it out.**

Among the purposes of purchasing derivatives would be all of the following **except**

- A. hedging.
- B. income.
- C. profits.
- D. speculation.

**Answer: B.** Purchase of a derivative, whether an option, a forward, or a futures contract, never generates income. Selling one does, but the question refers to a purchaser, and that is why the correct answer is choice B.

**KNOWLEDGE CHECK 4.4**

1. The term *derivative* would **not** include
  - A. futures on commodities.
  - B. interest rate swaps.
  - C. REITs.
  - D. LEAPS.
2. Writing options can be a useful method of generating a stream of income for your customer's portfolio. One issue to be considered is that
  - A. the income is generally tax free.
  - B. the income is generally taxed as short-term gain.
  - C. the income is generally taxed as long-term gain.
  - D. the writer of the option controls whether or not the option is exercised.

# KNOWLEDGE CHECK ANSWERS

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## Knowledge Check 4.1

1. **A** The reason for the term *derivative* is because these securities derive their value from the underlying asset. In the case of equity options, the subject covered on the exam, it is the value of the stock that the options are based on. The CBOE is a primary regulator of the options market but has nothing to do with determining value. The term *face amount* is meaningless, and it is the option that expires, not the underlying corporation.

LO 4.a

2. **C** The three standardized features of listed equity options (the only ones covered on the exam) are:
- The size of the contract on the underlying asset—that is, all options on XYZ stock are for 100 shares of the XYZ common stock.
  - The expiration date—All options that expire in June (or July or whatever month) have the same date and time of expiry.
  - The exercise or strike price—Strike prices are set at standardized intervals.

The amount of profit (or loss) is not standardized. As we'll see later in this unit, there is potential for an unlimited profit or an unlimited loss.

LO 4.a

## Knowledge Check 4.2

1. **B** It is the call option that permits investors to speculate on a rise in the price of the underlying common stock without buying the stock itself and the put option that is the alternative to selling stock short.

LO 4.b

2. **A** A corporation issues rights to existing shareholders to allow them to purchase enough stock, within a short period and at less than current market price, to maintain their proportionate interest in the company. Rights need not be exercised but may be traded in the secondary market. Warrants, not rights, are often issued with debentures to sweeten the offering.

LO 4.c

## Knowledge Check 4.3

1. **B** The price of a forward contract is agreed upon between the buyer and seller at initiation. Remember, forward contracts are not standardized like futures contracts. The *value* of the contract may change during its life, but not the exercise price. Because forwards tend to be confusing, think of this in the manner of an equity call option. The customer buys a 105 call when the stock's price is \$102. One month later, the market price of the stock has risen to \$110. What is the strike price? It is still 105. Same concept here.

LO 4.d

2. **B** The simple math is this: The individual bought at 80 cents and sold at 70 cents, losing 10 cents per bushel. Multiply 10 cents (\$.10) by 1,000 bushels, and the loss is \$100. It is the seller who is obligated to deliver; the buyer of the contract must accept delivery (unless there was an offsetting transaction prior to expiration). This individual was long the futures contract, not long (the owner of) the wheat.

LO 4.d

**Knowledge Check 4.4**

1. **C** A derivative is something that derives its value from something else. REITs represent direct investment into real estate; the asset purchase is the actual asset. LEAPS are the options with long-term expiry. Never heard of interest rate swaps? Well, on the real exam, there will occasionally be an answer choice that you've never heard of, but it should not affect your ability to choose the correct one.

LO 4.e

2. **B** The nature of selling options is such that the IRS generally considers the income generated to be taxable as a short-term gain. Currently, the rate of tax on those gains is significantly higher than on long-term gains. It is the owner (holder) of the option, not the writer, who has control over the decision to exercise. Note that for testing purposes, invariably when there are two choices that are mutually exclusive (taxed short term, or taxed long term), one of those will be the correct answer.

LO 4.e

# UNIT 5

## Alternative Investments and Other Assets

### LEARNING OBJECTIVES

*When you have completed this unit, you will be able to accomplish the following.*

- › LO 5.a **Identify** the concept of flow-through of passive income and loss as it applies to DPPs.
- › LO 5.b **Differentiate** between the roles of the general partner(s) and the limited partner(s) in a DPP.
- › LO 5.c **Recognize** the characteristics of the pooled investment vehicles that are considered alternative investments.
- › LO 5.d **Compare** viaticals and life settlement policies.
- › LO 5.e **Contrast** passive and active real estate investing.
- › LO 5.f **Identify** the different types of commodities and precious metals that are popular investments.
- › LO 5.g **Explain** the benefits and risks of alternative investments in client portfolios.
- › LO 5.h is in the Addendum.

Your exam will include approximately four questions from the topics covered in Unit 5.

### INTRODUCTION

In the 1990s financial advisers began introducing their wealthy clients to **alternative investments**, now generally referred to as *alts*. These included, among other products, ETNs, leveraged ETFs, and new, highly sophisticated financial derivatives. One thing that all of these had in common was that they were complex and not easy to understand for either the investor or the person recommending the investment.

Although investing can be complex, standard investments are fairly easy to comprehend. Even new investors understand that stocks have more risk but hold out the chance of superior returns, while bonds generally have less risk with correspondingly lower returns. All investors dream of scoring a touchdown and not getting tackled for a loss. Alternative investments try to do just that. Some are successful, but many are not. Suitability determinations need to be made on a case-by-case basis, considering each customer's objectives, circumstances, and sophistication.

Securities professionals must take special care in recommending these complex products to the sophisticated customer and even more so to one with less financial acumen.

In addition to alternative investments, the exam will test your knowledge on other, more traditional assets, such as investment real estate and commodities, including precious metals.

## LESSON 5.1: DIRECT PARTICIPATION PROGRAMS (DPPS)

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### LO 5.a Identify the concept of flow-through of passive income and loss as it applies to DPPs.

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Direct participation programs (DPPs) are one class of alternative investment. DPPs, many of which are limited partnerships, allow the economic consequences of a business to flow-through to investors. Any income or loss to the investor is considered passive because the investor does not take an active role in the management of the business; that is the role of the general partner, as you will learn shortly. Unlike corporations, limited partnerships pay no dividends. Rather, they pass income, gains, losses, deductions, and credits directly to investors. Limited partnerships offer investors limited liability. Similar to a stockholder in a corporation, creditors cannot generally come directly to limited partners to collect on defaulted debt. In general, the maximum potential loss to a limited partner is the amount already invested plus any funds committed for which have not yet been submitted.



#### TAKE NOTE

In Unit 15, the topic of partnership taxation will be covered in greater detail, but at this point, we want you to know that any income received by a partner is considered passive, and the same is true for losses. The effect of this is that any passive losses can only be deducted as losses against passive income.

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### LO 5.b Differentiate between the roles of the general partner(s) and the limited partner(s) in a DPP.

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#### Investors in a Limited Partnership

It is important to understand that a direct participation program (DPP) is just a different way to invest in a business rather than buying the company's stock. There are certain tax advantages to being structured as a partnership with the flow-through of income or loss being one of them. That aside, this is merely an investment in a business, whether it be a RELP (real estate limited partnership), an oil and gas drilling program, or a movie production company.

Just like any other business, there are those who run the enterprise (management) and those who contribute the capital (investors). For DPPs, those roles are assumed by the general partner(s), usually referred to as GPs, and the limited partner(s), the LPs. From a legal standpoint, there must be at least one GP and one LP.

Investing in a DPP requires analyzing the program just as one would analyze a stock or bond investment, just with a few different parameters.

An investor should choose to invest in a specific limited partnership because:

- it is economically viable;
- the investor can make use of the potential tax benefits;
- the GP(s) has (have) demonstrated management ability and expertise in running similar programs;
- the program's objectives match the investor's objectives and do so within a time frame that meets the investor's needs; and
- the start-up costs and projected revenues are in line with the start-up costs and revenues of similar ventures.

Promoters structure DPPs to meet various objectives. When a promoter's tax stance is too aggressive or is without economic purpose in the view of the IRS, the program is considered an abusive tax shelter. If the IRS judges the program to be abusive, it disallows deductions; assesses back taxes, interest, and penalties; and, in some cases, charges the promoter with criminal intent to defraud.

Investors should try to match their current and future objectives with a program's stated objectives.



### EXAMPLE

A person seeking current taxable passive income should not invest in an oil and gas exploratory drilling program. Why not? Because these programs drill where oil (or gas) has never been found before (*exploratory*) and have a low success rate. Even when they do "hit," it may take years before any income is generated.



### TAKE NOTE

Because the majority of these are privately placed, DPPs are considered illiquid, and investors must commit money for a long period of time. Even those that are publicly traded do not have the liquidity of other investments, frequently requiring authorization from the GP in order to be able to sell your unit(s).

### General Partner (GP)

The GPs are the active investors in a limited partnership and assume responsibility for all aspects of the partnership's operations. A general partner:

- makes decisions that bind the partnership;
- buys and sells property for the partnership;
- manages the partnership property and money;
- supervises all aspects of the partnership's business; and
- maintains a minimum 1% financial interest in the partnership.

Unlike limited partners, who have limited liability, general partners assume unlimited liability and are therefore personally liable for all partnership business losses and debts. A partnership's creditors may seek repayment from the GPs and may go after their personal assets.

A general partner has a fiduciary relationship to the LPs in that the GP has been entrusted with the LPs' capital and is legally bound to use that capital in the investors' best interests. The

GP must manage the business in the partnership's best interest and avoid the appearance of improper use of assets and conflicts of interest. The GP cannot borrow from the partnership, compete with the partnership, or commingle personal funds with partnership funds. Finally, GPs do not generally receive any distributions from profits until after a payment has been made to the LPs.

### **Limited Partner (LP)**

LPs are passive investors with no management or day-to-day decision-making responsibilities; therefore, they usually are not held personally responsible for the partnership's indebtedness. In fact, if an LP does take an active role, she faces the danger of losing the limitation on liability. LPs may receive cash distributions and capital gains from partnerships. The total yield of a partnership investment takes into account all potential rewards: tax deductions, cash distributions, and capital gains. Units of ownership in a partnership are called interests, rather than shares.

#### **PRACTICE QUESTION**



- In a direct participation program, liability for the debts of the business falls upon the
- A. general partner(s).
  - B. limited partner(s).
  - C. shareholder(s).
  - D. agent(s) selling the program.

**Answer:** A. DPPs consist of at least one GP and one LP. The liability of the limited partners is limited to their investment, including commitments made but not yet fulfilled. On the other hand, the general partners bear the liability for the debts of the entity.

### **Issuing Partnership Investments**

DPPs may be offered either as private placements, qualifying for an exemption from registration under state and federal law (as will be described in Unit 8), or publicly registered either with the SEC, the state(s), or both. In either case, specialized documentation known as a subscription agreement is required from investors.

An investor who buys a limited partnership unit must complete and sign a subscription agreement, which includes a statement of the investor's net worth and annual income and a power of attorney form appointing the GP as the agent of the partnership. The agent is responsible for making certain that the information the potential investor provides in the subscription agreement is complete and accurate.

#### **KNOWLEDGE CHECK 5.1**



1. One of the ways that investing in a real estate limited partnership (RELP) differs from investing in a REIT is that
  - A. the DPP pays dividends, while the REIT does not.
  - B. the REIT passes through at least 90% of its taxable income, while the DPP retains the income.
  - C. the DPP is a pass-through vehicle for both income and loss, while the REIT does not pass through losses.
  - D. DPPs generally have greater liquidity than REITs.

2. A direct participation program is a form of business entity. It may purchase real estate, drill for oil or gas, or engage in a number of other business activities. Which of the following statements is **true**?
  - A. Management of the enterprise is generally in the hands of a committee formed by the largest investors.
  - B. Management of the enterprise is always in the hands of the general partner(s).
  - C. Management of the enterprise is under the control of a committee consisting of limited and general partners.
  - D. Limited partners may not participate in management affairs until at least one year has passed since the offering is completed.

## LESSON 5.2: ALTERNATIVE POOLED INVESTMENTS

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### LO 5.c Recognize the characteristics of the pooled investment vehicles that are considered alternative investments.

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The category of alts also includes a number of pooled investment vehicles. Probably the best known is the hedge fund (covered in Unit 3), but there are a number of others. The following is a description of the pooled investment vehicles considered alternative investments that are most likely to appear on the exam.

#### Exchange-Traded Notes (ETNs)

Although similar in some regards, don't confuse ETFs with ETNs. It could be said that ETNs are cousins of ETFs. That said, just as with family members, there are some important differences. Most obvious is the difference in their basic structure. While ETNs register under the Securities Act of 1933, ETFs register under the Investment Company Act of 1940. Basically, this means that ETNs are made as debt instruments, while ETFs are looked at as investment companies. ETNs are a type of exchange-traded debt security offering a return linked to a market index or other benchmark rather than periodic interest payments as is the case with traditional debt securities. These are sometimes referred to as equity-linked notes (ELNs), which is a real misnomer because they are debt securities.

Issuers of ETNs issue and redeem notes as a means to keep the ETN's price in line with a calculated value, called the *indicative value* or closing indicative value for ETNs. This value is calculated and published at the end of each day by the ETN issuer. When an ETN is trading at a premium above the indicative value, issuing more notes to the market can bring the price down. Similarly, if an ETN is trading at a discount, redemption of notes by the issuer reduces the number of notes available in the market, which tends to raise the price. ETN issuers have primary control over the issuance and redemption processes, which can become a conflict of interest.

Unlike ETFs, they do not buy or hold the assets replicating the performance of the underlying index. Some of the indexes and investment strategies used by ETNs can be sophisticated and very complex, carrying many different risks. They should be offered only to people who are knowledgeable and comfortable with the risks. Those risks, in part, include:

- credit risk (ETNs are senior unsecured debt obligations);
- market risk;
- liquidity risk (although exchange traded, a trading market may not develop);

- call, early redemption, and acceleration risk (ETNs may be called at the issuer's discretion); and
- conflicts of interest (the issuer may engage in trading activities that are at odds with note holders [shorting, for instance]).

## Leveraged ETFs

These funds attempt to deliver a multiple of the return of the benchmark index they are designated to track. For instance, a 2x leveraged fund would try to deliver two times the return of whatever index it is tracking. With leveraged funds, there are no limits by rule or regulation as to the amount of leverage that could be applied to a portfolio. Currently there are numerous 2x and 3x leveraged funds available to investors. The risk associated with leverage is that it is always a double-edged sword; volatility is magnified. Therefore, the risk to be recognized regarding this fund strategy is that if the benchmark index is falling, then the fund's returns will be, in theory, the designated leverage amount (perhaps 2 or 3) times the loss. In addition, most of these funds use derivative products such as options, futures, and swaps to enable them to achieve the stated goal. Because these derivative products are not suitable for all investors, so too can it be said of the leverage fund portfolio containing them. Ultimately, as always, suitability becomes an issue when recommending these products.

## Inverse (Short or Bear) Funds

Inverse funds, sometimes referred to as bear or short funds, attempt to deliver returns that are the opposite of the benchmark index they are tracking. For example, if the benchmark is down 2%, the fund's goal is to be up 2%. In addition, inverse funds can also be leveraged funds or, said another way, 2 or 3 times the opposite of the indices' return. You won't find investors looking for a *bull* inverse fund. That would be one where if the index goes up, the value of your investment goes down; not an attractive strategy.

### TEST TOPIC ALERT



Leveraged and inverse ETFs use options and other derivatives to achieve their goals.

### EXAMPLE



A simple example of this would be an inverse fund tracking the S&P 500. If the index were to drop by 1%, the value of the inverse fund would rise by 1%. If this were a 3x inverse fund, then the fund's value would rise by 3%. Of course, if the index were to rise, the performance of the inverse fund would suffer, especially if it was leveraged.

### TEST TOPIC ALERT



FINRA warns investors that most leveraged and inverse ETFs "reset" daily, meaning that they are designed to achieve their stated objectives on a daily basis. Their performance over longer periods of time—over weeks or months or years—can differ significantly from the performance (or inverse of the performance) of their underlying index or benchmark during the same period of time. Therefore, in most cases, these would not be suitable investments for buy and hold investors or those with other than a very short time horizon.

For the TVIX (Velocity Shares Daily 2x VIX ST ETN), one of the risk disclosures (page 28, PS-28) reads like this (bold theirs, not ours):

**The long-term expected value of your ETNs is zero. If you hold your ETNs as a long-term investment, it is likely that you will lose all or a substantial portion of your investment.**



### TAKE NOTE

Both leveraged and inverse index funds (leveraged or not) can be traded on an exchange. When they are, they are known as exchange-traded funds (ETFs). If the shares are exchange traded, they are priced by supply and demand, can be purchased on margin, and are bought and sold throughout the trading day, like all exchange-traded products. For those that are not exchange traded (e.g., inverse mutual funds), they would be priced, purchased, and redeemed like all investment company shares. Neither of these fund types carry any guarantee that they will achieve the stated goals or objectives.

## Structured Products

When you need something that doesn't yet exist, what do you do? You build it. That is the concept behind structured products: they are built (structured) to meet specific needs. In many cases, they involve structuring a debt issue in such a fashion as to provide lower borrowing costs to the issuer while increasing potential returns to the lender. The goal is to give investors more reasons to accept a lower interest rate on debt in exchange for certain features.

In other examples, options and other derivatives are used to provide possible principal protection or other goals. Needless to say, for the most part these are highly complex products and should be limited to those investors who have the necessary financial sophistication to be able to understand the potential risks. When used properly, they can be useful tools to increase portfolio diversification.

## Structured Notes with Principal Protection

FINRA defines the term "structured note with principal protection" as any structured product that combines a bond with a derivative component and offers a full or partial return of principal at maturity. Structured notes with principal protection typically reflect the combination of a zero-coupon bond, which pays no interest until the bond matures, with an option or other derivative product whose payoff is linked to an underlying asset, index, or benchmark. These notes are promises to pay made by the product issuers. That is why any guarantee that the principal will be protected, whether in whole or in part, is only as good as the financial strength of the company that makes that promise. For those who can remember, this is what happened to investors who purchased structured notes with principal protection issued by Lehman Brothers Holdings, which declared bankruptcy in September 2008.



### KNOWLEDGE CHECK 5.2

1. Inverse ETFs are **least** suitable for investors
  - A. with a long time horizon.
  - B. who are bearish on the market's future.
  - C. wishing to take higher than normal risk.
  - D. who follow an active investment strategy.
2. All of the following are characteristics associated with equity-linked notes (ELNs) **except**
  - A. they are equity securities.
  - B. they are considered an alternative pooled investment.
  - C. they have final payments at maturity linked to the return of an underlying stock or basket of stocks.
  - D. they are considered to be nonconventional structured investments.

## LESSON 5.3: OTHER ALTERNATIVE INVESTMENTS

This learning objective is no longer tested on the Series 65.

### LO 5.d Compare viaticals and life settlement policies.

The terms *viatical* and *life settlement* are often used interchangeably, but they are technically not quite the same. The most significant (and testable) difference is that viaticals apply to those with a terminal illness and a life expectancy of 24 months or less regardless of their age, while life settlements apply to those who, although generally at least 65 years old, are in decent health with a life expectancy of at least 2 years that can run 10 years or longer. Health and life expectancy aside, the concepts are the same for both. In general, almost any kind of life insurance policy can be sold, although most companies will not purchase a straight (nonconvertible) term life policy.

Viatical settlements emerged in the early 1990s in response to the AIDS crisis to create opportunities for terminally ill patients to receive money by selling their life insurance death benefits for much more than the cash surrender value available (but less than the death benefit) from insurance companies. The idea is that the money the person gets from the settlement is to go toward paying for medical expenses during this two-year period. Interests in the settled insurance policies are then sold to investors, with the promise of returns in the form of the death benefit (an amount higher than the purchase price) to be paid upon the death of the insured. As the market has expanded, viatical settlement providers have turned to new classes of viators, those selling their life insurance policies, including the elderly and the chronically ill.

Selling a life insurance policy (or the right to receive the death benefit) to any person other than the insurance company that issued the policy is a transaction known as a viatical or life settlement. NASAA concludes that these settlements, regardless of the health status or age of the insured, are securities. All persons involved in the offer and/or sale of viatical or life settlements should be aware of the nature and extent of the registration and antifraud provisions of state securities laws, as well as the applicability of these provisions to every offer and/or sale of a security. Because licensing is done on a state-by-state basis, there is little uniformity. Some states require just a life insurance license, some require both a life insurance and a life settlement license, and some require either or both of these and being licensed as a securities agent. As with so much else, the regulators are concerned about suitability and disclosure. When a life insurance policy is sold to an investor, the buyer is acquiring a financial interest in the insured's death. In addition to paying a lump sum, the purchaser agrees to pay any premiums that are necessary to support the cost of the policy for as long as the insured lives. In exchange, the buyer will receive the death benefit upon death of the insured. It is important to be aware of the risks involved in this activity:

- ❑ Because there is no active secondary market for these policies, it is difficult to arrive at a fair evaluation, and the investor may wind up paying too much for the policy;
- ❑ The chance that the insured will live longer than anticipated—the more the insured's life exceeds the projected expectancy, the lower the return to the investor;
- ❑ The possibility, remote as it is, that the insurance company will not be financially able to honor the claim; and
- ❑ The intangible moral issue of the investor knowing that the sooner the insured dies, the greater the return.

This learning objective is no longer tested on the Series 65.

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### LO 5.e Contrast passive and active real estate investing.

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We have already discussed two methods of passive real estate investing—that is, investing in real estate where all of the work is done for the investor. That is the case with the REIT and the real estate limited partnership investment (DPP). Investing in real estate, whether it be single-family homes to flip or to rent or commercial property, involves work on the part of the investor. Whether it is collection of rents, finding tenants, or doing repairs, the investor is responsible for doing the work (or hiring someone to do it).

One of the other differences is taxation. As a passive investor, the income to an owner of a real estate limited partnership (DPP) is considered passive income (taxed as ordinary income) while losses are passive losses and can be deducted, but only from passive income. For active investors, it can get quite complicated (and beyond the scope of the exam). However, you should know that there are cases where the activity level is such that the investor is deemed to be buying and selling real estate (such as flipping homes) as a business, not as an investment. That could lead to losses being deducted from regular income, rather than passive income, as ordinary loss.

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### LO 5.f Identify the different types of commodities and precious metals that are popular investments.

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In the previous unit, we discussed futures. They are one of the methods by which individual investors can invest directly in commodities (forwards are used primarily by producers and industrial consumers). One can also invest indirectly through ETPs (exchange-traded products, such as ETFs, that follow a commodity index) or mutual funds that invest in commodity-related businesses. For instance, an oil and gas fund would own stocks issued by companies involved in energy exploration, refining, storage, and distribution.

Historically, most commodity trading was of agricultural products (we were an agrarian society), and these commodities, such as corn, wheat, oats and soybeans, are still actively traded. There are also animal-based commodities, such as beef, pork, and eggs. Today, the most commonly traded commodity is crude oil, with coffee often claimed to be in second place. And, of course, for all of you Eddie Murphy fans (remember the movie *Trading Places*), there are frozen orange juice futures.

Active trading also takes place in industrial metals, such as aluminum, nickel, copper, and lead. These are not considered *precious* metals. Speaking of metals, it is hard to turn on the TV today without seeing a commercial for gold or silver investments. Whether you agree or not with the ads, for millennia, individuals and governments have stored their wealth in precious metals.



#### KNOWLEDGE CHECK 5.3

1. Your customer, age 68, is in reasonably good health. After the sale of her business, the need for maintaining a \$1 million whole life insurance policy is questionable. Which of the following would be a reasonable recommendation if the decision were made that the policy is no longer needed?
  - A. Engage in a life settlement sale
  - B. Engage in a viatical sale
  - C. Borrow the maximum cash value and invest it in an index ETF
  - D. Terminate the policy, take the cash value proceeds, and begin writing uncovered call options

2. All of the following would be considered passive real estate investing **except**
  - A. buying homes and managing the rental of them.
  - B. investing in mortgage REITs.
  - C. real estate limited partnerships (RELPs).
  - D. owning shares of the common stock of Better Home Builders.
3. Many investors look at precious metals as a hedge against inflation. Those investors would be most likely to own
  - A. uranium.
  - B. cadmium.
  - C. lead.
  - D. platinum.

## LESSON 5.4: BENEFITS AND RISKS OF ALTERNATIVE INVESTMENTS

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### LO 5.g Describe the benefits and risks of alternative investments in client portfolios.

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Most alternative investments share similar benefits and risks. Usually, these investments offer low or even negative correlation to the stock market, resulting in greater diversification of the portfolio. This can lead to greater overall long-term returns with reduced risk. In some cases, there are opportunities for abnormal returns, high and low.

As was done with pooled investment vehicles in Unit 3, we'll take these one at a time.

#### DPPs

The DPP investor enjoys several advantages, including:

- an investment managed by others;
- flow-through of income and certain expenses; and
- limited liability—the most the investors can lose is the amount of their investment plus any funds committed for, but not yet remitted.

The exam will probably give more attention to the following disadvantages.

- **Liquidity Risk.** The greatest disadvantage is lack of liquidity. Because the secondary market for DPPs is limited, investors who want to sell their interests frequently cannot locate buyers.
- **Legislative Risk.** When Congress changes tax laws, new rules can cause substantial damage to LPs, who may be locked into illiquid investments that lose previously assumed tax advantages.
- **Risk of Audit.** Statistics from the IRS indicate that reporting ownership of a DPP results in a significantly higher percentage of returns selected for audit.
- **Depreciation Recapture.** One of the tax benefits is the ability to depreciate most fixed assets, especially when that depreciation can be accelerated. The effect of the depreciation deduction is to lower the tax basis of the asset. If that asset is then sold for more than that basis, the excess is “recaptured” and subject to tax, possibly at ordinary income tax rates. You won’t need to know anything more than the concept.

### PRACTICE QUESTION



Benefits of investing in a DPP would include

- I. high liquidity.
  - II. flow-through of operating losses.
  - III. limited liability.
  - IV. immunization against tax audit.
- A. I and II  
B. I and IV  
C. II and III  
D. III and IV

**Answer: C.** DPPs are structured as flow-through entities, giving their investors opportunity to receive income without the partnership being taxed first. In addition, if there are losses, they get the opportunity to write off those losses against passive income from other DPPs. As limited partnership vehicles, they offer their investors liability limited to their investment. They generally have very low liquidity, and, instead of reducing the tax audit risk, they actually increase it.

## Commodities

Investing in commodities offers several benefits.

- Potential hedge against inflation.
- Diversification because commodities are generally not correlated with stock market returns.
- Potential returns. As with any other investment, those who buy low and sell high will make money. Commodity prices are subject to supply and demand on a global basis and can provide handsome returns to those who predict future shortages.

Investors should also be aware of some of the risks.

- Principal Risk. Commodity prices can be extremely volatile.
- Because commodities represent a global investment, in addition to the risks of the commodities themselves, there is also the vast array of risks that one faces when investing in foreign markets.
- High leverage can work against the investor in a down market.
- Lack of Income. No matter how long you hold gold or silver, you will never receive a dividend or an interest check. In fact, with any commodity, there is no income, only the chance for capital gains.

Any good asset allocation program should have some commodity exposure (as we will learn in Unit 21).

### PRACTICE QUESTIONS



An investor is reading a report that industrial demand for copper is expected to double in the next 5 years. This might lead the investor to

- A. buy corn futures.
- B. sell copper futures.
- C. invest in several copper mining companies.
- D. modify the investor's portfolio to take a larger cash position.

**Answer: C.** If the demand for copper increases, those companies producing the commodity should find their stock prices increase nicely. Selling copper futures would be when one expects the demand (and, therefore, prices) to fall.

Investors interested in adding precious metals to their portfolios would likely consider

- A. coal.
- B. diamonds.
- C. gold.
- D. tin.

**Answer:** C. Of these choices, only gold is considered a precious metal. Diamonds are certainly precious, but they are not a metal. Tin, is a metal, but is not considered precious.

## Risks of Structured Products

There are several risks involved with structured products. First, because of the customized nature of these products, there is little or no liquidity. Second, in most cases, these are structured so that the returns are not fully realized until maturity. As a result, these should appeal to buy and hold investors rather than short-term traders. There is also the matter of credit risk, so it is important to know the strength of the financial institution who is the issuer. Finally, as with most alternative investments, there is a lack of efficient pricing. That is, the actual market price does not necessarily reflect the real value. This can lead to abnormal returns, good and bad.

### KNOWLEDGE CHECK 5.4



1. Although there can be many benefits to investing in an oil and gas limited partnership drilling program, risks include
  - A. limited liquidity.
  - B. potential for a tax audit.
  - C. drilling a dry hole.
  - D. all of the above.
2. Among the reasons for investors to consider investing in real estate would be all of the following **except**
  - A. the ability to increase returns through leverage.
  - B. a high correlation with stock market returns.
  - C. possible tax advantages.
  - D. potential appreciation.
3. Although it is widely agreed that adding precious metals to a portfolio can potentially increase returns, doing so is not without risk. Risks that investors face with this asset class include
  - A. storage cost.
  - B. lack of income.
  - C. larger spreads when buying and selling than are found with most equities.
  - D. all of the above.

# KNOWLEDGE CHECK ANSWERS

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## Knowledge Check 5.1

1. C DPPs are pass-through entities. All of the tax considerations, income or loss, flow-through to the investors. REITs will distribute at least 90% of their taxable income as dividends, but if there is a loss, none of that benefits the investors. One risk found in the DPP that is not in the REIT is the lack of liquidity.  
LO 5.a
2. B Management of a DPP is solely the province of the general partner(s). In fact, any limited partner assuming a management role is in danger of forfeiting their status as a limited partner. This is one of the rare cases where *always* is a correct statement (there are so many exceptions to the rules).  
LO 5.b

## Knowledge Check 5.2

1. A Inverse and leveraged ETFs are structured in such a manner that holding them for more than a few days or a week becomes unattractive. They are for bearish investors, which is why they are often referred to as *short* funds. They are purchased for short-term capital gains; there is no income. Short-term investors are following an active strategy.  
LO 5.c
2. A Despite their name, equity-linked notes (ELNs) are debt instruments, not equity instruments. They have a partial fixed return as well as a final payment linked to the performance of a single stock or equity index. Some are exchange traded, while others trade OTC. FINRA, which considers ELNs to be nonconventional structured investments, has expressed concerns that investors might not fully understand ELNs or the risks associated with them.  
LO 5.c

## Knowledge Check 5.3

1. A For individuals at least 65 years of age, in reasonably good, but not excellent, health, the life settlement is potentially a suitable recommendation. Why not a viatical? Although the effects are basically the same, viaticals are for those with a terminal condition and a life expectancy of up to 24 months. Borrowing out the cash value means keeping the policy when the decision was made to terminate the coverage. Surrendering the policy for its cash value will never realize as much as the sale and, in any event, recommending the use of the proceeds to write uncovered call options is likely much too speculative.  
LO 5.d
2. A Real estate investing where the investor works with the property is active rather than passive. In a passive real estate investment, as with any other passive investment, the work is done by others, not the investor. Examples are REITs and stock in real estate companies, such as those who build homes.  
LO 5.e
3. D We like to think of a precious metal as something you'd find in a jewelry store. The primary choices on the exam will be silver, gold, and platinum. Some of our students remember precious metals by thinking about the credit cards (or travel status) they have. I have never been on a flight where they praised their lead level flyers, but silver, gold, and platinum seem to get priority over the rest of the bunch. I'm not sure a good friend would appreciate a uranium bar as a gift.  
LO 5.f

### Knowledge Check 5.4

1. **D** These are just some of the risks in an oil and gas drilling DPP. Obviously, the dry hole would not apply to real estate or equipment leasing programs, but they have their unique issues.  
LO 5.g
2. **B** One of the investment advantages of real estate is that returns on real estate generally have a low correlation to stock market returns. That low correlation increases the diversification, lowering the overall risk and likely increasing overall return.  
LO 5.g

3. **D** Most investors in precious metals pay to have the asset in safe storage. This is an ongoing cost, and it cannot be offset by income as would be the case with owning bonds or dividend-paying stock. The nature of this business is such that spreads between the buy and sell price are typically significantly higher than when trading securities.

LO 5.g

# UNIT 6

## Basic Economic Concepts

### LEARNING OBJECTIVES

*When you have completed this unit, you will be able to accomplish the following.*

- › LO 6.a **Analyze** the four stages of the business cycle.
- › LO 6.b **Identify** the three types of yield curves and how they reflect interest rates.
- › LO 6.c **Identify** fundamental economic principles, including the difference between monetary and fiscal policy.
- › LO 6.d **Differentiate** between inflation and deflation and how they are affected by the major economic indicators.

Your exam will include approximately six questions from the topics covered in Unit 6.

### INTRODUCTION

Investment decisions are made within the context of the general economic climate and are based on the specific merits of the selected investments. This unit will deal with basic economic concepts, such as monetary and fiscal policy, the business cycle, yield curves, and measuring inflation.

## LESSON 6.1: ECONOMIC THEORIES

### LO 6.a Analyze the four stages of the business cycle.

#### Business Cycles

Business cycles reflect fluctuations in economic activity as measured by the level of activity in such variables as the rate of unemployment and the GDP. Periods of economic expansion have been followed by periods of contraction in a pattern called the **business cycle**. Business cycles go through four stages:

- Expansion
- Peak
- Contraction
- Trough

**Definition: gross domestic product (GDP).** GDP is the market value of all final goods and services produced within a country in a given period of time. To account for inflation, GDP in the United States is based on a constant dollar, currently the value in 2012.

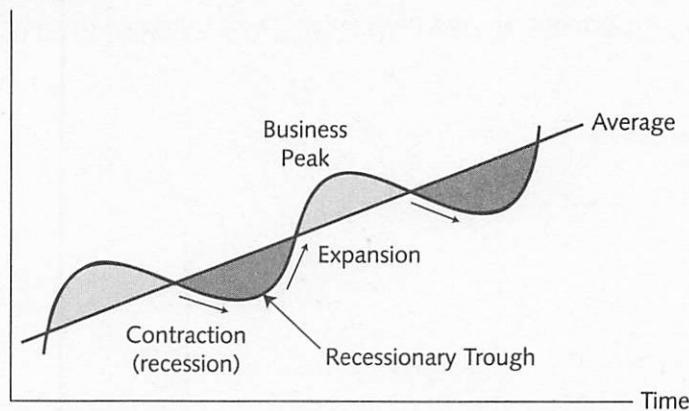
**Expansion, or recovery**, is characterized by increasing business activity—in sales, manufacturing, and wages—throughout the economy. When GDP increases rapidly and businesses reach their productive capacity, the nation's economy cannot expand further. At this point, the economy is said to have reached its **peak**. When business activity declines from its peak, the economy is **contracting**.

Economists call mild short-term contractions **recessions**. Longer, more severe contractions are **depressions**. When business activity stops declining and levels off, the cycle makes a **trough**.

According to the U.S. Department of Commerce, the economy is in a recession when a decline in real output of goods and services—the **GDP**—continues for two or more consecutive quarters. It defines a depression as a decrease in GDP for six consecutive quarters.

#### The Four Stages of the Business Cycle

Real GDP



## The Four Stages of the Business Cycle

To determine the economy's overall direction, economists consider many trends in business activity.

**Expansions** are characterized by increasing consumer demand for goods and services, possibly leading to:

- an increasing rate of inflation; and
- increasing industrial production, generally leading to
  - a decreasing unemployment rate as hiring accelerates,
  - falling inventories,
  - rising stock markets,
  - rising property values, and
  - increasing GDP.

**Peaks** are characterized by:

- a decrease to the GDP growth rate;
- a decrease to the unemployment rate, but a slowdown in hiring;
- a slower rate of growth in consumer spending and business investment; and
- an increase to the inflation rate.

**Contractions/recessions** in the business cycle tend to be characterized by:

- rising numbers of bankruptcies and bond defaults;
- decreasing working hours and increasing unemployment rate;
- decreasing consumer spending, home construction, and business investment;
- falling stock markets;
- a decrease to the inflation rate;
- rising inventories (a sign of slackening consumer demand); and
- a negative growth rate for the GDP.

**Troughs** tend to be characterized by:

- a change from negative to positive GDP growth rate;
- a high unemployment rate and increasing use of overtime and temporary workers;
- a possible increase in spending on consumer durable goods and housing; and
- a moderate or decreasing inflation rate.

### PRACTICE QUESTION



If the Consumer Price Index (CPI) is down but consumer demand is up, the economy is likely in which stage of the business cycle?

- A. Trough to expansion
- B. Peak to contraction
- C. Recovery to trough
- D. Contraction to trough

**Answer: A.** As prices trend downward and consumer demand increases, the economy is recovering from a trough (the bottom) to expansion, choice A. As demand continues to increase, assuming supply remains constant, upward pressure will be put on prices through the expansion to the peak.

Analysts will frequently make investment decisions based upon where we are in the business cycle. Certain industries outperform while others underperform at different points in the cycle. Following are several examples.

## Cyclical Industries

**Cyclical industries** are highly sensitive to business cycles and inflation trends. Most cyclical industries produce durable goods, such as heavy machinery and automobiles, as well as raw materials, such as steel.

During recessions, the demand for durable goods declines as manufacturers postpone investments in new capital goods and consumers postpone purchases of automobiles. On the other hand, **countercyclical industries** tend to turn down as the economy heats up and to rise when the economy turns down. Gold mining has historically been a countercyclical industry.

## Growth Industries

Most industries pass through four phases during their existence: introduction, growth, maturity, and decline. An industry is considered in its growth phase if the industry is growing faster than the economy as a whole because of technological changes, new products, or changing consumer tastes. Social media and bioengineering are examples of current growth industries. Because many growth companies retain nearly all of their earnings to finance their business expansion, growth stocks usually pay little or no dividends.

## Defensive Industries

**Defensive industries** are least affected by normal business cycles. Companies in defensive industries generally produce nondurable consumer goods, such as food, pharmaceuticals, tobacco, and energy. Public consumption of such goods remains fairly steady throughout the business cycle.

During recessions and bear markets, stocks in defensive industries generally decline less than stocks in other industries. During expansions and bull markets, defensive stocks may advance less. Investments in defensive industries tend to involve less risk and, consequently, lower investment returns. Those using sector rotation will “rotate” into defensive issues when it appears the business cycle is headed into the contraction phase.

### PRACTICE QUESTION



Let's make sure you understand these terms:

An investor fears a coming recession. She would probably invest in

- A. biotech.
- B. steel producers.
- C. drug companies.
- D. home builders.

**Answer: C.** In a recessionary period, business activity slows, so one should take a defensive position. Drug companies (pharmaceuticals) tend to have steady earnings, even in bad economic times. After all, those taking needed prescription drugs will not stop. Even OTC drugs like headache remedies and antacids will continue to be sold (some say even more in a downturn). People generally don't buy a new home when things slow down, nor do they buy new cars (much of the steel produced goes into the manufacturing of autos). Biotech companies will find that funding for experimental treatments dries up.

**PRACTICE QUESTION**

When the business cycle is in the recovery stage, what type of industry tends to perform the best?

- A. Countercyclical
- B. Cyclical
- C. Defensive
- D. Growth

**Answer: B.** In general cyclical industries, those that follow the cycle tend to be the best performers during expansion (recovery). Countercyclical industries would tend to go in the opposite direction, and defensive industries are billed as such because they tend to be stable regardless of where we are in the business cycle. Most economists would agree that growth industries react later as the recovery gets closer to the peak.

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**LO 6.b Identify the three types of yield curves and how they reflect interest rates.**

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Although interest rates in general reflect investor expectations about inflation, short-term rates reflect the policy decisions of the Federal Reserve Board (FRB) as it implements the nation's monetary policy.

**Interest Rates**

An **interest rate** is the cost of borrowing money. The rate a borrower pays for funds is determined by the supply and demand for loanable funds, the credit quality of the borrower, and the length of time for which money is borrowed. In addition, the cost of funds is influenced by factors not related to the borrower, such as current and expected inflation.

When a company borrows money by issuing bonds, the bonds have a fixed interest rate, or coupon payment. As interest rates fluctuate, the price of the bonds in the secondary market also fluctuates. When interest rates increase, bond prices decrease; when interest rates decrease, bond prices increase. Thus, there is an inverse relationship between interest rates and bond prices.

**Nominal Interest Rates**

The **nominal rate of interest** is the actual rate of interest a borrower pays on the borrowed money. If inflation is expected, it is likely that interest rates are going to increase. That means that new loans (e.g., bonds) will carry a nominal rate higher than the bonds currently available. As a result, as interest rates rise, market forces will lead the price of those older, lower-interest-rate bonds to decline. That is because an investor's rate of return needs to be equivalent to current market conditions.



### EXAMPLE

Although covered in Unit 2, here is a refresher. A bond has a nominal yield of 5%. That means it is paying 5% interest annually on the loan, or \$50 on each \$1,000 bond. If interest rates rise to 7%, where a newly issued bond is paying \$70 per year, would you pay \$1,000 to buy the bond paying \$50 per year? Probably not. To make the “old” bond attractive to investors, the price will have to decline. In this case, it might sell for approximately \$700. Why? Because receiving \$50 per year (the loan rate is a fixed percentage of the \$1,000 loan) on an investment of \$700 give you a return of just a bit over 7% ( $50 / 700 = 7.14\%$ ).

## Yield Curve Analysis

An important tool in gauging investor sentiment toward future interest rates is analyzing the **yield curve**.

Plotted on a graph, the difference between short- and long-term interest rates normally reflects an upward sloping line known as the **yield curve**. When it is an upward sloping curve, it is a positive, or normal, yield curve. Long-term interest rates are normally higher than short-term rates for a number of reasons. Lenders must be compensated for the:

- time value of money;
- reduced buying power of money resulting from inflation;
- increased risk of default over long periods; and
- loss of liquidity associated with long-term investments.

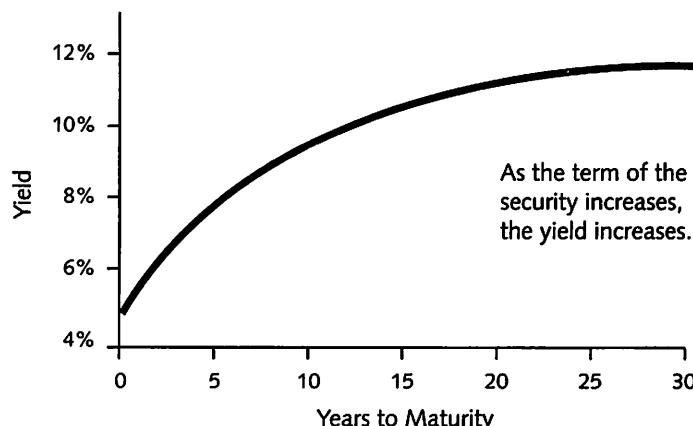
The yield curve is also a reflection of investor **expectations** about inflation. If investors expect high inflation rates, they will require higher rates of return to compensate for the reduction in purchasing power over time.



### TAKE NOTE

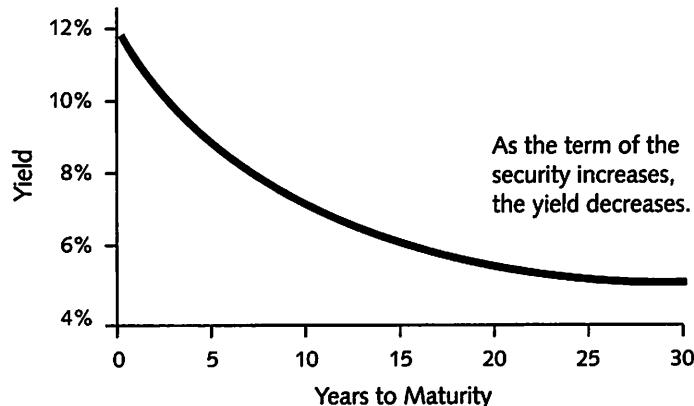
When the yield curve is normal, long-term interest rates are higher than short-term interest rates. On a graph, the normal yield curve is upward sloping.

### Normal (Positive) Yield Curve



In unusual circumstances, the yield curve can be **inverted**, or downward sloping. An inverted or negative yield curve can be the result of high current demand for money relative to the available supply. Short-term interest rates tend to be more sensitive to Fed policy than long-term rates. An inverted yield curve may occur because of a sharp increase in short-term rates. Therefore, when you notice a negative yield curve, you can expect that interest rates have rapidly risen and, according to most analysts, they will soon retreat.

### Inverted (Negative) Yield Curve

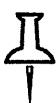


When short-term and long-term rates are the same, it is called a **flat** yield curve.



### TEST TOPIC ALERT

You will need to be able to recognize the different yield curves from their shape. A normal (positive) curve slopes upward. An inverted (negative) curve slopes downward. And there is such a thing as a flat yield curve, which, as the name implies, is level throughout all of the maturities.



### TAKE NOTE

The shape of the yield curve varies with changes in the economic cycle.

- A normal, or ascending, yield curve occurs during periods of economic expansion—it generally predicts that interest rates will rise in the future.
- A flat yield curve occurs when no change in interest rates is expected.
- An inverted, or descending, yield curve occurs when the Federal Reserve Board has tightened credit in an overheating economy; it predicts that rates will fall in the future.
- Yield curves for issuers with different risk levels can be compared to make economic predictions.

### Yield Spread (Credit Spread)

It should be obvious that the greater the risk, the higher the yield on the bond. Many analysts compare the difference between yields on bonds with the same maturity but different quality (ratings) to get a sense of the market sentiment. One common measurement is the difference in yields between Treasuries and corporate bonds. This difference is called the *yield spread* and tends to widen when economic conditions sour and narrow when they get better.

Yield spread can also be used between issues of the same issuer. For example, one of the most popular measurements of attitudes regarding future economic conditions is the yield spread between the 2-year Treasury note and the 10-year Treasury note. When investors are feeling optimistic about the economy, the yield spread narrows; when pessimistic, the yield spread widens.



### EXAMPLE

How is the yield spread predictive?

- If the yield spread between corporate bonds and government bonds is widening, a **recession** is expected. Investors have chosen the safety of government bonds over higher corporate yields, which occurs when the economy slows down.
- If the yield spread between corporate bonds and government bonds is narrowing, an economic **expansion** is expected, and so investors are willing to take risks. They will sell government bonds to buy higher-yielding corporates.



### TEST TOPIC ALERT

When constructing a yield curve, the method is to use bonds of a single issuer over varying maturities. Specifically, most rely on the curve drawn when plotting yields on U.S. Treasury securities, starting with the 91-day T-bill and ending with anything from the 10-year note to the 30-year bond.



### PRACTICE QUESTION

- A bond analyst is plotting a yield curve and notices that short-term maturities have higher yields than intermediate and long-term maturities. This is an example of
- A. an inverted yield curve.
  - B. a positive yield curve.
  - C. a normal yield curve.
  - D. an algorithmic yield curve.

**Answer:** A. An inverted, or negative, yield curve is one that results when debts with short-term maturities has higher yields than those with maturities that are longer. A positive, or normal, yield curve results when the yields increase as maturities do.



### KNOWLEDGE CHECK 6.1

1. The business cycle includes all of the following classifications **except**
  - A. expansion.
  - B. peak.
  - C. trough.
  - D. waves.
2. An upward sloping yield curve represents which of the following?
  - A. Time value of money
  - B. Increased risk of default over time
  - C. Inflation expectations
  - D. All of the above

## LESSON 6.2: PRACTICAL ECONOMICS FOR INVESTORS

### LO 6.c Identify fundamental economic principles, including the difference between monetary and fiscal policy.

The economic climate has an enormous effect on the conditions of individual companies and, therefore, the securities markets. In addition to a company's earnings and business prospects, any changes in government policy, business cycles, money supply, and Federal Reserve Board (FRB) actions affect securities prices and trading and the markets at large. In today's global economy, economic conditions abroad can influence the conditions domestically and in turn will also impact our securities markets. This unit will explore some of these factors.

**Fiscal policy** refers to a government's use of spending and taxation to influence economic activity. The budget is said to be *balanced* when tax revenues equal government expenditures. A **budget surplus** occurs when government tax revenues exceed expenditures, and a **budget deficit** occurs when government expenditures exceed tax revenues.

**Monetary policy** refers to the central bank's actions that affect the quantity of money and credit in an economy in order to influence economic activity. Monetary policy is said to be **expansionary** (or *accommodative* or *easy*) when the central bank increases the quantity of money and credit in an economy. Conversely, when the central bank is reducing the quantity of money and credit in an economy, the monetary policy is said to be **contractionary** (or *restrictive* or *tight*). Monetary policy is under the control of the Federal Reserve Board (the Fed).



#### TAKE NOTE

It is important for you to know that the fiscal policy of the United States is determined by the president and Congress through the process of budgeting and taxation. The budget is presented by the president and, usually after some negotiation, approved by Congress. The final step is the signature of the president. Monetary policy is determined by the Board of Governors of the Federal Reserve System. Unlike monetary policy, the Federal Reserve has nothing to do with fiscal policy.

### Major Schools of Economics

#### **Keynesian Economics**

Named after the economist John Maynard Keynes (pronounced "Canes"), Keynesian economists recognize the importance of government intervention. In 1936, Keynes published *The General Theory of Employment, Interest, and Money*, in which he revolutionized the way economists think about macroeconomics. He laid out how and why recessions happen and what must be done to recover from them. His strategy for recovery from a recession was for governments to run deficits to stimulate demand and employment. In other words, he suggested lower levels of taxation and more government spending.

#### **Classical and Supply-Side Economics**

Classical economists favor a school of thought referred to as supply-side economics. The most notable feature of this idea is the belief that lower taxes and less government regulation benefits consumers through a greater supply of goods and services at lower costs. **Supply-side economics** holds that supply creates demand by providing jobs and wages. The prices of goods of which there is excess supply will fall, and the prices of goods in demand will rise.

## Monetarist Theory

Monetarists, such as the late Milton Friedman, believe that the quantity of money, or **money supply**, determines overall price levels and economic activity. Too many dollars chasing too few goods leads to inflation, and too few dollars chasing too many goods leads to deflation. One of the principal roles of the Federal Reserve Board is monitoring the money supply and making adjustments when necessary.

## Tools of the Federal Reserve Board

Because the Federal Reserve Board (the Fed) determines how much money is available for businesses and consumers to spend, its decisions are critical to the U.S. economy. There are three primary tools employed to affect the money supply.

- **Changes in reserve requirements.** By raising the amount of funds commercial banks must leave on deposit with the Fed, the amount of money available for these banks to lend out is decreased. This shrinkage of the money supply generally translates into higher interest rates. The reverse is true when reserve requirements are eased.
- **Changes in the discount rate.** This is the rate the Fed charges member banks when lending them money. Higher rates discourage borrowing, reducing the money supply, with lower rates having an opposite effect.
- **Open-market operations.** The Fed buys and sells U.S. Treasury securities in the open market under the direction of the Federal Open Market Committee (FOMC). When Treasuries are purchased, it adds to the money supply. This is because the FOMC is purchasing these securities from commercial banks, causing the banks to have greater reserves. When the FOMC sells Treasuries, the money supply is reduced because funds are pulled out of the bank's reserves to pay for those securities. This is the most actively used Fed tool.

There is a fourth item that, although not set by the Fed, is highly influenced by their actions. That item is the federal funds rate. The **federal funds rate** is the rate banks that are members of the Federal Reserve System charge each other for overnight loans of \$1 million or more. The rate is considered a barometer of the direction of short-term interest rates. The federal funds rate is listed in daily newspapers and is the most volatile rate; it can fluctuate drastically under certain market conditions.



### TAKE NOTE

The Federal Reserve Board establishes the discount rate. The discount rate, unlike the federal funds rate, is a managed rate. It is one of the tools of monetary policy. In contrast, the **federal funds rate** is a market rate determined by the demand for bank reserves on the part of deposit-based financial institutions.

One final rate to discuss is the prime rate. The **prime rate** is the most preferential interest rate on corporate loans at large U.S. money center commercial banks. Each bank sets its own prime rate, with larger banks generally setting the rate that other banks follow. Banks lower their prime rates when the Fed eases the money supply and raise rates when the Fed contracts the money supply.

**PRACTICE QUESTION**

Which of the following statements regarding significant interest rates in the U.S. economy is **not** true?

- A. The federal funds rate is the rate the Federal Reserve charges for overnight loans to member commercial banks.
- B. The prime rate is the interest rate that large U.S. money center commercial banks charge their most creditworthy corporate borrowers.
- C. The discount rate is the rate the New York Federal Reserve Bank charges for short-term loans to member banks.
- D. The most active tool used by the Fed is the buying and selling of Treasury securities by the FOMC.

**Answer: A.** The federal funds rate is the rate that member banks charge each other for overnight loans of \$1 million or more; it is not the rate that the Federal Reserve charges member banks for overnight loans.

**TEST TOPIC ALERT**

Although the Fed's actions certainly impact all interest rates, you'll need to know that the Fed does not set the prime rate—that is done by the major commercial banks.

**TEST TOPIC ALERT**

Know the fundamentals of fiscal and monetary policy.

Fiscal policy:

- Actions of Congress and the president
- Government spending and taxation

Monetary policy:

- Policy of the Federal Reserve Board (FRB)
- Discount rate (set by the Fed)
- Reserve requirement (most drastic)
- Open-market operations (most frequently used)

**Definition: balance of payments.** The **balance of payments** measures all the nation's import and export transactions with those of other countries for the year. The balance of payments account contains all payments and liabilities to foreigners (debits) and all payments and obligations (credits) received from foreigners.

**TEST TOPIC ALERT**

When you receive interest on your bank account, what happens to that account? It's simple: your balance is credited; it goes up. When foreign money is received here, such as interest received on money loaned to foreign business enterprises, there is a credit to the foreign account balance of the United States. Conversely, a debit (reduction) to the foreign account balance of the United States occurs when money leaves our shores, such as loans made to foreign governments or dividends paid on foreign investment in the United States.



### TAKE NOTE

If the U.S. dollar weakens, meaning it buys less of a foreign currency such as Japanese yen, it makes U.S. exports more competitive in foreign markets. Conversely, if the U.S. dollar strengthens and buys more yen per dollar, it makes U.S. exports less competitive in foreign markets.



### TEST TOPIC ALERT

One way an investor can protect against a weakening U.S. dollar is to invest in foreign securities. In Unit 1, we discussed the American depository receipt (ADR), the simplest way to invest in individual foreign securities.

## ***Balance of Trade***

The largest component of a country's balance of payments is usually its balance of trade—that is, comparing the country's exports to its imports.

### ***Trade Deficit***

A **trade deficit** is an excess of one country's imports over its exports and is reported as part of the balance of payments figures. Over time, an excessive trade deficit can lead to the devaluation of a country's currency because the country will be converting, or selling, its currency to obtain foreign currency to pay for its increasing imports.

### ***Trade Surplus***

The opposite of a trade deficit, a trade surplus is an excess of one country's exports over its imports and is reported as part of the balance of payments figures. Over time, an excessive trade surplus can lead to the strengthening of a country's currency.



### EXAMPLE

On the U.S. credit side are sales of American products to foreign countries. On the debit side are American purchases of foreign goods that cause American dollars to flow out of the country. When debits exceed credits, a deficit in the balance of payments occurs; when credits exceed debits, a surplus exists.

## ***Balance of Trade***

Debit Items	Credit Items
Imports	Exports
U.S. spending abroad	Foreign spending in the United States
U.S. investments abroad	Foreign investments in the United States
U.S. bank loans abroad	
U.S. foreign aid	



### EXAMPLE

If the dollar value of French perfume imported into the U.S. is greater than the dollar value of Kentucky bourbon exported to France, the difference results in a negative trade balance, creating a debit to the U.S. trade account and a credit to France's.

We think the following chart will help you solidify the concepts.

US Dollar \$	Exports (money flowing in)	Imports (money flowing out)	Trade	Preference
Weak	Increase	Decrease	Surplus (more money flowing in than out)	Exporters/producers
Strong	Decrease	Increase	Deficit (more money flowing out than in)	Importers/ consumers

## Analytical Methodology

There are two popular methods used by analysts to help them determine where the best investment opportunities lie.

### Top-Down Analysis

If we were to draw a picture of top-down analysis, it would look like an inverted isosceles triangle: broad on top and narrow on the bottom. The analyst starts with the broadest measure of the overall economy and then successively narrows it down to finally select the company or companies that best fit the objectives.

### Bottom-Up Analysis

This is the direct opposite of top down. In this case, we merely start at the bottom (the point) of the triangle with the specific company and work our way up through the industry and then the economy. This analyst starts with the narrowest indicator and then steadily broadens the search.

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## LO 6.d Differentiate between inflation and deflation and how they are affected by the major economic indicators.

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### Inflation

Inflation is a general increase in prices as measured by an index such as the **Consumer Price Index (CPI)**, described in detail shortly. Mild inflation can encourage economic growth because gradually increasing prices tend to stimulate business investments. High inflation reduces a dollar's buying power, which can reduce demand for goods and services. A term that may appear on your exam is "inflation inertia." This is the concept that the rate of inflation does not immediately react to unexpected changes in economic conditions; rather, it lags behind, sometimes for several quarters, before there is an effect.

Sometimes the term *inertial rate of inflation* or *inertial inflation* is used. This is the persistent rate of inflation that continues at the same rate until an economic shock leads to a change. One of the results of this is that prices rarely go down. After all, what company wants to lower the prices of its goods or services, and how many workers are willing to accept wage cuts? So, prices generally continue to advance, hopefully at a slow rate.



### TEST TOPIC ALERT

Because inflation is a global issue, not just confined to the United States and our dollar, a universal definition would be "a decrease in the value of the monetary unit."

*Inflation is caused by excessive demand and monetary expansion.* Excessive demand occurs when aggregate demand exceeds the aggregate supply and prices rise. Monetary expansion is a rapid increase in a nation's money stock in excess of the nation's growth rate.

Increased inflation drives interest rates higher and drives bond prices lower. Decreases in the inflation rate have the opposite effect: bond yields decline and bond prices rise, as you will learn shortly.



### TAKE NOTE

An increase in real income means the percentage increase in income is greater than the rate of inflation. Buying power has increased.

## Deflation

Though rare, deflation is a general decline in prices. Deflation usually occurs during severe recessions when unemployment is on the rise. Deflation is caused by conditions opposite those that cause inflation. Basically, when the demand for goods and services is substantially below the supply of those goods or services, prices tend to drift downward (certainly not increase) to encourage an increased demand. One other possible cause of deflation is a severe shrinkage in the money supply.

If	And	Then	Thus
inflation increases	interest rates go up	bond prices go down	bond yields go up
inflation decreases	interest rates go down	bond prices go up	bond yields go down



### TEST TOPIC ALERT

It is not unusual to experience deflation during recessionary periods. At those times, investors tend to flee to safe havens such as U.S. government securities because unlike stocks, real estate, and commodities, Treasuries will likely not only hold their value but may even show some capital appreciation.



### PRACTICE QUESTION

- The contraction phase of the business cycle is least likely accompanied by decreasing
- consumer spending.
  - economic output.
  - inflation pressure.
  - unemployment.

**Answer:** D. An economic contraction is likely to feature increasing unemployment (i.e., decreasing employment), along with decreasing consumer spending, declining economic output, and decreasing inflation pressure.

## Statistical Indicators

Certain statistical **indicators** are used to measure the economic health of a country at a given time. Some of the primary indicators used are discussed below.

## Gross Domestic Product (GDP)

In LO 6.a, we defined gross domestic product and how it is affected by the business cycle. Let's take a deeper dive into the subject. Gross domestic product (GDP) expresses the total value of all final goods and services produced within the United States during the year. GDP includes personal consumption (by far the largest component), government spending, gross private investment, foreign investment, and the total value of net exports. If imports exceed exports, that negatively affects GDP, and that net amount is subtracted. The GDP measures a country's output produced within its borders regardless of who generated it. When the GDP is negative, it is generally a sign of deflation.



### PRACTICE QUESTION

A U.S.-based firm assembles electronic equipment using parts imported from Singapore. Its income statement looks like this:

Sales	\$60 million
Wages	\$30 million
Parts	\$16 million
Expenses	\$46 million
Net Income	\$14 million

What is this firm's contribution to the U.S. GDP?

- A. \$14 million
- B. \$30 million
- C. \$44 million
- D. \$60 million

**Answer: C.** The question is how we measure this firm's contribution to U.S. output. At first glance, the answer would seem to be \$60 million, the total value of its sales. However, \$16 million of this was produced somewhere else, so it shouldn't be counted as part of the firm's—or the United States'—output. Thus, the correct answer is \$44 million, the amount of value the firm has added to the imported parts.



### TEST TOPIC ALERT

The exam may want you to know that net exports will lead to an **increase** in GDP.

## Employment Indicators

The unemployment level is a key indicator of a country's economic health and bears a relationship to inflation. The two most common employment indicators are the average weekly initial claims for unemployment compensation and the average workweek in manufacturing. Both measures serve to predict the direction of economic activity. Many economists believe an unemployment level of about 4% reflects full employment, the point at which wage pressures do not create undue inflation.

## Consumer Price Index (CPI)

The **Consumer Price Index (CPI)** is a measure of the general retail price level. By comparing the current cost of buying a basket of goods with the cost of buying the same basket a year ago, we can get an indication of changes in the cost of living. In doing so, the CPI figure attempts to measure the rate of increase or decrease in a broad range of prices, such as food, housing, transportation, medical care, clothing, electricity, entertainment, and services. The

CPI is published on a monthly basis by the Bureau of Labor Statistics (BLS) and is the most commonly used measurement of the rate of inflation.



### TAKE NOTE

The index for all items, less food and energy, is often unofficially referred to as the **core** CPI, a term created by the media and not the Bureau of Labor Statistics. The reasoning behind excluding food and energy prices when computing **core** inflation is because of their high short-term volatility.

## Barometers of Economic Activity

Certain aspects of economic activity serve as barometers, or **indicators**, of business cycle phases. There are three broad categories of economic indicators: **leading**, **coincident**, and **lagging**. These indicators are published on a monthly basis by The Conference Board, a nongovernmental, not-for-profit research organization.

### **Leading Indicators**

**Leading indicators** are economic activities that tend to turn down before the beginning of a recession or turn up before the beginning of a business expansion. These indicators are used by economists to predict the future direction of economic activity four to six months hence. The leading economic indicators include the following:

- Money supply
- Building permits (housing starts)
- Average weekly initial claims for unemployment insurance
- Average weekly working hours, manufacturing
- Manufacturers' new orders for consumer goods
- Manufacturers' new orders for nondefense capital goods
- Index of supplier deliveries—vendor performance
- Interest rate spread between 10-year Treasury bonds and the federal funds rate
- Stock prices (e.g., S&P 500)
- Index of consumer expectations

Not all leading indicators move in tandem. Positive changes in a majority of leading indicators point to increased spending, production, and employment. This will generally result in an increase to the rate of inflation. Negative changes in a majority of indicators can forecast a recession.

### **Coincident (or Current) Indicators**

**Coincident**, or **current**, **indicators** are economic measurements that change directly and simultaneously with the business cycle. Widely used coincident indicators include the following:

- Nonagricultural employment
- Personal income minus Social Security, veteran benefits, and welfare payments

- Industrial production
- Manufacturing and trade sales in constant dollars

### Lagging Indicators

**Lagging indicators** are measurements that change four to six months **after** the economy has begun a new trend and serve to confirm the new trend. Lagging indicators help analysts differentiate long-term trends from short-term reversals that occur in any trend. Lagging indicators include the following:

- Average duration of unemployment
- Ratio of consumer installment credit to personal income
- Ratio of manufacturing and trade inventories to sales
- Average prime rate
- Change in the CPI for services
- Total amount of commercial and industrial loans outstanding
- Change in the index of labor cost per unit of output (manufacturing)



#### TAKE NOTE

Simply stated, these indicators attempt to tell us where we're going (leading), where we are (coincident), and where we've been (lagging). As an IAR, we suspect you'd be most interested in knowing where we're going, so you'd pay most attention (as everyone else does) to the leading indicators.



#### PRACTICE QUESTION

- Core inflation is best described as an inflation rate
- A. for producers' raw materials.
  - B. the central bank views as acceptable.
  - C. that excludes certain volatile goods prices.
  - D. that represents a market basket of consumer items.

**Answer: C.** Core inflation is measured using a price index that excludes food and energy prices.



#### KNOWLEDGE CHECK 6.2

1. The U.S. balance of payments deficit would decrease in all of the following scenarios **except**
  - A. a decrease in purchases of U.S. securities by foreign investors.
  - B. a decrease in imports of foreign goods into the United States.
  - C. an increase in exports of domestic goods from the United States.
  - D. a decrease in dividend payments by U.S. companies to foreign investors.
2. The Conference Board has released information indicating an increase in the Help Wanted Index. Most analysts would take this as a sign of
  - A. an impending recession.
  - B. likely wage inflation in the future.
  - C. an increase in manufacturing inventories.
  - D. a rising trade deficit.

# KNOWLEDGE CHECK ANSWERS

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## Knowledge Check 6.1

1. **D** Throughout modern history, periods of economic expansion have been followed by periods of contraction in a pattern referred to as the business cycle or economic cycle. Business cycles go through four stages: expansion, peak, contraction, and trough.  
LO 6.a
2. **D** The time value of money is reflected in the upward sloping yield curve. Longer-term rates require higher rates to compensate for loss of current buying power and liquidity. Longer-term funds bear a higher risk of default than do shorter-term funds and, as a result, command higher rates. Increasing inflation expectations cause the yield curve to slope upward to compensate lenders for the loss of value through inflation.  
LO 6.b

## Knowledge Check 6.2

1. **A** A deficit in the balance of payments occurs when more money is flowing out of the country than in. When foreign investors decrease their purchases of U.S. securities, the flow of money coming into the United States decreases; this adds to the deficit rather than decreasing it.  
LO 6.c
2. **B** An increase in the Help Wanted Index signifies that employers are hiring—business is good. Competition for qualified workers will usually result in paying higher wages, and that will translate to higher prices for goods and services (inflation).  
LO 6.d