

UNIT 22

Performance Measures

LEARNING OBJECTIVES

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

- › LO 22.a **Calculate** the investment return measurements most commonly found on the exam.
- › LO 22.b **Match** the appropriate benchmarks for various portfolios.

Your exam will include approximately four questions from the topics covered in Unit 22.

INTRODUCTION

Ultimately, the judge of the value of an investment adviser is the performance of the client's account. There are a number of different ways to measure the performance, and one must always keep in mind that it is how well the account meets the investor's objectives that counts. For example, an account that appreciated 10% in one year while distributing an income return of 1% is not meeting the goals of a client needing current income.

LESSON 22.1: INVESTMENT RETURN MEASUREMENTS

LO 22.a Calculate the investment return measurements most commonly found on the exam.

There will probably be two computations on your exam dealing with different types of returns. We'll cover all of them and indicate which are the most (and least) likely to appear on your test.



TAKE NOTE

As you review these quantitative evaluation measurements, know that the exam is more concerned with the ability to identify what they measure than how to perform the calculation. One or two questions might require a relatively simple calculation on current yield, after-tax return/yield, inflation-adjusted return, or total return.

Total Return

Total return includes the income from dividends or interest plus any capital appreciation (or less any capital depreciation) over a given time period, usually one year. As such, total return is considered to be the best measure of how a security has performed for an investor.



EXAMPLE

A common stock purchased for \$20 with an annual dividend of \$1 is sold after one year for \$24. The total return on the investment is \$5: \$1 in dividends plus \$4 in capital appreciation. The total return, then, is 25% ($\$5 \div \$20 = 25\%$).



TEST TOPIC ALERT

The exam may require you to know how to calculate total return. Keep in mind that the total annual return on an investment includes income and capital appreciation. In the case of bonds held to maturity, this is the YTM. Otherwise, it is the coupon income plus any appreciation or less any price depreciation. In the case of stocks, one would use the dividend income plus or minus the appreciation or depreciation.

Mutual Fund Returns

Unlike other securities, an investor's total return from a mutual fund investment may include, in addition to income distributions in the form of dividends, distribution of realized capital gains. They are all added together, along with unrealized appreciation (or mutual funds must separate their total return from their current return). The SEC requires that **current return calculations** be based only on income distributions for the past 12 months divided by the current per-share price: annual dividend + current price = current yield.



PRACTICE QUESTION

The KAPCO Income Fund has a current public offering price of \$10.50 and a net asset value per share of \$10.00. During the past 12 months, the fund has made four quarterly distributions from net investment income of \$.15 and one distribution from capital gains in the amount of \$.25. What would the fund's current yield be?

- A. 1.5%
- B. 5.7%
- C. 6.0%
- D. 1.1%

Answer: B. It is computed by dividing the annual income ($4 \times .15 = .60$) by the POP (not the NAV) of \$10.50. Only the dividends are used for current yield.

Holding Period Return

The length of time an investor owns an investment is called the **holding period**. The return for that period is called the **holding period return (HPR)**. HPR is the total return, income plus capital appreciation, of an investment over a specified period, the holding period. It is essentially the same as the total return, but, whereas the total return is usually computed on an annual basis, the holding period return can be for any period.



EXAMPLE

An investment purchased for \$100 and sold three years later for \$120 (\$20 capital appreciation) after paying a total of \$30 (\$10 per year) in dividends has a holding period return of 50% ($\$120 + \$30 = \$150$). The total gain is $\$150 - \$100 = \$50$. A \$50 return on a \$100 investment is 50% ($\$50 \div \$100 = 50\%$).



TAKE NOTE

Holding period return is not an annualized return. It is the percentage return over a defined period.



TEST TOPIC ALERT

We tend to focus on looking at the total return and the holding period return for equities, but it is also a valid measurement for bond returns. In this case, we combine the interest received and any appreciation or depreciation. However, there is one other factor that is sometimes considered: the rate at which the coupons are reinvested. If we assume the bondholder will keep the bond until maturity date, in a period of rising interest rates, the bondholder should be able to reinvest the coupons at a higher rate than the current coupon, thus causing the holding period return to exceed the yield to maturity. If, on the other hand, interest rates are falling, the coupons will only be able to be reinvested at a lower rate, causing a holding period return that is less than the bond's YTM.

Annualized Return

Annualized return is the return an investor would have received had he held an investment for one year. Annualized return is determined by multiplying the actual return by an **annualization factor**. The **annualization factor** is the number of months in the year divided by the number of months an investment is held.



EXAMPLE

An investor receives \$5 on a \$100 investment held for 6 months. The annualized return is determined by multiplying the 5% return by the annualization factor of 2 ($12 \text{ months} \div 6 \text{ months} = 2$) for an annualized return of 10%. Another investor has a capital gain of 30% from an investment held for 18 months. The annualized return is 20%, calculated as follows: $30 \times (12 \div 18) = 20$.



TAKE NOTE

The formula we've shown you is only approximate (the computation has never been asked on the exam). In reality, because of compounding, the annualized return would actually be a bit different. In the first example shown, it would be about 10.2% instead of 10%. In the second example (the 18-month holding period), it would be about 19.1% instead of 20%.

Inflation-Adjusted Return (Real Return)

Because inflation reduces the buying power of a dollar, investment performance measurements are often adjusted to provide a measure of the buying power earned from a given investment. Returns that have been adjusted for inflation are called **real rates of return**. This is a frequently required computation on the exam.

To determine the inflation-adjusted rate of return of a debt security, reduce its nominal return by the inflation rate as reflected in the Consumer Price Index (CPI).

To determine the inflation-adjusted rate of return of an equity security, reduce the **total return** (as taught above) by the inflation rate as reflected in the CPI.

EXAMPLE



A bond with an 8% coupon has a nominal return of 8%. If inflation (as measured by the CPI) is 3%, then the inflation-adjusted return of the bond investment is 8% – 3%, or 5%.

EXAMPLE



Let's revisit the total return example from a couple of pages ago:

A common stock purchased for \$20 with an annual dividend of \$1 is sold after one year for \$24. The total return on the investment is \$5: \$1 in dividends plus \$4 in capital appreciation. The total return, then, is 25% ($\$5 \div \$20 = 25\%$). If the question asked for the "real rate of return" and told you that the CPI increase for the period was 6%, you would subtract that from the 25% total return to arrive at an inflation-adjusted return of 19%.

EXAMPLE



For fixed-income investors, inflation and taxes reduce the buying power of their dollars. For an investor in the 25% tax bracket in a 2.5% inflationary environment, an investment that yields 10% before taxes provides the investor with a 5% after-tax inflation-adjusted return. To calculate the 5% after-tax inflation-adjusted return, first determine the after-tax return. In this case, 10% less 25% for taxes results in a 7.5% after-tax return.

The easiest way to compute the real rate of return is to reduce the return by the amount of inflation during the period. In this case, 7.5% less 2.5% inflation results in a 5% after-tax inflation-adjusted return. Even though a calculation of this type might not be on your exam, you need to understand the concept that your final returns are reduced by both taxes and inflation.

TEST TOPIC ALERT



The exam will require you to know how to calculate the approximate inflation-adjusted return by merely subtracting the CPI from the total return. What we've shown you is only an approximation—the correct formula is "the sum of one plus the nominal rate divided by the sum of one plus the inflation rate, which then is subtracted by one," but we've never heard of that being asked on the exam.

Calculating the Return on a TIPS Bond

We covered the basics of TIPS (Treasury Inflation-Protected Securities) in Unit 2. You might have to compute the value of a TIPS bond after several years, or the amount of an interest payment. There are two key points to remember:

Every six months, the principal value is adjusted by the change to the cost of living as measured by the CPI.

Every six months, the semiannual interest payment is calculated by multiplying one-half of the annual coupon times the adjusted principal. We'll show you the steps in an example (and then show you a short cut that will always work on the exam).



EXAMPLE

If you have a TIPS bond with a 3% coupon and the annual inflation rate is 4% for the next two years, here is what happens:

Each six months, you will receive 1.5% (half of the annual 3% coupon) of the principal value as adjusted for the inflation rate. If the inflation rate is 4% per year, that is 2% each six months. So, after the first semiannual period, the principal value of the bond is now \$1,020 ($\$1,000 + 2\% \text{ of } \$1,000$, or $102\% \times \$1,000$). Therefore, the first interest check will be $1.5\% \times \$1,020$, or \$15.30. Six months later, the adjusted principal value is \$1,040.40 ($102\% \times \$1,020$), so that interest check will be for \$15.61 ($\$1,040.40 \times 1.5\%$). As we continue into the next year, the principal will increase to \$1,061.21 ($\$1,040.40 \times 102\%$) and the interest check will be for \$15.92. Because we're only looking at two years, the ending principal value will be \$1,082.43 with the final interest check of \$16.24. As you can see, both the income from the TIPS and its principal value are increasing at a compounded rate based upon inflation.

We know that some of you may be mathematically challenged, so here is a shortcut that will always work. The key to the increased principal value of the TIPS is that the interest is compounding. But you don't have to do that. In this example, the inflation rate is 4%. Using just simple interest would mean that the principal would increase by \$40 (4% of \$1,000) per year. After two years, that would be \$80 or a new principal amount of \$1,080. However, we know that compounding will give us slightly more, so we choose the first number given in the answers that is above \$1,080. The same "trick" can be used to determine the final interest payment. We take 1.5% of \$1,080 (\$16.20) and look for an answer choice that is slightly higher.



TEST TOPIC ALERT

Because of the built-in inflation adjustment, the real rate of return on a TIPS bond is always equal to the coupon rate.

After-Tax Return/Yield

Capital gains and income are generally taxable; thus, taxes reduce the return of an investment. The **after-tax return**, also known as the **adjusted return**, is determined by reducing the investment's return by the client's tax rate.

**EXAMPLE**

The after-tax return of an investment that yields 10% for an investor in the 25% tax bracket is calculated by multiplying the return by $(1 - .25)$, or .75. The investor retains 75% of the 10% yield for a 7.5% after-tax return. Likewise, an investment that returns 45% over three years provides an after-tax return of 33.75% ($.75 \times 45\%$).

The importance of the after-tax return is realizing that any investor's return is going to be reduced by the effects of taxation, whether it is the favorable capital gains tax or the higher ordinary income rate. That is the beauty of programs such as the Roth IRA or Section 529 plan, where it is possible to have totally tax-free returns. Remember, even though the interest on a municipal bond may be tax free, any capital gains are not.

Probable Return

Unlike historical or actual rates of return, **probable returns** are estimates of the likely returns an investment may yield. To determine the probable return of an investment, the adviser assigns a probability to each return that the investment is likely to earn and then multiplies that return by the probability of it occurring. The sum of those probable returns is the expected return for that investment. The formula is as follows: $\text{expected or probable return} = (\text{probability of return } \#1 \times \text{possible return } \#1) + (\text{probability of return } \#2 \times \text{possible return } \#2)$.

**EXAMPLE**

The probable (expected) return of an investment with a 30% probability of returning 15% and a 70% chance of returning 10% has a total expected return of 11.5%, calculated as follows: $(.30 \times 15\% = 4.5\%) + (.70 \times 10\% = 7.0\%)$, or $4.5\% + 7.0\% = 11.5\%$.

In effect, this return reflects the arithmetic (mean) return of the portfolio. When one constructs a portfolio, there are usually securities with different grades of risk and, hence, different expectations of reward. Investors view the portfolio as a whole, looking to maximize returns for each level of risk. This overall view, or mean, of the entire portfolio is the expected or probable return of the portfolio.

**TEST TOPIC ALERT**

Don't be surprised to get a question similar to our example above, but with one of the possibilities being a negative. Suppose our example had said there was a 30% probability of returning 15%, a 40% chance of returning 10%, and a 30% chance of losing 8%. The expected return would be $(.30 \times 15\% = 4.5\%) + (.40 \times 10\% = 4.0\%) + (.30 \times -8\% = -2.4\%)$ for a total of 6.1% expected return.

Risk-Adjusted Return (Sharpe Ratio)

Securities practitioners have developed many measures to quantify the risk characteristics of a portfolio. One such measure that may show up on the exam is called the **Sharpe ratio**. The ratio is calculated by subtracting the risk-free rate (e.g., the 91-day Treasury bill rate) from the overall return of the portfolio. This result, which is the portfolio's risk premium, is then divided by the standard deviation of the portfolio. This ratio measures the amount of return per unit of risk taken. The higher the ratio, the better or more return per unit of risk taken.



TEST TOPIC ALERT

The Sharpe ratio measures risk-adjusted return. The exam might state this as, “The Sharpe ratio looks at the return compared to the risk.” A high ratio means that the investor is getting “more bang for the buck.” That is, based on the risk taken, the return is higher than what would be expected.



TEST TOPIC ALERT

You must know that the three components of the Sharpe ratio are:

- the actual return, minus
- the risk-free rate (the 91-day T-bill rate), divided by
- the standard deviation.

Beta is not a part of this ratio.



PRACTICE QUESTION

Given the following information, calculate the risk-adjusted return.

Actual return: 13.5%

91-day T-bill rate: 1.5%

Beta = 1.6

CPI: 4%

Standard deviation: 4.0

- A. 2%
- B. 3%
- C. 4.8%
- D. 15.2%

Answer: B. Any question asking about risk-adjusted return is going to be referring to the Sharpe ratio. This is shown as a simple number and is calculated by subtracting the risk-free rate (91-day T-bill) from the actual return and dividing that remainder by the standard deviation. In this example, $13.5\% - 1.5\% = 12\%$ divided by $4 = 3\%$. As will often be the case on the exam, there is unnecessary information supplied in the question (beta and CPI).

Unit 22

Risk Premium

It should be clear that in order to have a positive Sharpe ratio, our actual return on an investment must exceed the risk-free return. Therefore, any investor would surely expect to achieve that higher return, or the investment would not be made. This return is known as the risk premium.

The required rate of return on *any* investment is a combination of the risk-free rate plus a risk premium. For equity investments, the risk premium can be determined by using the capital asset pricing model (CAPM) discussed in Unit 21.

Internal Rate of Return (IRR)

IRR has been discussed previously, in Unit 20. We’re just going to list a few of the points that are important for the exam:

- IRR is the preferred method of measuring the return on a DPP;

- IRR takes into consideration the time value of money; and
- IRR is the way the yield to maturity of a bond is computed.

Time-Weighted Returns

Although time-weighted returns and dollar-weighted returns are both methods of determining a rate of return, they have very different purposes. A **time-weighted return** is determined without regard to any subsequent cash flows of the investor. As such, it measures the performance of the investment over a period of time (and not of the investor, as in a dollar-weighted approach). Most returns reported on mutual funds are time-weighted because the portfolio manager does not have any control over the future cash flows to the fund with respect to investor dollars.

Dollar-Weighted Returns

In contrast, a **dollar-weighted return** considers subsequent contributions to and withdrawals from an investment, including sales of, for example, stock. As a result, the dollar-weighted approach focuses on the return of the investor (not the investment, as in the time-weighted approach) over a period of time, and usually results in a rate of return different than the time-weighted method.

Portfolio A					
Period	Investor Deposits or Withdrawals	Beginning of Period Value	End of Period Value	Periodic Rate of Return	
0	\$1,000	\$1,000	\$1,200	20.00%	
1	(-\$400)	\$800	\$700	-12.50%	
2	\$300	\$1,000	\$1,400	40.00%	
3	(-\$200)	\$1,200	\$1,000	-16.67%	
4	(\$1,000)	—	—	—	—
DWR = 8.2311%				TWR =	5.2034%

Portfolio B					
Period	Investor Deposits or Withdrawals	Beginning of Period Value	End of Period Value	Periodic Rate of Return	
0	\$1,000	\$1,000	\$1,200	20.00%	
1	\$400	\$1,600	\$1,400	-12.50%	
2	(-\$400)	\$1,000	\$1,400	40.00%	
3	\$400	\$1,800	\$1,500	-16.67%	
4	(\$1,500)	—	—	—	—
DWR = 2.0245%				TWR =	5.2034%

**TEST TOPIC ALERT**

The dollar-weighted return reflects the internal rate of return (IRR); the time-weighted return does not.

**PRACTICE QUESTION**

- If you wanted to evaluate the performance of a portfolio manager, you would calculate the portfolio's
- dollar-weighted return.
 - holding period return.
 - portfolio return.
 - time-weighted return.

Answer: D. Because portfolio managers have no control over the deposits and withdrawals made by clients, the time-weighted return (choice D) is a more appropriate measure of performance.

**KNOWLEDGE CHECK 22.1**

- If an investment adviser wanted to look at a security's return versus the risk taken, it is most likely the adviser would calculate
 - the total return ratio.
 - the Sharpe ratio.
 - the CAPM ratio.
 - the Markowitz ratio.
- An investor purchased 200 shares of XYZ Corporation common stock at \$50 per share in early May. During the year, XYZ paid \$0.50 quarterly dividends on a January, April cycle. If the market price of the XYZ stock on December 31 is \$54 per share, this investor's total return is
 - 8%.
 - 10%.
 - 11%.
 - 12%.

LESSON 22.2: PORTFOLIO BENCHMARKS

LO 22.b Match the appropriate benchmarks for various portfolios.

Tens of thousands of stocks trade in the stock markets. Stock indexes, such as the S&P 500 or the Utility Index, are smaller groups of stocks that serve as a benchmark for measuring the performance of the overall market or sectors of the market.

Indexes are generally weighted for the capitalization (number of outstanding shares times the market price per share) of the companies included. Therefore, a large company's stock price changes will have a greater effect on the index. Indexes are often used as benchmark portfolios against which managed portfolios are measured in order to gauge the performance, or added value, of the fund manager. In addition, index mutual funds and ETFs will invest in the securities that compose an index to specifically mirror the index's performance. Following is a listing of indexes or averages that may appear on the exam.

Dow Jones Industrial Average

The best known of all of the market indexes are those published by Dow Jones & Company. There are probably two reasons why the Dow Jones Industrial Average (DJIA) is so well known: first, because the 30 industrial stocks are among the 30 best-known corporations in the world; and second (and some would say more important), because Dow Jones & Company also publishes *The Wall Street Journal*, the nation's leading financial newspaper. Because it is price weighted, the Dow Jones is truly an average. Originally it was computed by adding together the prices of one share for each of the 30 different companies and then dividing by 30. That had to be changed as soon as the first one of those 30 companies had a 2:1 stock split. Because a stock split will cause the market price of the stock to drop—that is, the average would be distorted by continuing to divide the 30 current market prices by 30—an adjustment had to be made to the 30 (called the divisor). Over the years, stock splits and other distributions have caused that original divisor of 30 to be adjusted. There are three other Dow Jones Averages: the 20 transportation companies, the 15 utilities, and the composite of all 65. On November 1, 1999, history was made when non-NYSE stocks were included in the DJIA for the first time. Added to the average were Microsoft and Intel, which are both listed on Nasdaq.

Standard & Poor's 500

The composition of the Standard & Poor's 500 (S&P 500) Composite Index includes four main groups of securities: 400 industrials, 20 transportation companies, 40 public utilities, and 40 financial institutions. The S&P 500 is a cap-weighted index using a base period of 1941–1943 equal to 10. Although most of the stocks in the S&P 500 are listed on the NYSE, many of the highest-priced issues—Alphabet (Google), Amazon, and Booking Holdings (Priceline)—are traded on the Nasdaq Stock Market.

New York Stock Exchange (NYSE) Index

The NYSE publishes a composite index that covers all of the common stocks listed on the NYSE, more than 3,000 different companies. This index provides the most comprehensive measure of market activity on the NYSE. The NYSE index is cap weighted, similar to the S&P 500, but the base is December 31, 1965, and the index for the base is 50.

Nasdaq Composite Index

The over-the-counter market is represented by the Nasdaq Composite Index, which covers more than 3,000 over-the-counter companies. The Nasdaq Composite Index is calculated in a manner similar to those used for the S&P and NYSE indexes, with a base period of February 5, 1971, and an index number of 100. These indexes, their subgroups, and several other popular indexes are quoted daily in *The Wall Street Journal*. As with the others (except for the Dow Jones), this is also a cap-weighted index.

Russell 2000 Index

The Russell 2000 index measures the performance of the small-cap segment of the U.S. equity universe. It includes approximately 2,000 of the smallest securities, based upon their market capitalization (minimum market cap of \$300 million). Like most of the others, it is market-cap weighted, with the median market cap being something approximating \$600 million.

EAFE

The EAFE, sometimes referred to as the MSCI EAFE (it was developed by Morgan Stanley Capital International), is an index of foreign stocks. The index is market capitalization weighted. The EAFE acronym stands for Europe, Australasia, and the Far East.

The index includes a selection of stocks from 21 developed countries outside of the United States and Canada. The index has been calculated since the end of 1969, making it the oldest truly international stock index. It is probably the most common benchmark for foreign stock funds.

Wilshire 5000

The Wilshire 5000 Total Market Index measures the performance of all U.S. equity securities with readily available price data. This is another market- or cap-weighted index that, when it was initially created in 1974, did contain approximately 5,000 issues. Now, as of December 31, 2021, the number was 3,687 issues.



TEST TOPIC ALERT

If you are asked to identify the index that reflects the broadest coverage of the U.S. stock markets, it is the Wilshire 5000.



TEST TOPIC ALERT

The exam will want you to know which index serves as the benchmark for which type of portfolio:

- Large-cap—S&P 500
- Mid-cap—S&P 400
- Small-cap—Russell 2000
- International stocks—EAFE



KNOWLEDGE CHECK 22.2

1. Which of the following is a price-weighted average?
 - A. Dow Jones Industrial Average
 - B. MSCI EAFE
 - C. Russell 2000
 - D. S&P 500
2. Amare is the portfolio manager of a mutual fund concentrating on stocks with a market capitalization between \$500 million and \$1 billion. The benchmark that Amare's performance is compared to is *most* likely
 - A. the Dow Jones Industrial Average.
 - B. the Russell 2000.
 - C. the S&P 400.
 - D. the S&P 500.

KNOWLEDGE CHECK ANSWERS

Knowledge Check 22.1

1. **B** One of the most popular measurements of the risk-adjusted return of an asset or a portfolio is the Sharpe ratio. None of the other choices are measured ratios.

LO 22.a

2. **B** Total return on a stock consists of any price appreciation (or depreciation) plus any dividends received.

The formula for total return is $\frac{(P_1 - P_0) + D}{P_0}$

Where P_0 = initial stock price; P_1 = ending stock price; and D = dividends. Plugging in the numbers, we have $(\$54 - \$50) + \$1 = \$55 + \$50 = 10\%$.

When a stock pays quarterly dividends on a January, April cycle, it means those two months plus July and October. Note that the stock was purchased in May, so the only dividends received by this investor were the \$0.50 in July and the \$0.50 in October.

LO 22.a

Knowledge Check 22.2

1. **A** The only major benchmark that is price weighted is the Dow Jones. All of the others are market-cap weighted.

LO 22.b

2. **B** Amare's focus is on small-cap stocks—the benchmark index for those is the Russell 2000. The S&P 400 is the benchmark index for mid-cap stocks, and the S&P 500 is the benchmark index for large-cap stocks. The DJI is not generally thought of as a portfolio benchmark index.

LO 22.b

UNIT 23

Trading Securities

LEARNING OBJECTIVES

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

- LO 23.a **Compare** cash and margin accounts.
- LO 23.b **Compute** the margin account calculations.
- LO 23.c **Contrast** stock exchanges and the over-the-counter market.
- LO 23.d **Identify** the difference between functioning as a broker and acting as a dealer.
- LO 23.e **Describe** the costs of trading securities.
- LO 23.f **Identify** the features and uses of market, stop, and limit orders and short sales.
- LO 23.g **Describe** high frequency trading (HFT) and dark pools.

Your exam will include approximately four questions from the topics covered in Unit 23. **New information in LO 23.d and LO 23.e is in the Addendum.**

INTRODUCTION

By this time in the course, you're probably itching to go out and try some of these great strategies and techniques and get active in the market. In this unit, we'll cover the first thing you have to do—decide what type of account you're going to open. Then, we'll discuss where the securities you wish to purchase or sell are traded. It isn't like you can visit your local Walmart and pick up a few hundred shares of stock. Nor can you go online to Amazon and, even if you have Prime, order some bonds and have them delivered in two business days.

LESSON 23.1: CUSTOMER ACCOUNTS

LO 23.a Compare cash and margin accounts.

Customers can open either cash accounts or margin accounts, depending on how they choose to pay for securities. In cash accounts, customers pay the full purchase price of securities by the transaction settlement date. In margin accounts, customers may borrow part of a security's

purchase price from the broker-dealer under terms set by Regulation T of the Federal Reserve Board (FRB). That power was given to the FRB in the Securities Exchange Act of 1934.

Cash Accounts

A **cash account** is the basic investment account, and anyone eligible to open an investment account can open one. In a cash account, a customer must pay in full for any securities purchased. Although, there are exceptions, as with almost everything in this course, for exam purposes, certain accounts may *only* be opened as cash accounts, including:

- personal retirement accounts, such as IRAs;
- corporate retirement accounts;
- custodial accounts, such as Uniform Transfer to Minors Act accounts (UTMAs); and
- Coverdell ESAs.

Margin Accounts

Margin accounts allow customers to control investments for less money than they would need if they were to buy the securities outright, because a margin account allows a customer to borrow money for investing. The term *margin* refers to the minimum amount of cash or marginable securities a customer must deposit to buy securities.

Margin also is a potential source of cash. If a customer has fully paid securities in an account and needs cash, a broker-dealer is permitted to lend money against those securities up to the margin limit that the FRB has set.

Customers who open margin accounts must meet certain minimal suitability requirements. The customer may then buy securities on margin and pay interest on the borrowed funds. The securities purchased are held in street name as collateral for the margin loan.

When buying on margin, investors are using financial leverage—that is, they are increasing the potential for gain (and for loss as well) by using borrowed funds. Leveraging can be beneficial when the security is moving up, but it can result in a loss greater than the original investment if the security goes against the investor.

Marginable Securities

In addition to prescribing the loan value of securities, Regulation T also identifies which securities are eligible for purchase on margin and which may be used as collateral for loans for other purchases. These are known as marginable securities. The following should be helpful.

Securities that may be purchased on margin/used as collateral:

- Exchange-listed stocks and bonds
- Stocks traded on the Nasdaq Stock Market
- Warrants traded on either of the above

Securities that cannot be purchased on margin/used as collateral:

- Options (puts and calls)—LEAPS are an exception, but that is unlikely to be tested
- Stock rights (preemptive)
- Insurance contracts (e.g., variable annuities and variable life)

Securities that cannot be purchased on margin, but may be used as margin collateral once owned at least 30 days:

- Mutual funds
- New issues

Finally, although they are exempt from Regulation T, the self-regulatory organizations, primarily FINRA, have established margin requirements for government and municipal securities. That means that they can also be purchased on margin and have value as collateral.

Documenting a Margin Account

Opening a margin account requires more documentation than opening a regular cash account. The customer signs a margin agreement, which includes the required credit agreement, the hypothecation agreement, and an optional loan consent. Under NASAA policies, it is an unethical business practice to execute any transaction in a margin account without securing from the customer a properly executed written margin agreement promptly after the initial transaction in the account.

Margin Account Agreements

Credit Agreement	Discloses the terms under which credit is extended, including the use of the client's securities as collateral for the margin loan. SEC Rule 10b-16 requires firms to disclose the method of computing interest and the conditions under which interest rates and charges will be changed. Firms must send customers an assurance that statements accounting for interest charges will be sent with the same frequency that interest is charged (monthly or quarterly).
Hypothecation Agreement	Gives the firm permission to pledge (hypothecate) securities held on margin to a lending institution; it is a mandatory part of a margin agreement.
Loan Consent (optional)	Gives the firm permission to lend securities held in the margin account to other brokers, usually for short sales. It is not mandatory for customers to sign the loan consent agreement.



TAKE NOTE

Although NASAA does not have one, FINRA rules (which most states view as practices to be followed by broker-dealers under their jurisdiction) do have a risk disclosure requirement for margin accounts. As part of opening a margin account, the broker-dealer must provide customers with a risk disclosure document. Unlike the "promptly after the initial trade" requirement that NASAA has for its required documentation, FINRA requires this document to be delivered prior to or at the time of opening the account. This information must also be provided to margin customers on an annual basis. The document discusses the risks associated with margin trading, some of which are listed below.

- You can lose more funds than you deposit in the margin account.
- The firm can force the sale of securities or other assets in your account(s) and do so without contacting you.
- You are not entitled to choose which securities can be sold if a call for additional funds is not met.
- You are not entitled to an extension of time to meet a margin call.
- The firm can increase its house maintenance margin requirements at any time and is not required to provide advance written notice to the client.



TAKE NOTE

One of the agreements described above is the hypothecation agreement. In order to finance the loan that the broker-dealer makes to the client, the firm takes the newly purchased security and hypothecates (pledges) it to a bank to collateralize a loan made by the bank to the BD. The **broker call loan rate** is the interest rate banks charge broker-dealers on money they borrow to lend to margin account customers. The broker call loan rate is also known as the *call loan rate* or *call money rate*. The broker call loan rate usually is slightly higher than other short-term rates. Broker call loans are callable on 24-hour notice. Invariably, *call loan* appears on the exam as one of the incorrect choices.

LO 23.b Compute the margin account calculations.

The term *margin call* is properly defined as the initial call for funds when making a margin transaction. For example, with the margin requirements of the Federal Reserve Board's Regulation T at 50% (as they have been since 1974), a purchase of \$12,000 of stock will result in a margin call of \$6,000. The broker-dealer lends the client the other \$6,000, creating a debit balance in the account. The equity in the account is 50%, and the client's debt is the other 50%.

Maintenance

The self-regulatory organizations (SROs) (e.g., FINRA and the NYSE), rather than the Fed through Regulation T, have established minimum levels of equity in a margin account below which a call will go out for additional funds. This is properly referred to as margin maintenance or a maintenance call. Current SRO levels are 25% for long margin accounts. For example, if, in the above purchase, the stock's price were to drop to \$8,000, there would only be \$2,000 of equity in the account (market value of \$8,000 minus debit balance of \$6,000 equals \$2,000). At this point, the equity represents 25% of the current market value ($\$2,000 / \$8,000$). If the stock should drop any further, a maintenance margin call would be sent with a request for immediate funds. You will not have to do any of these computations, but you will need to know the term. If the maintenance call is not met, the broker-dealer will liquidate enough securities in the account to bring the equity back to the maintenance level. If there is more than one security in the account, the firm can select which to sell—it does not have to be one whose decline triggered the call.

House Maintenance

This is the term used to describe stricter limits imposed by the broker-dealers themselves. Typically, instead of relying on the SRO maintenance level of 25%, the individual firm may require a minimum of 35% or even higher.



TAKE NOTE

This should help you remember the three terms we've just discussed:

Margin call: Set by the Federal Reserve Board under Regulation T, this is the initial deposit required when purchasing securities on margin (the broker-dealer lends the balance of the purchase price). For most equity securities, the initial margin requirement is 50% of the purchase price.

Minimum maintenance: Set by the SROs, this is the minimum equity that must be maintained in a margin account. Should the equity fall below the minimum required, a maintenance call (sometimes called maintenance margin) will go out demanding an immediate deposit of enough equity to bring the account above the required level. Currently, the minimum maintenance level for long positions is 25%.

House maintenance: Set by the individual broker-dealer firm; as a cushion, and to reduce the possible sellout caused by failure to meet a maintenance call, most firms set a minimum equity level above the SRO minimum. A common house requirement is 35%. Falling below triggers a *house call*.

None of these numbers will be tested, only the concepts.

Mixed Margin Account

Later in this unit, we'll describe the short sale. Short sales must take place in a margin account. When the margin account contains both long and short positions, it is said to be a mixed margin account. Computing the equity, sometimes called net equity, in one of these accounts is done by calculating the equity for both the longs and shorts and then combining them.

In a long account, the equity is what you own, minus what you owe. That would be the current market value of the long stock minus the debit balance. In the case of the short position, it is basically the same, except the terms are different. What you owe in a short position is the cost to buy back the stock you've borrowed. What you own is the credit balance representing what you received when you sold the stock in the first place. So, the equity in a short account is the credit balance minus the current market value of the short stock. Perhaps the following will make it a bit easier:

$$\text{CMV long} - \text{debit balance} = \text{long equity}$$

$$\text{Credit balance} - \text{CMV short} = \text{short equity}$$

We have two positive numbers: the stock we own and the credit balance (you know that when you get a bill and there is a credit balance, it means they owe you money—that's yours). On the other side, we have two negative numbers: the cost to buy back the stock we're short and the debit balance. If we add the two positives and then subtract the two negatives, we've got our net equity.



EXAMPLE

A client's mixed margin account shows the following information: the current market value of the long positions is \$50,000, while the current market value of the short positions is \$25,000. There is a debit balance of \$20,000 and a credit balance of \$40,000. What is the combined, or net, equity in the account?

Find the equity in each account, long: $\$50,000 - \$20,000 = \$30,000$ and short: $\$40,000 - \$25,000 = \$15,000$, so the total is \$45,000. Or take the two positive numbers, \$50,000 + \$40,000, which equal \$90,000, and subtract the two negative numbers, \$20,000 + \$25,000, which equal \$45,000, and you get the same: \$45,000.

Positive (Negative) Margin

The term *positive margin* simply means that your returns are higher than the cost of the borrowed money to carry the positions in a margin account.

For example, if you buy \$10,000 of stock on 50% margin, you will be borrowing \$5,000 of that purchase price from the broker-dealer. If, over the holding period, you pay \$400 in interest and sell the stock for \$11,000, you've made a profit of \$1,000 against the cost of \$400 for net "winnings" of \$600. That would be considered *positive margin*.

If, however, you sold the stock for \$10,300, your interest cost would have exceeded the profit by \$100, and that would be considered *negative margin*.

There is one more fact we need to cover about margin accounts. **Margin interest** is a tax-deductible expense. The one exception is interest expense incurred in the purchase of municipal securities. Because municipal interest income is federally tax exempt, the IRS does not allow taxpayers to deduct the margin interest expenses for municipal securities. Investors can deduct interest expenses incurred when borrowing money to purchase other securities to the extent those interest expenses do not exceed their portfolio income, which includes interest income, dividends, and all capital gains.



KNOWLEDGE CHECK 23.1

1. Certain documentation is required to open a margin account. Which of the following is optional?
 - A. The credit agreement
 - B. The hypothecation agreement
 - C. The loan consent agreement
 - D. The risk disclosure document

2. When dealing with margin accounts, there are generally three different percentages involved: the initial margin, the house requirement, and the maintenance level. Rank those three from the highest to the lowest percentage.
 - A. Initial margin, maintenance margin, house maintenance
 - B. Initial margin, house maintenance, maintenance margin
 - C. House maintenance, maintenance margin, initial margin
 - D. Maintenance margin, initial margin, house maintenance

LESSON 23.2: TYPES OF SECURITIES MARKETS

LO 23.c Contrast stock exchanges and the over-the-counter market.

Securities Markets

There are two terms used to describe the market for securities. The **primary market** is the market in which the proceeds of sales go to the issuer of the securities sold. The **secondary market** is where previously issued securities are bought and sold. This unit will focus on secondary market trading.

After the initial offering, many stocks and bonds are bought and sold on exchanges in a two-way auction process. The major exchanges include the New York Stock Exchange (NYSE), NYSE American LLC (formerly known as the American Stock Exchange [AMEX]), the Chicago Board Options Exchange (CBOE), and the Nasdaq Stock Market. Other trades take place in the nationwide network of broker-dealers known as the over-the-counter (OTC) market.

Exchange Market

The **exchange market** is composed of the NYSE and other exchanges on which **listed** securities are traded. **Listed security** refers to any security listed for trading on an exchange. Each stock exchange requires corporations to meet certain criteria before it will allow their stock to be listed for trading on the exchange. In order to operate in the United States, an exchange must be registered with the Securities and Exchange Commission as called for in the Securities Exchange Act of 1934. Under that act, the SEC has many powers, including enforcement of the laws. Two specific actions that the SEC can take that might be tested are:

- to suspend trading in any nonexempt security for up to 10 days without prior notice; and
- to suspend trading on an entire exchange for up to 90 days (in order to do this, the SEC must give prior notification to the president of the United States).

Location. Most stock exchanges, such as the NYSE, maintain central marketplaces and trading floors. Some, such as the Nasdaq Stock Market, are strictly electronic markets. As of the date of this printing, there are 21 exchanges registered as national stock exchanges with the SEC. At one time, there were a number of regional stock exchanges, but they have either been closed or merged into the national ones.

Pricing system. Historically, listed markets operated as **auction markets**. Floor brokers competed to execute trades at the most favorable prices. That process still exists on some exchanges.

Specialist. The **specialist** maintains an orderly market and provides price continuity. He fills limit and market orders for the public and trades for his own account to either stabilize or facilitate trading when imbalances in supply and demand occur.

The specialist's chief function is to maintain a fair and orderly market in the stocks for which he is responsible. An additional function is to minimize price disparities that may occur at the opening of daily trading. He does this by buying or selling, as a dealer, stock from his own inventory only when a need for such intervention exists. Otherwise, the specialist lets public supply and demand set the stock's price.



TAKE NOTE

The term **specialist** has been replaced with **designated market maker (DMM)**, but it is possible to still see specialist on your exam.

Over-the-Counter (OTC) Market

The OTC market functions as an interdealer market in which **unlisted securities**—that is, securities not listed on any exchange—trade.

In the OTC market, securities dealers across the country are connected by computer and telephone. Thousands of securities are traded OTC, including stocks, corporate bonds, and all municipal and U.S. government securities. One of the best-known of the OTC markets are those operated by the OTC Markets Group. An example of them is the Pink Market, which for many years was known as the Pink Sheets because the quotes were printed on pink-colored paper. These tend to include those stocks that are thinly traded (little trading activity) with higher than normal spreads.

Location. No central marketplace facilitates OTC trading. Trading takes place over the phone, over computer networks, and in trading rooms across the country.

Pricing system. The OTC market is an **interdealer network**. Registered market makers compete to post the best bid and ask prices. The OTC market is a negotiated market.

Market makers. Market makers are broker-dealers who stand ready to buy and sell at least the minimum trading unit, usually 100 shares (or any larger amount they have indicated), in each stock in which they have published bid and ask quotes. Market makers, acting in a dealer (principal) capacity, sell from their inventory at their asking price and buy for their inventory at the bid price.



TAKE NOTE

The differences between the OTC and NYSE markets are summarized below.

OTC	NYSE
Securities prices determined through negotiation	Securities prices determined through auction bidding
FINRA is the SRO (regulator)	NYSE is the SRO (regulator)
Traded at many locations across the country	Traded on the NYSE floor on Wall Street

Exchange = listed securities = prices determined by auction

OTC = unlisted securities = prices determined by negotiation

Government and municipal bonds and unlisted corporate stocks and bonds trade in the OTC market.



KNOWLEDGE CHECK 23.2

1. Which of the following has the power to close a stock exchange for up to 90 days?
 - A. The Securities and Exchange Commission
 - B. The president of the United States
 - C. The governing board of that stock exchange
 - D. The Administrator in the state where that stock exchange is located

2. Which of the following is the most accurate statement regarding pricing systems on U.S. securities markets?
 - A. Supply and demand determines prices on all markets.
 - B. Exchanges are auction markets, while the OTC markets are negotiated markets.
 - C. Exchanges are negotiated markets, while the OTC markets are auction markets.
 - D. Exchanges and the OTC markets are both auction markets.

LESSON 23.3: BROKERS AND DEALERS AND THEIR COSTS

LO 23.d Identify the difference between functioning as a broker and acting as a dealer.

Most securities firms act as both brokers and dealers, but **never** in the same transaction. Let's examine the differences between these two terms.

Dual Capacity of a Broker-Dealer **Brokers**

When a broker-dealer acts in the capacity of a *broker*, it is said to be acting in an agency capacity. That is, the firm represents clients who wish to buy a security by finding a seller, or finding a buyer for those clients with a security to sell. For this service, they charge a commission.

Brokers do not buy shares for inventory but facilitate trades between buyers and sellers.

Dealers

When a broker-dealer acts in the capacity of a *dealer*, it is said to be acting as a principal in the trade. Just as with any transaction, there are always two principals: the buyer and the seller. Dealers, acting as principals, buy and sell securities for their own account. When they receive a customer order to buy a security, they sell that security out of their inventory in the same manner as an automobile dealer sells you a car off the lot. When they receive a customer order to sell, dealers buy that security for their inventory, once again similar to an automobile dealer who buys your old clunker from you.



TEST TOPIC ALERT

Disclosure of the capacity in which the broker-dealer acted is always required on the trade confirmation.

LO 23.e Describe the costs of trading securities.

Trading Costs **Commissions**

Buying and selling securities is not without cost. As described above, there are two ways in which broker-dealers function: as brokers or as dealers. As brokers, they are acting as their client's agents, and, as is typical in any business, agents charge a commission for their service.

In other words, when an investor buys a security, the broker's commission will be added to the investor's purchase price. Likewise, when an investor sells a security, the broker's commission will be deducted from the investor's proceeds.

Markup and Markdown

When selling from their inventories, dealers charge the buying customers a markup rather than a commission. When buying for their inventory, dealers charge the selling customers a markdown (they buy for less than they can sell it for—think about what happens when the auto dealer buys your used car from you and what it sells for on the lot a week later after they've cleaned it up).



TAKE NOTE

The term *principal* has several meanings in the securities industry. A broker-dealer acts as a principal in a dealer transaction. A principal of a firm is a person who acts in a supervisory capacity. *Principal* can also mean the face value of a bond or an asset in a trust.

A firm cannot act as both a broker and a dealer in the same transaction.



EXAMPLE

A firm cannot make a market in a stock, mark up that stock, and then add an agency commission. If the firm acts as a broker, it may charge a commission. If it acts as a dealer, it may charge a markup or markdown. Violation of this practice is called **making a hidden profit**.

Broker	Dealer
Acts as an agent, transacting orders on the client's behalf	Acts as a principal, dealing in securities for its own account and at its own risk
Charges a commission	Charges a markup or markdown
Is not a market maker	Makes markets and/or takes positions (long or short) in securities
Must disclose its role and the amount of its commission to the client	Must disclose its role to the client, but not necessarily the amount or source of the markup or markdown



TAKE NOTE

An easy way to remember these relationships is to memorize the following letters.

BAC/DPP—Brokers act as **A**gents for **C**ommissions/**D**ealers act as **P**rincipals for **P**rofits.

ABCD—Agents that are **B**rokers for **C**ommissions that must be **D**isclosed.



PRACTICE QUESTION

When viewing several of your client's trade confirmations, you notice that a recent purchase was made of ABC stock where there was no commission indicated, while a sale took place of DEF stock in which the commission listed was \$55. From this information you could determine that

- I. ABC was purchased in an agency transaction.
 - II. ABC was purchased in a principal transaction.
 - III. DEF was sold in an agency transaction.
 - IV. DEF was sold in a principal transaction.
- A. I and III
 - B. I and IV
 - C. II and III
 - D. II and V

Answer: C. Whenever a trade is made without a commission indicated on the confirmation, it means that a markup or markdown was charged. That makes it a dealer or principal transaction. Commissions are always disclosed on agency transactions. Therefore, we know that ABC (II) was purchased in a principal transaction and DEF (III) was sold in an agency transaction, so the correct match is choice C.

Bids, Offers, and Quotes

A firm quote is a market maker's current bid and offer on a security. The current bid is the highest price at which the dealer will buy, and the current offer is the lowest price at which the dealer will sell. The difference between the bid and ask is known as the spread. A general rule is: "The more active the stock, the narrower the spread." This concept plays out in our everyday life because those products that move off the shelves quickly (think about milk, eggs, and bread in the grocery store) tend to have a lower retail markup than items that move

slowly, such as antiques and fine art. We have mentioned earlier that higher markups or commissions on thinly traded (not highly active) securities would generally not be in violation as long as they are properly disclosed.

In most cases, a market maker's quote will also include the size—that indicates the number of shares the quote is good for. For example, a quote of 45 – 45.20 8 × 10 means that the dealer is offering 1000 shares for sale at 45.20 and is ready to buy 800 shares at 45. If not stated, the quote is firm for a single round lot (100 shares). Remember, when acting in a principal capacity, there are no commissions added.

This should help you regarding the prices received or paid by BDs and investors:

	Bid Price	Ask or Offer Price
BD/Market Maker:	Buys at	Sells at
Investor:	Receives	Pays

PRACTICE QUESTION



If WXYZ is quoted as 43.25 to .50, it means that the bid price (the price that a customer would receive for her shares) is \$43.25, and the ask price (the price that the customer would pay to buy shares) is \$43.50. The \$.25 difference is the dealer's spread. Alternatively, the exam might put it like this:

A broker-dealer quotes a stock 42 to a half. The difference between these two numbers is known as

- A. the broker's commission.
- B. the dealer's markup.
- C. the profit margin.
- D. the spread.

Answer: D. The dealer's quote represents the bid and the offer (ask) prices. This quote is 42 bid and 42.50 offered. The difference between these two is the spread. Markup is added to the higher price (the ask or offering price).

TEST TOPIC ALERT



If a client has U.S. Treasury bonds she wishes to sell and receives a quote of 104.22, which represents the bid price, don't select an answer choice that says "a premium". It is a premium, but that is not as good an answer.



KNOWLEDGE CHECK 23.3

1. When viewing several of your client's trade confirmations, you notice that a recent purchase was made of ABC stock where there was no commission indicated, while a sale took place of DEF stock in which the commission listed was \$55. From this information you could determine that
 - I. ABC was purchased in an agency transaction.
 - II. ABC was purchased in a principal transaction.
 - III. DEF was sold in an agency transaction.
 - IV. DEF was sold in a principal transaction.
 - A. I and III
 - B. I and IV
 - C. II and III
 - D. II and V

2. To fill a customer buy order for 600 ABCD shares, your firm requests a quote from a market maker for 600 shares. The response is "bid 18, ask 18.15." If the order is placed, the market maker must sell
 - A. 100 shares at \$18.15 per share.
 - B. 600 shares at no more than \$18 per share.
 - C. 600 shares at \$18 per share.
 - D. 600 shares at \$18.15 per share.

LESSON 23.4: TYPES OF ORDERS

LO 23.f Identify the features and uses of market, stop, and limit orders and short sales.

Order (Trade) Ticket

Many types of orders are available to customers. The type will be indicated on the *order ticket*. SEC rules require preparation of order tickets before order entry. Required disclosures include:

- ❑ the account number;
- ❑ whether the order is solicited, unsolicited, or discretionary (including time or price);
- ❑ if a sale, whether long or short;
- ❑ the terms and conditions of the order (market, limit, or stop);
- ❑ the number of shares if a stock, and if a bond, aggregate par value (but not rating or current yield);
- ❑ the time of order entry (execution time and execution price will be added); and
- ❑ the name of the broker-dealer and identity of the registered individual who accepted the order or is responsible for the account.



TEST TOPIC ALERT

Two items that would not be on an order ticket are the current market price of the security and the client's name or address.

Order Types

Price

Orders that restrict the price of the transaction include the following:

- ❑ **Market**—executed immediately at the market price with no restrictions
- ❑ **Limit**—limits the amount paid or received for securities
- ❑ **Stop**—becomes a market order if the stock reaches or goes through the stop price
- ❑ **Stop limit**—entered as a stop order and changed to a limit order if the stock hits or goes through the trigger price

Time

Limit orders based on time considerations include the following:

- Day**—expires if not filled by the end of the day
- Good till canceled**—does not expire until filled or canceled



PRACTICE QUESTION

Which of the following types of orders does not restrict the price at which an order is executed?

- A. Limit
- B. Stop
- C. Market
- D. Stop limit

Answer: C. A market order does not reflect or restrict the price at which a security is executed. A limit order limits the amount to be paid or received for securities. A stop order becomes a market order if the stock reaches or goes through the stop price. A stop limit order becomes a limit order if the stock hits or goes through the trigger price.

Market Orders

A **market order** is sent immediately to the floor for execution without restrictions or limits. It is executed immediately at the current market price and has priority over all other types of orders. A market order to buy is executed at the lowest offering price available; a market order to sell is executed at the highest bid price available. Those prices are usually referred to as the *inside market* or *inside quote*. As long as the security is trading, a market order guarantees execution.



Limit Orders

In a **limit order**, a customer limits the acceptable purchase or selling price. A limit order can be executed only at the specified price or better. *Better* means lower in a buy order and higher in a sell order. If the order cannot be executed at the market, the order is left with the specialist (now called the DMM), who records the trade in the order book and executes the order if and when the market price meets the limit order price.

A customer who enters a limit order risks missing the chance to buy or sell, especially if the market moves away from the limit price. The market price may never go as low as the buy limit price or as high as the sell limit price.



TEST TOPIC ALERT

If any part of an order can be filled at the limit price, it is done. For example, if a day limit order to buy 400 shares at \$22.45 is turned in and all that can be executed at that price or better is 200 shares before the market closes, that sale is confirmed and the order for the balance is canceled.

Short Sales

Selling short is a technique to profit from the decline in a stock's price. The short seller initially borrows stock from a broker-dealer to sell at the market. The investor expects the stock price to decline enough to allow him to buy shares at a lower price and replace the borrowed stock at a later date. Unless the stock price declines to zero, the short seller is obligated to buy the stock and replace the borrowed shares to close the short position. Because of this "borrowing," a margin deposit is required. Therefore, short sales can only take place in a margin account.

Short sales are risky because if the stock price rises instead of falls, an investor still must buy the shares to replace the borrowed stock—and a stock's price can rise without limit. Therefore, the position has unlimited risk.

Stop Orders

A **stop order**, also known as a **stop loss order**, may be entered to protect a profit or prevent a loss if the stock begins to move in the wrong direction.

The stop order becomes a market order once the stock trades at or moves through a certain price known as the **stop price**. Stop orders for listed stocks are usually left with and executed by the specialist (DMM).

A trade at or through (lower in the case of a sell stop; higher in the case of a buy stop) the stop price *triggers* the order, which then becomes a market order. As a market order, there is no assurance of any specific price. The order may wind up being executed at, above, or below the stop price.

A stop order takes two trades to execute:

- **Trigger**—the trigger transaction at or through the stop price activates the trade
- **Execution**—the stop order becomes a market order and is executed at the market price, completing the trade

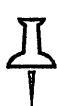
Stop Limit Order

A stop limit order is a stop order that, once triggered, becomes a limit order instead of a market order.



EXAMPLE

An order that reads "sell 100 COD at 52 stop, 51.50 limit" means that the stop will be activated at or below 52. Because a 51.50 limit applies, the order to sell cannot be executed below 51.50.



TAKE NOTE

The uses of buy and sell stop orders are summarized below.

Buy Stop Orders (might be called stop-buy on the exam)

- Protect against loss in a short stock position
- Protect a gain from a short stock position
- Establish a long position when a breakout occurs above the line of resistance (i.e., stock prices rise above historic high levels)

Sell Stop Orders (might be called stop-sell on the exam)

- Protect against loss in a long stock position
- Protect a gain from a long stock position
- Establish a short position when a breakout occurs below the line of support (i.e., stock prices decline below low level)

Mechanics of a Stop Order

As stated above, it takes more than one trade for a stop order to be executed. The first of those, the trigger, occurs whenever the subject security trades at or through the stop price. In the case of a buy stop order, *through* means *at a higher price*. In the case of a sell stop order, *through* means *at a lower price*.

Then, once the order has been triggered, unless it is a stop limit order, the next price in the market is the one at which the trade is executed. It will probably be easier to follow if we display an example.



EXAMPLE

A client enters a buy stop order for 100 shares of XYZ at 40. Trades then occur at 38, 39, 39.90, 40.05, 40.10, and 39.78. What price did the client pay for the stock? The order will be triggered as soon as the price gets to 40 or higher. That would be the trade at 40.05. At that time, a market order is entered and the client pays the next price (which could be more or less than 40). In this case, the next price is 40.10, and that is the price per share paid by the client (we're ignoring any commissions).

How is this different for a stop limit order? If we change the above example to make the order, buy stop at 40, limit 40, then the client is stating that once the order has been triggered, enter a limit order and do not pay any more than 40 for the stock. Once again, the order is triggered with the trade at 40.05, but now, because a limit order has been placed, we can't buy on the next trade—40.10 is too high. However, the following trade at 39.78 allows us to meet the client's limit of paying no more than 40 for the stock.



PRACTICE QUESTION

A client order is received with the following instructions: Buy stop 100 shares ABC at 34, limit 34.20. After the order is submitted, trades occur at 33, 33.90, 34.10, 33.85, 34.05, and 34.25. More than likely, the client paid

- A. 33.85.
- B. 34.05.
- C. 34.10.
- D. 34.25.

Answer: A. This is two orders in one. The first does not become triggered until the price gets as high as 34 or higher. That happens at 34.10. Once triggered, a buy limit order at 34.20 is entered (pay 34.20 or less), and the trade at 33.85 meets that requirement.

Market Manipulation

In Unit 14, we discussed the prohibitions against market manipulation. Here are some additional cases that will make more sense now.

Capping: This is the act of entering sell orders in a stock for the purpose of keeping the stock from rising above the sale price when one is short the stock. If successful, the stock will stay below the strike price and the short position will be profitable. The opposite of this is **supporting**, where purchase orders are entered in an attempt to keep the price of a stock from falling when one has a long position.

Pegging: This is a generic term that applies to any activity intended to keep the price of a stock from moving. This can involve entering either buy or sell orders or both. For example, a short straddle writer will profit most if the stock price and strike prices of the position are the same at expiration—that is, the short options are right at-the-money.

TEST TOPIC ALERT



There is a danger in using stop orders in that once they are triggered, the marketplace receives an increase of sell orders in a falling market and buy orders in a rising market. This can have the tendency to accelerate the direction of the market: sell stops in a bearish market, or buy stops in a bullish one.

TAKE NOTE



An interesting legal question arises when an agent becomes aware of MNPI after a stop order is triggered, but prior to execution. Unless the agent has reason to suspect that the client was acting on that information, the order can proceed as normal because it was received prior to the agent becoming aware of the information.

Block Trade

NYSE Rule 72 defines a “block” as at least 10,000 shares or \$200,000 USD, whichever is less. Thus, for stocks priced at less than \$20, a 10,000-share trade can be a block, but in higher-priced stocks even a 1,000-share trade could constitute a block.

LO 23.g Describe high frequency trading (HFT) and dark pools.

High Frequency Trading

Over the past 10 years, high frequency trading (HFT) has gone from a small, niche strategy in financial markets to the dominant form of trading. It currently accounts for well over half of the trading volume in U.S. equity markets and 40% in European equity markets, and is quickly growing in Asian, fixed-income, commodity, foreign exchange, and nearly every other market. Although a precise definition of HFT does not exist, it is generally classified as autonomous computerized trading that seeks quick profits using high-speed connections to financial exchanges. The objective of HFT is to take advantage of minute discrepancies in prices and trade on them quickly and in huge quantities. As computers get more technically advanced, trading practices have increased in size, and algorithms have become more sophisticated. The trades are done at close to the speed of light. In fact, HFT firms have moved their servers to be near an exchange computer to further increase trading speeds.

Regulators across the globe are spending considerable effort deciding if and how to regulate HFT. On the one hand, HFT appears to make markets more efficient. Algorithmic trading in general, and HFT specifically, increases the accuracy of prices and lowers transaction costs.

On the other hand, HFT appears to make the financial system as a whole more fragile. The rapid fall and subsequent rise in prices that occurred in U.S. markets on May 6, 2010 (known as the Flash Crash, when the Dow Jones Industrial Average plunged about 1,000 points in a matter of minutes) was, in part, due to HFT. Because HFT firms do not openly disclose their trading activities, it has so far been unclear how and why HFT produces these outcomes—a circumstance that has greatly increased the controversy surrounding its existence.

A typical objective of high frequency traders is to identify and capture minute price discrepancies present in the market. They do so with no human intervention, using computers to automatically capture and read market data in real time, transmit thousands of order messages per second to an exchange, and execute, cancel, or replace orders based on new information on prices or demand. In most cases, the trades are executed before individual investors know the quotes of prices or that the trades happened at all. For example, a computer recognizes when one exchange quotes an ask price of one cent more than the quote on another exchange. This computer then trades in extraordinarily large volumes on this information, taking advantage of the arbitrage opportunity in a split second. Before individual and other investors who do not possess the same sophisticated technology realize it, the one-cent spread between the two exchanges is erased and the stock price trades at the same level.

Benefits of HFT

- Increased liquidity in the markets, especially for more active stocks
- Market efficiency—price differences are arbitrated away, leading to narrower spreads
- Reduced costs, especially for institutional purchasers such as mutual funds

Negatives of HFT

- Market manipulation—with the huge volume that can be generated, HFT traders entering phony trades that are later canceled can prompt market activity that would not have happened had these HFT traders not manipulated the market to their advantage
- Harm to small investors—they do not have access to the same trading information anywhere near as soon as the HFT traders
- “Snowballing” effect of HFT—for years, one of the problems with stop orders was the acceleration of a downward move when sell stop orders were triggered. With HFT, the volume is so much greater that this movement, as we saw in the Flash Crash, has been magnified.



TAKE NOTE

HFTs rely on very low latency for their algorithmic trading schemes. Low latency is just a fancy way of saying quick trading. It's not unusual nowadays to have a DMA (direct market access) customer enter and have executed 5,000 or 6,000 orders or more in one second. Trades are being executed and reported in microseconds. HFT customers are the most likely customers to be provided by their broker-dealers with DMA, which bypasses the firm's trading desk. This kind of DMA trading is called low or “no-touch.” No-touch doesn't mean no obligation; the broker-dealers still have an obligation to monitor their DMA customer's behavior. No broker-dealer can throw its hands up and say to the regulators, “We didn't know what they were doing.”

Dark Pools

Dark pools, sometimes referred to as dark pools of liquidity or simply dark liquidity, are trading volume that occurs or liquidity that is not openly available to the public. The bulk of this volume represents trades engaged in by institutional traders and trading desks away from the exchange markets. Generally, these are large-volume transactions that occur on crossing networks or alternative trading systems (ATS) that match buy and sell orders electronically for execution without routing the order to an exchange or other market where quote, last sale price, and volume information is displayed.

Institutional trading desks that choose to use dark pools are able to execute large block orders without impacting public quotes or price, or revealing their investment strategy regarding any of their holding accumulations or divestitures. Additionally, orders can be placed anonymously so that the identity of the entity placing the order is unknown to the general investing public, along with the volume and price for the transaction. The concern with dark pools is that some market participants are left disadvantaged because they cannot see the trades, volume, or prices agreed upon within the pools, and thus market transparency is darkened.

Dark pools account for about 17% of the trading volume in the U.S. stock market. Here are some points you should try to remember about dark pools:

Benefits of Dark Pools

Orders entered can't be seen by other market participants before the trade occurs; there is no risk of information leakage.

- An execution venue with high pre-trade transparency is called a *lit venue* (e.g., national stock exchanges).

Negatives of Dark Pools

Traders can't see orders on the other side of the trade, so they do not know the pre-trade likelihood of execution.

KNOWLEDGE CHECK 23.4



1. A customer enters an order to sell 100 BCT at 49 stop limit. Prior to the order, BCT was trading at 49.25. Subsequent trades are reported on the tape as follows:
TCB 49.10, 48.75, 48.85, 49, 49.25
Which trade triggered the order?
 - A. 48.75
 - B. 48.85
 - C. 49
 - D. 49.25

KNOWLEDGE CHECK ANSWERS

Knowledge Check 23.1

1. **C** The loan consent agreement is optional. Investors need to sign the credit and hypothecation agreements, and the BD must furnish the risk disclosure document.
LO 23.a
2. **B** Initial margin (50%) is the highest and maintenance margin (25%) is the lowest. House maintenance is whatever the broker-dealer sets but is most often 30% or 35%.
LO 23.b

Knowledge Check 23.2

1. **A** The Securities Exchange Act of 1934 granted the SEC the power to close any registered stock exchange for up to 90 days. All that is required is notice to the president of the United States.
LO 23.c
2. **B** Be careful. Prices of securities are determined by supply and demand, but the question wants to know what system is used to measure that supply and demand. On the exchanges, the pricing system is by auction, while in the OTC markets, the pricing system used is negotiation.
LO 23.c

Knowledge Check 23.3

1. **C** Whenever a trade is made without a commission indicated on the confirmation, it means that a markup or markdown was charged. That makes it a dealer or principal transaction. Commissions are always disclosed on agency transactions. Therefore, we know that ABC (II) was purchased in a principal transaction and DEF (III) was sold in an agency transaction.
LO 23.d

2. **D** A market maker is responsible for honoring a firm quote. If no size is requested by the inquiring trader, a quote is firm for 100 shares. In this example, the trader requested a 600-share quote, so the market maker is responsible for selling 6 round lots of 100 shares at the ask price of \$18.15 per share.
LO 23.e

Knowledge Check 23.4

1. **A** This is an order where the stop price and limit price (Stop, Limit) are the same. A sell stop limit order is triggered (elected) by the first trade that is at or below the stop price. It is subsequently executed at a price at or better than the limit price.
LO 23.f

UNIT 24

Insurance-Based Products

LEARNING OBJECTIVES

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

- › LO 24.a **Contrast** fixed and variable annuities.
- › LO 24.b **Compare** variable annuities and mutual funds.
- › LO 24.c **Calculate** the account return for an index annuity.
- › LO 24.d **Compare** the different purchase and settlement options for annuities.
- › LO 24.e **Calculate** the tax on an early withdrawal from an annuity.
- › LO 24.f **Compare** the major types of life insurance.
- › LO 24.g **Recognize** the special characteristics of variable life insurance.

Your exam will include approximately two questions from the topics covered in Unit 24.

INTRODUCTION

In Unit 3, we discussed a number of different pooled investment vehicles. In this unit, we're going to cover two more: variable annuities and variable life insurance. But those are not the only insurance-based products that are relevant to this exam. Even though the others we'll discuss are not securities, understanding what they are and their basic features are testable items.

LESSON 24.1: WHAT ARE ANNUITIES?

Although many products offered by insurance companies are not securities, the securities professional should be aware of the features of both securities and nonsecurities offerings.

LO 24.a Contrast fixed and variable annuities.

Annuities

An **annuity** is generally a contract between an individual and a life insurance company, usually purchased for retirement income. An investor, the **annuitant**, pays the premium in one lump sum or in periodic payments. At a future date, the annuitant can either elect to surrender the policy and receive a lump-sum payout or begin receiving regular income distributions that will continue for life.

Because all earnings are tax deferred, many individuals looking to accumulate additional funds for retirement find annuities to be a valuable tool. Unlike IRAs and qualified retirement plans (covered in Unit 18) that limit the amount that can be contributed, there is no legal limit to the amount that can be invested in an annuity (the insurance company may place a limit, generally in the range of \$1–\$3 million, that it will accept).

Annuity contracts are classified into two major types (depending on the guarantees offered):

- fixed annuities; and
- variable annuities.



TEST TOPIC ALERT

For exam purposes, every annuity is nonqualified (contributions are made with after-tax dollars) unless stated otherwise.

Fixed Annuities

A **fixed annuity** guarantees a fixed rate of return. When the individual elects to begin receiving income, the payout is determined by the account's value and the annuitant's life expectancy based on mortality tables. A fixed annuity payout remains constant throughout the annuitant's life. Although principal and interest are not at risk, a fixed annuity risks loss of purchasing power because of inflation.



TAKE NOTE

Because the insurance company guarantees the return and the annuitant bears no risk, a fixed annuity is an insurance product and not a security. A salesperson must have a life insurance license to sell fixed annuities but does not need to be securities licensed.



EXAMPLE

An individual who annuitized a contract in 1990 may have been guaranteed a monthly payout of \$800. Decades later, this amount may prove insufficient to live on.

Variable Annuities

Instead of purchase payments being directed to the insurance company's general account, money deposited in a variable annuity is directed into one or more subaccounts of the company's separate account. Although the options include money market securities and bonds, purchase payments are frequently invested in a stock portfolio, which has a better chance of keeping pace with inflation than fixed-income investments.

The greater potential gain of a variable annuity involves more potential risk than a fixed annuity because it invests in securities rather than accepting the insurance company's guarantees. Payouts may vary considerably, because an annuity unit's worth fluctuates with the value of the selected subaccount(s).

Fixed Annuities	Variable Annuities
Monthly payout is fixed	Monthly payout varies
Guaranteed interest rate	Variable rate of return
Investment risk assumed by insurance company	Investment risk assumed by annuitant
Portfolio of fixed-income securities and mortgages	Portfolio of equities, debt, money market instruments
General account	Separate account
Vulnerable to inflation	Resistant to inflation
Insurance regulation	Insurance and securities regulation



PRACTICE QUESTION

The key difference between a fixed annuity and a variable annuity is that the fixed annuity

- A. offers a guaranteed return.
- B. offers a monthly payment that may vary in amount.
- C. will always pay out more money than a variable annuity.
- D. attempts to offer protection to the annuitant from inflation risk.

Answer: A. If an annuity is fixed, it means the return to the investor is guaranteed, whereas with a variable annuity, there are no guarantees as to the amount of return. It is the variable annuity whose annuity payment will vary and, because of the growth opportunity, offers potential inflation protection.

Separate Account

The contributions that investors make to a variable annuity are kept in a **separate account** from the insurance company's general funds. Some insurance company's separate accounts offer 25, 30, or even more subaccounts, from the most aggressive to the most conservative. Investors determine the subaccounts into which their money will be placed.

Because the investor rather than the insurance company bears the risk, a variable annuity is considered to be a security. As a consequence, variable annuity salespersons must have both a securities license (registered with a broker-dealer member of FINRA and the applicable state or states) and an insurance license issued by the appropriate state(s).



TEST TOPIC ALERT

It is the performance of the specific subaccount(s) selected by the investor that determines the investment return.

LO 24.b Compare variable annuities and mutual funds.

In the eyes of many novice investors, there doesn't seem to be very much difference between a mutual fund and a variable annuity. Although there are many similarities, there are critical differences. The following chart is a good place to begin.

Principal Features of Mutual Funds vs. Variable Annuities

Mutual Funds	Variable Annuities
Investment company product	Insurance company product
Shares	Units
Investment objectives: varied	Investment objectives: varied
No guarantees	Some guarantees
Redeemed by issuer	Redeemed by issuer
Price based on formula	Price based on formula
Voting rights	Voting rights

Looking at the above chart, there doesn't seem to be much difference other than one being an insurance product with some guarantees and the other not. The following discussion applies to nonqualified annuities—those which are not included in a qualified retirement plan such as the 403(b) plan covered in Unit 18. Let's look a bit deeper:

Advantages of Investing in Variable Annuities Compared to Mutual Funds

- Tax-deferred growth: All income and capital gains generated in the portfolio of the separate account are free from income tax until the money is withdrawn. Over time, this tax-deferred compounding can make a significant difference in the value of the account.
- Guaranteed death benefit: Most variable annuities offer an option stating that if the investor dies during the accumulation period, the beneficiary will receive the greater of the current value of the account or the amount invested. Therefore, the estate is assured of getting back at least the original investment.
- Lifetime income: Although a variable annuity cannot guarantee how much will be paid, choosing a payout option with lifetime benefits gives assurance that there will be a check every month as long as the annuitant is alive. This benefit protects against *longevity risk*, the uncertainty that one will outlive one's money. Be sure that you don't refer to this as guaranteed income—that would be an incorrect statement on the exam, because the income is variable.
- IRS Section 1035 exchanges: If you don't like the annuity you're in, you can exchange into another one without any tax consequences. However, it is possible there will be a surrender charge. This is unlike mutual funds, for which use of the exchange privilege is a taxable event.
- No age restrictions or requirements: Unlike traditional retirement plans that have required minimum distributions after the age of 72, an investor can delay withdrawals as desired and, in fact, can continue to contribute. Please note that annuities are always nonqualified unless something in the exam question indicates otherwise.
- No contribution limits: Unlike retirement plans, where the annual contribution is limited, no IRS ceiling is placed on the amount that may be invested into a fixed or variable annuity.

- Tax-free transfer between subaccounts: Unlike mutual funds, where the exchange between funds is a taxable event, the investor can transfer from one subaccount to another without any current tax liability.
- No probate: Because the annuity calls for direct designation of a beneficiary, upon death, the asset passes directly without the time and expense of probate.

Disadvantages of Investing in Variable Annuities Compared to Mutual Funds

- Earnings are taxed as ordinary income. Even though it is possible that the majority of the increase in value is generated through long-term capital gains, all earnings will be taxed at the higher ordinary income rate.
- The administrative and insurance-related expense fees are typically much higher than the fees incurred by owning a mutual fund.
- Withdrawals made before age 59½ will generally incur a 10% penalty, in addition to the ordinary income tax on that portion of the withdrawal representing the earnings.
- Most variable annuities carry a conditional deferred (surrender) sales charge. Therefore, surrender in the early years will usually involve additional costs.



TEST TOPIC ALERT

A variable annuity offers an investor the opportunity to have tax-deferred participation in the equity markets, albeit with expenses that are generally higher than for a mutual fund with a similar objective.



PRACTICE QUESTION

The Test Topic Alert shown above represents an idea that is commonly tested. It could look something like this:

When comparing mutual funds and variable annuities, it would be correct to state that

- A. both offer tax-deferred growth of earnings.
- B. both require that the salesperson possess a securities license and an insurance license.
- C. the surrender charges on a mutual fund are usually higher than on a variable annuity.
- D. the expense ratio of the variable annuity is usually higher than that of a comparable mutual fund.

Answer: D. It is generally correct to state that variable annuities offer a way to accumulate funds on a tax-deferred basis, although generally with operating expenses somewhat higher than mutual funds with the same investment objective. There is no tax deferral with mutual funds, and an insurance license is not required to sell them. Only Class B and C shares have back-end fees, a form of surrender charge, and they are invariably lower and/or run for fewer years than annuity surrender charges.



KNOWLEDGE CHECK 24.1

1. When comparing fixed and variable annuities, which of the following statements applies solely to variable ones?
 - A. Payments guaranteed for life
 - B. Level payout each month
 - C. Owner's contribution goes into a separate account
 - D. Issued by a life insurance company

2. When comparing mutual funds and variable annuities, it would be most correct to state that
 - A. both permit tax deferral of earnings in the account.
 - B. neither are traded in the secondary markets.
 - C. the expense ratio of mutual funds tends to be somewhat higher than variable annuities.
 - D. mutual funds are generally invested equities, while variable annuities are invested in debt.

LESSON 24.2: INDEX ANNUITIES

LO 24.c Calculate the account return for an index annuity.

Index Annuity

In an effort to overcome the purchasing power risk of fixed annuities, but without the market risk of the variable annuity, the industry developed the index annuity (IA). This product is sometimes called an equity index annuity or a fixed index annuity.

Indexed annuities (IAs) are currently popular among investors seeking market participation with a guarantee against loss. Unlike a traditional fixed annuity, an index annuity credits interest to the owner's account using a formula based on the performance of a particular stock index, such as the S&P 500. If the index does well, the annuitant is credited with a specified percentage of the growth of the index—typically 80% or 90% of the growth. This is known as the participation rate. If, over the life of the annuity, the index does poorly, the annuitant may receive the IA's minimum guaranteed return—typically 1 to 3%.

In addition to the participation rate, there is usually a cap rate. A typical cap might be 8%. This means that if your annuity was pegged to the S&P 500 and that index increased 20% during the year, your gain would be capped at 8%. One other negative characteristic of these products is that they tend to have longer surrender charge periods (as long as 15 years) than other annuities, especially if there is a front-end bonus.



EXAMPLE

To give you an idea of how an index annuity might work, consider one with a participation rate of 80%, a cap rate of 8%, and a minimum guarantee of 2%. If the index shows growth of 9% during the index annuity's measurement period, the annuitant would be credited with 7.2% growth (80% of 9%, which is less than the cap of 8%). However, if the index grew at a rate of 12%, the participation rate of 80% would yield 9.6%, but, because that is over the 8% cap, the account would only be credited with 8%. In any year where the index declines, the annuitant's account is not credited

with any earnings, but—and this is the real benefit—the account does not lose any value either. The 2% guaranteed rate would apply if, over the term of the annuity, performance was less than 2%.



TAKE NOTE

Although *index annuity* is the preferred term in the industry, your exam may refer to this product as an *equity index annuity*.



TEST TOPIC ALERT

In NASAA's never-ending battle to try to baffle potential investment adviser representatives with questions about products they will most likely never handle, we are hearing from students that you should know the different crediting methods used for index annuities.

Without going into the technicalities (it seems all you have to know is the different types, not a lot about how they work), the purchaser can be offered the following choices as to how growth in the underlying index will be credited in the form of interest to the account:

1. Annual reset. In this method, the interest to be credited to the account is computed by comparing the index value at the end of the year to the value at the beginning of the year (hence the term *annual*). Annual reset generally has a lower participation rate than point-to-point.
2. High-water mark. In this method, the highest value reached by the index between anniversary dates of the annuity is compared to the value at the beginning of the year. This option can provide the greatest gain.
3. Point-to-point. In this method, the interest is computed based on the value of the index at the end of the contract compared to the beginning.
4. Averaging. The most common is a monthly average, and this can be the best option when markets are expected to be highly volatile.



KNOWLEDGE CHECK 24.2

1. An investor purchased an equity index annuity. The terms of the contract call for a 90% participation rate with an 11% cap. If during the measurement period the index increased by 13.2%, the investor's account would be credited with
 - A. 9.90%.
 - B. 11.00%.
 - C. 11.88%.
 - D. 13.20%.
2. An investor purchased an index annuity. The terms of the contract call for a 100% participation rate with a 6% cap. If during the measurement period the index decreased by 4.0%, the investor's account would
 - A. decrease by 4%.
 - B. decrease by 6%.
 - C. remain at the same level.
 - D. increase by 4%.

LESSON 24.3: PURCHASING AND WITHDRAWING FROM ANNUITIES

LO 24.d Compare the different purchase and settlement options for annuities.

Purchasing Annuities

Insurance companies offer a number of purchase options to make it easy for annuity owners to accumulate money.

Deferred Annuity

An annuity may be purchased with a single lump-sum investment (with payout of benefits deferred until the annuitant elects to receive them). This type of investment is referred to as a **single-premium deferred annuity**.

Periodic Payment Deferred Annuity

A **periodic payment deferred annuity** allows a person to make periodic payments. The contract holder can invest money on a monthly, quarterly, or annual basis (with payout of benefits deferred until the annuitant elects to receive them).

Accumulation Stage

The pay-in period for a deferred annuity is known as the **accumulation stage** (there is no accumulation period for an immediate annuity). During the accumulation stage of an annuity contract, the contract terms are flexible. An investor who misses a periodic payment is in no danger of forfeiting the preceding contributions.

The contract holder can terminate the contract at any time during the accumulation stage, although the contract holder is likely to incur surrender charges on amounts withdrawn in the first 5 to 10 years after issuance of the contract.

Accumulation Units

An **accumulation unit** is an accounting measure that represents an investor's share of ownership in the separate account. An accumulation unit's value is determined in the same way as the value of mutual fund shares. The unit value changes with the value of the securities held in the separate account.

Immediate Annuity

An investor may purchase an **immediate annuity** contract by depositing a single lump sum. The insurance company begins to pay out the annuity's benefits immediately—usually within 60 days. Unlike deferred annuities, there is no accumulation stage, so there are no accumulation units. The deposit acquires annuity units only.

The names of various purchase options are quite descriptive of how they operate and should not be difficult to follow. Just to be sure, let's try the following question:

PRACTICE QUESTION

Insurance companies selling annuities offer a variety of purchase options to owners. Which of the following definitions regarding these annuity options is **not** correct?

- A. Accumulation annuity—an annuity that allows the investor to accumulate funds in a separate account before investment in an annuity
- B. Single-premium deferred annuity—an annuity with a lump-sum investment, with payment of benefits deferred until the annuitant elects to receive them
- C. Periodic payment deferred annuity—allows a person to make periodic payments over time; the contract holder can invest money on a monthly, quarterly, or annual basis
- D. Immediate annuity—allows an investor to deposit a lump sum with the insurance company; payout of the annuitant's benefits starts immediately, usually within 60 days

Answer: A. Accumulation does not refer to a purchase option. The pay-in period for an annuity is known as the accumulation stage. A single-premium deferred annuity is an annuity with a lump-sum investment, with payment of benefits deferred until the annuitant elects to receive them. Periodic payment deferred annuities allow a person to make periodic payments over time. Immediate annuities allow an investor to deposit a lump sum with the insurance company payout of the annuitant's benefits starting immediately, usually within 60 days.

Bonus Annuities

It is not uncommon for index annuities (and variable annuities) to offer a “bonus” on top of the investor’s initial contribution. For example, investing \$60,000 into a single premium annuity with a 5% bonus would result in an account balance of \$63,000. Usually, bonus annuities have surrender charges lasting longer than those without the bonus.

Receiving Distributions from Annuities

The payout period for an annuity is known as the **annuity stage**. It happens when the owner of the annuity annuitizes.

Annuity Payout Options

It is now time for the contract holder to decide on the **settlement option**. An annuity offers several payout options for amounts accumulated in the annuity contract. The investor can let the money accumulate in the annuity, withdraw the accumulated funds in a lump sum, or withdraw the accumulated funds periodically by **annuitizing** the contract. Annuitizing occurs when the investor converts from the accumulation (pay-in) stage to the distribution (payout) stage.

The decision to annuitize the contract locks in the specified payout option. The contract holder may not change it. At that time, the death benefit provision terminates. Annuity payout options, in order from largest monthly payout to smallest monthly payout, follow.

Life Annuity/Straight Life/Pure Life. Under this option, the payout is structured so that the annuitant receives periodic payments (usually monthly) until death. No added options or benefits exist; therefore, for a given amount of funds, this option provides the largest periodic payment.

Life Annuity with Period Certain. Under the life annuity with period certain payout option, an annuitant receives payments for life, with a certain minimum period guaranteed. If the annuitant dies before the period certain expires, payments continue to the annuitant's named beneficiaries for the period certain. If the annuitant lives beyond the period certain, payments continue until the annuitant's death.



EXAMPLE

A client purchases a life annuity with a 10-year period certain payout. The insurance company guarantees payments for the life of the annuitant or 10 years, whichever is longer. If the annuitant lives for only one year after payments begin, the company continues to make payments to the annuitant's beneficiaries for 9 more years. If the annuitant dies after receiving payments for 13 years, payments cease at death.

Joint Life with Last Survivor Annuity. With this option, the annuity covers two or more people, and the payout is conditioned on both (all) lives.



EXAMPLE

A married couple owns an annuity jointly with a last survivor clause. The contract pays benefits as long as one of the annuitants remains alive. The payment may be the same as when both were alive, or it may be reduced for the surviving annuitant, depending on the contract. If this option includes more than two annuitants, payments cease at the last survivor's death.

Refund Annuity. Sometimes referred to as a unit refund annuity, under this settlement option, payments will continue after death of the insured until the full value of the initial premium (principal) has been returned. In some cases, the payment to the beneficiary will be a lump sum of cash, and in others, a series of monthly payments.

Mortality Guarantee

Annuity companies guarantee payments for as long as annuitants live. If a change occurs in life expectancy and annuitants live longer than originally anticipated, the insurance companies assume the increased mortality cost—the **mortality guarantee**.



PRACTICE QUESTION

Which of the following types of annuity settlement options provides a lifetime income to the annuitant regardless of how long he lives, and the highest monthly payment amount?

- A. Straight life annuity
- B. Life annuity with period certain
- C. Installment refund annuity
- D. Joint and survivor annuity

Answer: A. A straight life annuity provides a lifetime income to the owner/annuitant regardless of how long he lives. If the annuitant is fortunate to outlive his anticipated life expectancy, he has made a wise distribution choice. However, if he dies shortly after beginning distribution, he has made an imprudent choice because, after the annuitant dies, the issuer makes no further payments. Nevertheless, for a given purchase price, a single life annuity provides the highest monthly payment amount because the annuity provides no guarantees beyond the annuitant's life.

Annuity Units

When a variable annuity contract is annuitized, accumulation units are exchanged for annuity units. An **annuity unit** is a measure of value used only during an annuitized contract's payout period. It is an accounting measure that determines the amount of each payment to the annuitant during the payout period.

The number of annuity units is calculated when an owner annuitizes the contract. The number of annuity units liquidated each month does not change—it is fixed at the time of annuitizing, based on the value of the contract when the payout period begins and on other variables (such as the payout option selected, the individual's age and sex, and assumed interest rate). The payment the annuitant will receive each month varies, because each unit's value fluctuates with the separate account portfolio's value. This is, after all, a variable annuity.

Assumed Interest Rate (AIR)

The **assumed interest rate (AIR)** is a basis for determining distributions from a variable annuity. The rate, usually estimated conservatively, provides an earnings target for the separate account. Simply put, if the actual earnings exceed the AIR, the annuity payments increase; if they fall short of the AIR, the payments decrease.



EXAMPLE

An investor who annuitized a variable annuity in 1990 and began with a monthly payout of \$375 might now be receiving \$2,275 per month because of an increase in the value of the annuity unit.

LO 24.e Calculate the tax on an early withdrawal from an annuity.

Premature Withdrawal

Contributions to an annuity that is not part of an employer-sponsored retirement plan (qualified annuities) are made with after-tax dollars (nonqualified). Because contributions have been taxed already, when the account is annuitized, the portion of each payment representing a return of the original principal is not taxed. As with other investments, the money invested in an annuity represents the investor's cost basis.

The primary advantage of an annuity as an investment is that the tax on interest, dividends, and capital gains is deferred until the owner withdraws money from the contract. On withdrawal, the amount exceeding the investor's cost basis is taxed as ordinary income.

Partial or Full Withdrawals

One of the rights of the holder of an annuity contract is the ability to withdraw funds. A partial withdrawal is, as the term implies, when the policy holder requests part of the value of the account. A full withdrawal is when the request is to terminate the contract and receive all of the available funds.

Random and full withdrawals from annuity contracts (remember, all annuities are nonqualified unless stated to the contrary) are taxed under the **last in, first out (LIFO)** method. Earnings are presumed by the IRS to be the last monies to hit the account. The earnings are considered to be withdrawn first from the annuity and are taxable as ordinary income plus a 10% penalty if the investor has not reached 59½. After the withdrawal of all earnings, contributions representing cost basis may be withdrawn without tax.

The penalty does not apply if the funds are withdrawn after age 59½, are withdrawn because of death or disability, or are part of a life-income option plan with fixed payouts (the contract is annuitized).

EXAMPLE

A contract with a \$100,000 value consists of \$40,000 in contributions and \$60,000 in earnings. If the investor withdraws all \$100,000 at once, the \$60,000 in earnings is taxed as ordinary income and the \$40,000 cost basis is returned tax free. If the investor is at least 59½, there is no 10% tax penalty; if younger, the 10% tax penalty applies. However, the penalty only applies to the taxable portion (\$60,000)—there is never a penalty tax on money that is not taxable. If the investor withdraws \$10,000 (or any amount up to \$60,000), under the LIFO rule, it is considered a withdrawal of earnings and will be taxed as ordinary income.

If a partial withdrawal of \$50,000 is made, the entire withdrawal consists of earnings and is taxable. There is never a capital gain with an annuity.

TEST TOPIC ALERT

Yes, it is true: Even when the distribution is from a nonqualified annuity, if it is made before the age of 59½, it is subject to the 10% additional tax (unless it meets one of the exceptions listed above).

Annuitizing

Annuitized payouts are typically made monthly and are taxed according to an exclusion ratio. The **exclusion ratio** expresses the percentages of the annuity's value upon annuitization of contribution basis to the total.

Under certain circumstances, the annuitant's life expectancy may also factor in the exclusion ratio, but that is unlikely to be tested—we're just keeping it simple.

EXAMPLE

If \$50,000 in after-tax dollars was contributed to an annuity contract worth \$100,000 at annuitization, 50% of each payment will be treated as ordinary income, whereas the other 50% of each payment will be treated (for tax purposes) as nontaxable return of basis.

TEST TOPIC ALERT

Upon annuitization, there is never a 10% tax penalty, even if annuitization commences prior to age 59½.



KNOWLEDGE CHECK 24.3

1. All of the following statements concerning categories of annuities are correct **except**
 - A. a deferred annuity is one in which the first benefit payment is made one payment interval after the date of purchase.
 - B. an annuity may be paid periodically in a fixed amount for a period determined by the purchaser.
 - C. a joint and last survivor annuity provides income that ceases upon the last death among the covered lives.
 - D. a straight life annuity provides periodic (usually monthly) income payments that continue as long as the annuitant lives and terminate at the annuitant's death.
2. After the death of the annuitant, beneficiaries under a life and 15-year period certain option are subject to
 - A. capital gains taxation on the total amount of payments received.
 - B. ordinary income taxation on the total amount of payments received, plus a 10% withdrawal penalty if the annuitant was under age 59½.
 - C. ordinary income taxation on the amount of the payout that exceeds the cost basis based on the exclusion ratio.
 - D. tax-free payout of all remaining annuity benefits.

LESSON 24.4: LIFE INSURANCE POLICIES

LO 24.f Compare the major types of life insurance.

A life insurance policy is a contract between an insurance company and an individual that is designed to provide financial compensation to the named beneficiaries in the event of the insured's death. In exchange for payment of premiums, the insurance company agrees to pay the proceeds of the policy (the death benefit) upon the death of the insured.

Many types of life insurance contracts are available; each type serves a different need. We will focus more attention on those contracts that use separate accounts to fund the death benefits and those that are considered securities, as defined by the Securities Act of 1933.

Term Insurance

Term insurance is protection for a specified period; hence the description "term." Term insurance provides pure protection and is the least expensive form of life insurance.

The important facts about term life insurance policies include the following:

- They provide temporary insurance protection for a specified period of time (the policy term). For example, the term may be 1 year, 5 years, 10 years, 30 years, or to a specified age (such as age 65).
- They pay the death benefit only if the insured dies during the term of coverage. For example, a person buying a 20-year term policy at age 35 who dies at 56 will receive nothing.
- They do not accumulate cash value.

- The death protection and premium remain level for the specified term; e.g., a \$100,000 5-year term policy provides a death benefit of \$100,000 anytime during that 5-year term.
- If renewed at the end of the term, the face amount remains the same, but, because the new premium is based upon the insured's attained age, renewal premiums always increase.

Term insurance has a variety of useful applications. One of the most common uses for term is to provide a substantial amount of coverage at a minimum cost. Because term insurance provides pure protection, it allows a person with a limited income to purchase more coverage than might otherwise be affordable. This is particularly important when there is a clear need for additional protection, particularly in the case of younger people who are married with children.



TEST TOPIC ALERT

For test purposes, younger people with children are better off purchasing term insurance because the lower premiums allow significantly more protection. For those age 60 and older, the rates are generally prohibitive.

Whole Life Insurance (WLI)

A type of permanent or cash value insurance, **whole life insurance (WLI)** provides protection for the whole of life. Coverage begins on the date of issue and continues to the date of the insured's death, provided the premiums are paid. The benefit payable is the face amount, or face value, of the policy, which remains constant throughout the policy's life. The premium is set at the time of the policy's issue and it, too, remains level for the policy's life. As with all life insurance policies, the insured can choose how to spread out the premium payments (known as the *mode*). Premiums can be paid annually, semiannually, quarterly, or monthly. Please note that *ordinary* life or *straight* life are synonyms for whole life.

Cash Values

Unlike term insurance, which provides only a death benefit, whole life insurance combines a death benefit with an accumulation, or a savings element. This accumulation, commonly referred to as the policy's **cash surrender value**, increases each year the policy is kept in force. In traditional whole life insurance, the insurer invests reserves in conservative investments (e.g., bonds, real estate, mortgage loans).

Because of the low risk of such investments, the insurer can guarantee the policy's cash value and the nonforfeiture options that are based on that cash value. Traditional life insurance reserves are held in the insurer's **general accounts**.

Policy Loans

Once an insured has accumulated cash value, it cannot be forfeited. An insured may cash in a policy at any time by surrendering it in exchange for its cash value. An insured may also borrow a portion of the cash value in the form of a **policy loan**, but this must be paid back (with interest) in order to restore policy values. When a policyowner takes a cash value loan, the amount borrowed and any accumulated interest due on the loan become an indebtedness against the policy. If the insured dies before the loan has been repaid, any indebtedness will reduce the face amount of the policy accordingly—it will be subtracted from any death benefit.

Policy Dividends

Some whole life policies, known as participating policies, may pay dividends to the policyowner. These are not the same kind of dividends as we've covered throughout this course. Simply put, they are a return of the excess premiums charged on these policies. Because policy dividends are a return of premium, they are not taxable.

Uses of Whole Life

The principal advantage of whole life is that it is permanent insurance and accordingly can be used to satisfy permanent needs such as the cost of death, dying, and final burial expenses. The level premium allows the policyowner to always know exactly what the cost of insurance will be, and basically offers a form of forced savings. Whole life builds a living benefit through its guaranteed cash value that enables the policyowner to use some of this cash (through policy loans) for emergencies, as a supplemental source of retirement income, and for other living needs. The principal disadvantages of whole life insurance are that the premium paying period may last longer than the insured's income-producing years, and it does not provide as much protection per dollar of premium as term insurance.

Whole Life vs. Term

Whole life insurance has a guaranteed interest rate on cash value buildup	Term insurance will provide the highest face amount for the lowest premium
Whole life insurance builds cash value with ability to borrow	Term insurance does not build cash value
Whole life insurance remains in effect until age 100 as long as premiums are paid	Term insurance provides coverage for a specific period of time; it is pure protection

PRACTICE QUESTION



A 30-year-old client indicates that he needs \$500,000 of life insurance coverage for the next 20 years. The lowest out-of-pocket cost would be if he purchased a

- A. 20-pay life policy.
- B. 20-year level term policy.
- C. whole life policy.
- D. variable annuity with an extended death benefit.

Answer: B. In almost all circumstances, certainly for short-to-immediate time periods, term life will be the least expensive form of insurance. A 20-pay life is a permanent policy where the premiums are paid in a 20-year period rather than until death. Variable annuities are not life insurance policies even though they are issued by life insurance companies.

Surrendering the Policy

If the policyowner decides to stop paying the premiums, the policyowner may:

- surrender the policy for its cash value;
- take a reduced paid-up policy where the death benefit is decreased and future premiums are no longer required; or
- take extended term insurance, which pays the beneficiaries the full face amount if death occurs within a specified time period.

Universal Life Insurance

Universal life insurance was developed in the late 1970s in response to the relatively low interest rates (generally 3.5–5%) earned by traditional whole life insurance cash values, which made the whole life product less attractive during periods of high inflation. In order to be more competitive, insurers introduced universal life policies that might pay higher interest rates (such as 8%, 10%, or even 12%) during inflationary times. These policies also provide greater flexibility, because they allow policyowners to adjust the death benefits and/or premium payments based on their current needs assessment.

A universal life policy is similar to a whole life policy in the sense that it has the same two components—death protection and cash value. However, instead of being fixed and guaranteed amounts, the death protection resembles one-year renewable term insurance, and the cash value grows according to current interest rates.

Characteristics of Universal Life

- Premium payments are separated with the first being paid toward the insurance protection and the remaining balance being used to build the cash value (with interest).
- The policyowner may increase or decrease the death benefit during the policy term, subject to any insurability requirements.
- Premium amounts may be changed as long as enough premium is paid to maintain the policy. This is why universal life is known as flexible premium life. In fact, it is even possible to skip premium payments as long as there is sufficient cash value in the policy to keep it in force.
- The interest earned by the cash account will vary, subject to a guaranteed minimum.
- Universal life is not a security. Variable universal life (VUL) or universal variable life (UVL)—two ways of saying the same thing—is a security because of the *variable*.

Universal Life Interest Rates

Universal life contracts are actually subject to two different interest rates: the current annual rate and the contract rate.

- The **current annual rate** varies with current market conditions and may change every year.
- The **contract rate** is the minimum guaranteed interest rate, and the policy will never pay less than that amount.

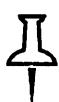
For example, if the guaranteed contract rate is 5% and the current rate is 8%, the cash account would grow by the higher 8% during that year. But if the current rate falls below 5%, the cash account would still grow by the minimum rate of 5% during that year.

Universal Life Death Benefits

Generally, there are two options available regarding the death benefit payable under a universal life policy.

- Option 1 (also known as option A) provides a level death benefit equal to the policy's face amount. As the policy's cash value increases, net death protection actually decreases over the life of the policy, which makes the policy structure similar to a whole life contract. The major advantage of option 1 is that the premiums are lower for the same face amount of death coverage. The trade-off is that the level death benefit will not keep pace with inflation.

- Option 2 (also known as option B) provides for an increasing death benefit equal to the policy's face amount plus the cash account. In terms of policy structure, this contract is more like a combination of level term insurance and increasing cash value than whole life insurance. The primary advantage of universal life insurance option B is that cash values grow more quickly over time. The cash values accumulate more quickly because of the higher initial premiums and lower initial death benefit. Because the premiums are higher and the death benefit is initially lower, a greater portion of the premium is added to the policy cash value, which then grows interest free inside the contract.



TAKE NOTE

With the original universal life policies, it was common that the flexibility of premium payments caused policies to lapse, with the result that one could not truly say there was a guaranteed death benefit. Because of this, most insurers today offer a guaranteed death benefit universal life, where the policy is guaranteed not to lapse if the sum of the premiums paid (less any loans or partial withdrawals and partial withdrawal fees) is greater than or equal to the sum of the minimum monthly premiums required. As a result, one can say that a universal life insurance policy has at least some guaranteed death benefit.

Universal Life Policy Loans

Universal life provides for cash value loans in the same manner that whole life or any permanent plan of insurance does. If a loan is taken, it is subject to interest and, if unpaid, both the interest and the loan amount will reduce the face amount of the policy.

Uses of Universal Life

This is a form of permanent insurance that can build cash values, hopefully at a rate greater than with traditional whole life. There is typically a guaranteed minimum interest rate stated in the policy (usually around 2%), which means that, no matter how the investments perform, there will be a known minimum return on the investment. The unique feature is the flexibility to adjust the death benefit as needs change, as well as the flexibility to pay smaller or larger premiums as financial conditions dictate. However, if the premium payments are reduced to the point where they can no longer support the policy, a lapse could occur. Another use of the flexibility of the premium payments is to "overfund" the policy, particularly when option 2 has been chosen—that is, pay premiums in excess of those required, with that excess going into the savings portion of the policy. This can have the effect of greatly increasing the cash value: money that may be borrowed out of the policy without tax consequences if done properly. (This is beyond the coverage of this course.)



PRACTICE QUESTION

- All of the following are advantages of universal life insurance **except**
- A. the ability to adjust the amount of premium payments.
 - B. the policy is guaranteed never to lapse.
 - C. the ability to change the death benefit amount.
 - D. when the cash value is sufficient, no premium payment is required.

Answer: B. A universal life policy may lapse if the accumulation fund drops below a specified level and an additional premium is not paid. Universal life has flexible premiums and, when there is sufficient cash value in the policy, premiums may be skipped (with the premium payments taken from that cash value).

Variable Life Insurance

Variable life insurance differs from whole life insurance with regard to where the premium is invested. In the case of whole life insurance, the premiums are invested solely in the insurance company's general account. On the other hand, in a variable life insurance (VLI) policy, the general account receives an amount equal to the actual cost of the life insurance, and the portion in excess of that is invested in a separate account. The separate account has a number of subaccounts with varying objectives, giving the insured some choice from highly aggressive (think mostly common stock) to highly conservative (think bonds and money market instruments).

The purpose is to let the customer assume some investment risk in an attempt to get inflation protection for the policy's death benefit.

Cash value in the policy fluctuates with the performance of the chosen subaccounts in the separate account and is not guaranteed. Variable life policies provide policy owners with a **minimum guaranteed death benefit**. The benefit may increase above this minimum amount, depending on investment results, but may never fall below.

Also, remember what was said earlier about variable annuities being securities requiring those who sell them to be dually licensed (insurance and securities); the same is true for those who wish to sell variable life insurance.

Flexible Premium Variable Life (Universal)

Universal variable life insurance (UVL or VUL) is a type of variable life insurance with flexible premiums (and thus a flexible death benefit). Premiums are invested only in a separate account, and there is only a variable death benefit. The insured has the option to increase, skip, or reduce premium payments, though he must maintain a minimum cash value, and the death benefit is adjusted appropriately.

Scheduled (Fixed)-Premium Variable Life

A **scheduled-premium** (or **fixed-premium**) VLI contract is issued with a minimum guaranteed death benefit. (The premiums for some variable life contracts are flexible; this is discussed next under variable universal life.) A scheduled-premium VLI contract's death benefit is determined at issue, and evidence of insurability is required.

The premium is calculated according to the insured's age and sex and the policy's face amount (guaranteed amount) at issue. Once the premium has been determined and the expenses have been deducted, the net premium is invested in the separate account's subaccount(s) the policyowner selects.

Deductions from the Premium

Deductions from the gross premium normally reduce the amount of money invested in the separate account. The greater the deductions, the less money available for the investment base in the separate account. Charges deducted from the gross premium include:

- the administrative fee;
- the sales load; and
- state premium taxes (if any).

The administrative fee is normally a one-time charge to cover the cost of processing the application.

The maximum allowable sales load on variable life insurance is the equivalent of an average of 9% of premium per year, computed over a 20-year period. The sales charge may be front-end loaded to 50% of the first year's premium, but must average out to 9% over a 20-year period. Because of the front-end loading, there are special sales charge refund rights for the first two years, spelled out in the Investment Company Act of 1940.

Deductions from the Separate Account

Deductions from the separate account normally reduce the investment return payable to the policy owner. Charges deducted from the separate account include:

- mortality risk fee (cost of insurance);
- expense risk fee; and
- investment management fee.

The **mortality risk fee** covers the risk that the insured may live for a period shorter than assumed. The **expense risk fee** covers the risk that the costs of administering and issuing the policy may be greater than assumed. And, of course, the **investment management fee** is the cost of the management of the chosen separate account's subaccounts.



TAKE NOTE

The exam may ask you which charges are deducted from the gross premium and which are deducted from the separate account (the net premium). Remember the acronym **SAS** to make it simple. The charges deducted from the gross premium are:

- sales load;
- administrative fee; and
- state premium taxes.

Any other charges, such as cost of insurance, expense risk fees, and investment management fees, are deducted from the net premium, which is invested in the separate account.

Variable Life Insurance Death Benefit

The death benefit payable under a variable life insurance policy consists of two parts: a guaranteed minimum provided by the portion of funds invested in the general account and a variable death benefit provided by those invested in the separate account. The guaranteed minimum does not change, but total benefit, including the variable portion of the death benefit, must be recalculated at least annually.

The effect that a change in earnings has on the contract's variable death benefit depends on a comparison of actual account performance and the performance assumed by the insurance company. If the separate account returns are greater than the assumed interest rate (AIR), additional funds are available to the insured. These extra earnings are reflected in an increase in the death benefit. If the separate account returns equal the AIR, actual earnings meet estimated expenses, resulting in no change in benefit levels. Should the separate account returns be less than the AIR, the contract's death benefit may decrease; however, it may never fall below the amount guaranteed at issue.



TAKE NOTE

If a variable life insurance policy has a minimum (stated) death benefit, the premiums necessary to fund this part of the death benefit are held in the insurer's general account. Any policy benefit that is guaranteed is invested in the insurer's general account.

Any premium above what is necessary to pay for the minimum death benefit is invested in the separate account. This portion of the premium is subject to investment risk. The death benefit will grow above the minimum guaranteed amount if the separate account performs positively. The death benefit will never be less than the minimum guarantee, even if the separate account performs poorly.



TAKE NOTE

With positive performance in the separate account, the death benefit will increase. If this is followed by several periods of performance that fails to equal the AIR, the death benefit will decline (but never below the minimum guarantee). If the decline has been steep enough, it may take several periods of positive results before the death benefit increases again.

Variable Life Insurance Cash Value

The policy's cash values reflect the investments held in the separate account. Unlike the death benefit, the individual policy's cash value must be calculated at least monthly.

The cash value, like the death benefit, may increase or decrease depending on the separate account's performance. However, because the cash value is not based on any assumed interest rate (AIR), any positive performance will result in cash value growth. If performance has been negative, the cash value may decrease to zero, even if the contract has been in force for several years. The cash value cannot be negative, but the insurance company keeps track of negative performance. Therefore, like the death benefit, the cash value may not increase until prior negative performance has been offset.



TEST TOPIC ALERT

The AIR has no effect on cash value accumulation in a variable life policy. The cash value will grow whenever the separate account has positive performance. The AIR, however, does affect the death benefit.

- ❑ If the separate account performance for the year is greater than the AIR, the death benefit will increase.
- ❑ If the separate account performance for the year is equal to the AIR, the death benefit will stay the same.
- ❑ If the separate account performance for the year is less than the AIR, the death benefit will decrease (but never below the guaranteed minimum).



TEST TOPIC ALERT

You may see a question that asks about the frequency of certain calculations associated with variable life insurance policies. Know that:

- ❑ death benefits are calculated annually;
- ❑ cash value is calculated monthly; and
- ❑ separate account unit values are calculated daily (in the event there is a withdrawal of cash value).

Comparison of Whole Life and Variable Life Policies

Whole Life	Variable Life (VLI)	Universal Variable Life (UVL or VUL)
Scheduled premium	Scheduled premium	Flexible premium
Fixed death benefit	Minimum guaranteed plus variable death benefit	Variable death benefit
Premiums to general account	Premiums to general and separate accounts	Premiums to separate account
Guaranteed cash value	No guaranteed cash value	No guaranteed cash value

It must be emphasized that variable life insurance must be sold as life insurance, not as an investment. However, the ability to commit a portion of the premium to investor selected separate account subaccounts makes this form of insurance unique. There is a guaranteed minimum death benefit, but if separate account performance merits such, the death benefit can increase to keep pace with inflation. Cash values, although not guaranteed, can also increase based upon that performance. As with any variable product, the investor bears the investment risk rather than the insurance company.

Comparison of Life Insurance Policies

	Level Term	Whole Life	Universal Life	Variable Life	Variable Universal Life
Death Benefit	Expires at end of term	Fixed and level	Adjustable, level, or increasing options	Varies with investment performance; original face amount is guaranteed minimum	Adjustable; level or increasing options
Premiums	Fixed schedule, increases at each renewal	Fixed schedule, level amount	Flexible schedule, flexible amount	Fixed schedule, level amount	Flexible schedule, flexible amount
Cash Values	None	Fixed and guaranteed	Current interest with guaranteed minimum rate	Varies with investment performance; no guaranteed minimum and at risk for loss	Varies with investment performance; no guaranteed minimum and at risk for loss

LO 24.g Recognize the special characteristics of variable life insurance.

Variable Life Policy Loans

Like traditional whole life insurance, a VLI contract allows the insured to borrow against the cash value that has accumulated in the contract. However, certain restrictions exist. Usually, the insured may only borrow a percentage of the cash value. The minimum percentage that must be made available is 75% after the policy has been in force for three years. If the death benefit becomes payable during any period that a loan is outstanding, the loan amount is

deducted from the death benefit before payment. The interest rate charged is stated in the policy.



TEST TOPIC ALERT

Several testable facts about policy loans are as follows.

- A minimum of 75% of the cash value must be available for a policy loan after the policy has been in force for three years.
- The insurer is never required to loan 100% of the cash value. Full cash value is obtained by surrendering the policy to the insurer.
- If the insured dies with a loan outstanding, the death benefit is reduced by the amount of the loan.
- If the insured surrenders the contract with a loan outstanding, cash value is reduced by the amount of the loan.

Variable Life Insurance Contract Exchange

A unique feature of variable life insurance is the ability for the insured to have a change of heart. During the early stage of ownership, you have the right to exchange a VLI contract for a form of permanent insurance issued by the company with comparable benefits (usually whole life). The length of time this exchange privilege is in effect varies from company to company, but under no circumstances may the period be less than 24 months (federal law).

The exchange is allowed without evidence of insurability. If a contract is exchanged, the new permanent policy has the same contract date and death benefit as the minimum guaranteed in the VLI contract. The premiums equal the amounts guaranteed in the new permanent contract (as if it were the original contract).



TEST TOPIC ALERT

Three testable facts about the contract exchange provision are listed here.

- The contract exchange provision must be available for a minimum of 24 months (it could say 2 years on the exam).
- No medical underwriting (evidence of insurability) is required for the exchange.
- The new policy is issued as if everything were retroactive; that is, the age of the insured as of the original date is the age used for premium calculations for the new policy.

Variable Life Insurance Voting Rights

Unlike any other type of life insurance, variable life contract holders have voting rights. Contract holders receive one vote per \$100 of cash value funded by the separate account. As with other investment company securities, changes in investment objectives and other important matters may be accomplished only by a majority vote of the separate account's outstanding shares or by order of the state insurance commissioner.



TEST TOPIC ALERT

Do not confuse the voting rights of variable annuities and variable life. Variable annuities and mutual funds are the same: one vote per unit (share). Variable life is one vote per \$100 of cash value.

KNOWLEDGE CHECK 24.4

1. Which of the following is indicative of the primary difference between variable life insurance and straight whole life insurance?
 - A. Amount of insurance that can be issued
 - B. Cost of the insurance
 - C. Tax treatment of the death proceeds
 - D. The way in which the cash values are invested

2. On July 15, 2019, your client purchased a variable life insurance policy with a death benefit of \$500,000. The November 2021 statement showed a cash value of \$30,000. If the client wanted to borrow as much as possible, the insurance company would have to allow a loan of at least
 - A. \$0.
 - B. \$15,000.
 - C. \$22,500.
 - D. \$27,000.

KNOWLEDGE CHECK ANSWERS

Knowledge Check 24.1

1. **C** The major difference between fixed and variable annuity policies is the existence of the separate account for VA purchasers. This separate account is what makes a VA a security. Both guarantee payments for life and both are issued by insurance companies. It is the fixed annuity with the level payout each month.
LO 24.a
2. **B** Both mutual funds and variable annuities are redeemable by the issuer. That being the case, there is no secondary trading (you can't buy a mutual fund or a variable annuity on a stock exchange or OTC). It is the variable annuity that offers tax deferral and has a higher expense ratio. When it comes to portfolio holdings, both funds, and separate accounts, have offerings covering the gamut of securities. It is the fixed annuity where the money goes to the insurance company's general account and that is primarily invested in debt instruments.
LO 24.b

Knowledge Check 24.2

1. **B** Here's the math: the account participates to the extent of 90% of the 13.2% increase, which is 11.88%. However, there is a cap limiting the amount to be credited to 11%. Therefore, that is what this investor's account receives.
LO 24.c
2. **C** One of the selling features of index annuities is that their value increases when the underlying index increases, but it does not fall when the index reports negative returns. As a practical matter, many of these products offer a minimum guaranteed return, but unless it is stated in the question, you can't assume there is one.
LO 24.c

Knowledge Check 24.3

1. **A** A single premium *immediate* annuity is one in which the first benefit payment is made one payment interval after the date of purchase. That is not the case with a deferred annuity. Annuities provide lifetime income, although some are set up to pay out over a specified number of years.
LO 24.d
2. **C** Payments from the annuity to the beneficiary through a period certain option are taxed in the same way as other periodic annuity payments; benefits over the amount of the cost basis are taxable as ordinary income. However, no 10% penalty applies in this situation.
LO 24.e

Knowledge Check 24.4

1. **D** Variable life insurance allows the policyowner to decide how the cash value is invested through a number of subaccounts. With a whole life policy, all investment decisions are made by the insurance company.
LO 24.f
2. **A** Until a variable life policy is in force for a minimum of 3 years (this one is a bit less than 2½ years), there is no requirement to make the loan provision available. Once the 3-year mark is reached, that minimum becomes 75% of the computed cash value.
LO 24.g