



13. FUNDAMENTAL & TECHNICAL ANALYSIS

INVESTMENT ANALYSIS METHODS

- **Fundamental** – assesses the short, medium and long-term prospects of different industries and companies... *most* important factor: actual and/or expected profitability of the issuer
- **Technical** – historical stock prices and stock market behaviour, identifying past trends and projecting them forward



MARKET THEORIES

- Definition of an “efficient market” – a market where the stock’s price is the best estimate of its true value
- **Efficient Market Hypothesis** – profit-seeking investors react quickly to the release of new information. Key conclusion: A stock’s price represents the best estimate of its true value
- **Random Walk Theory** – new information concerning a stock is disseminated randomly, therefore price changes are random and bear no relation to previous changes. Key conclusion: Past price changes contain no useful information on which to base decisions
- **Rational Expectations Hypothesis** – people are rational and make decisions after weighing all available information. Key conclusion: Past mistakes can be avoided by using information to anticipate change



THREE VARIATIONS OF EFFICIENT MARKET HYPOTHESIS

- The weak form assumes that all past market information is fully reflected in current prices. With this form, technical analysis is considered to have little or no value
- The semi-strong form assumes that all publicly available information is fully reflected in current prices. With this form, both fundamental and technical analysis have little or no value
- The strong form assumes that all information is fully reflected in current prices, including both publicly available and insider information. In other words, no single investor has information that provides an advantage over any other investor
- General criticisms of these theories: New information is *not* available to everyone at the same time; investors do *not* react in the same way to the same information; not everyone can make accurate forecasts and correct valuation decisions; and mass investor psychology and greed may at times cause investors to act irrationally



MACROECONOMIC ANALYSIS

- Fiscal Policy – tax changes, government spending and government debt
- Monetary Policy – debt levels and the bond market
 1. Changes in monetary policy affect both interest rates and corporate profits
 2. Tilting Yield Curve – leads to sizeable rallies in the stock market
 3. Inverted Yield Curve – frequently a harbinger of recessions
- Inflation impact – inverse relationship between inflation and prices of securities or P/E levels



FUNDAMENTAL INDUSTRY ANALYSIS

- Industries are classified by the good or service that they produce
- Classifying industries by their stage of growth
 1. Emerging growth industries: may *not* be accessible to equity investors... large start-up investments may mean negative cash flows... difficult to predict which companies will survive
 2. Growth industries: sales and earnings are expanding faster than *most* other industries... high return on capital, but cash flow may be negative... finance expansion with retained earnings – don't pay dividends
 3. Mature industries: growth rate matches general economy... earnings and cash flow are positive... profit margins fall due to competition
 4. Declining industries: cash flow may be large, even while profits are low, because no need to reinvest in new equipment



PORTER'S FIVE COMPETITIVE FORCES

- Threat of new entry: If we're investors, we want it difficult for new competitors to enter the space
- Competitive rivalry: If we're investors, we favour low competition between existing firms
- Threat of substitutes: If we're investors, we don't want there to be close substitutes
- Bargaining power of buyers: If we're investors, we don't want buyers to be powerful
- Bargaining power of suppliers: If we're investors, we don't want suppliers to be powerful



INDUSTRY CLASSIFICATION

- Cyclical versus Defensive
- Cyclical
 1. Commodity basic – forest and mining companies
 2. Industrial cyclical – steel and building materials
 3. Consumer cyclical – retail and automobiles
- Defensive
 1. Blue-chip – maintain earnings and dividends throughout the business cycle
- Speculative
- To compare cyclical and defensive companies, look at ROE. Defensive industries outperform cyclical companies during recessions; however during expansions cyclical companies outperform defensive companies. Sector rotation means going back and forth between these industries, depending on where we are in the business cycle



TECHNICAL ANALYSIS

- Assumptions:
 1. All influences on market action are automatically accounted for or discounted (reflected) in market prices
 2. Prices move in trends and those trends last for long periods of time
 3. The future repeats the past
- The main difference between technical analysts and fundamental analysts: The technician studies the effects of supply and demand (price movements) while the fundamental analyst studies the causes of price movements



TOOLS OF TECHNICAL ANALYSIS

- Chart Analysis – the use of graphic representations of relevant data
 1. **Support and resistance**. Support is where demand exceeds supply and prices rise. Resistance is where supply exceeds demand and prices fall
 2. **Reversal patterns**... **head-and-shoulders** (prices fall) or **bottom head and shoulders** (prices increase)
 3. **Continuation patterns**... pauses where trading narrows, before breaking out one way or the other – such as a symmetrical triangle



QUANTITATIVE ANALYSIS

- One general category of quantitative analysis used to supplement chart analysis is the **moving average**. It's a device for smoothing out fluctuating values: If a stock closed at \$20.00, then \$20.50, then \$20.30, then \$20.60, then \$20.75... its three day moving averages would be \$20.27, \$20.47 & \$20.55
- **BUY SIGNAL:** If the price breaks the moving average line from below on heavy volume (volume is a confirmation)
- **SELL SIGNAL:** If the price breaks the moving average line from above on heavy volume (volume is a confirmation)



OTHER TOOLS OF TECHNICAL ANALYSIS

- **Sentiment Indicators** – focus on investor expectations
- **Contrarian Investing** – move in the opposite direction from the crowd
- **Cycle Analysis** – Helps forecast when the market will start moving in a particular direction. Cycles can last for periods as short as a few days or as long as decades. There are four categories of cycle lengths: Long-term (greater than two years); Seasonal (one year); Primary/intermediate (nine to 26 weeks); Trading (four weeks). Cycle analysis is useful in identifying a time window when a market peak or trough is expected; but it is complicated by the fact that at any given point in time, a number of cycles may be operating



14. COMPANY ANALYSIS

PERFORMING COMPANY ANALYSIS

- Statement of Comprehensive Income starts with looking at revenue. Revenue growth is an important indicator of a company's investment quality.... the analyst must know *why* sales are growing
 - Price increases?
 - Price cuts?
 - Marketing initiatives?
 - Volume increases?
 - New products?
 - Geographic expansion?
 - Gain in market share?
 - Temporary increase – competitor's strike?
 - Change in the business cycle?
- Operating costs:
 - Include Cost of Goods Sold
 - + Selling, General & Administrative Expense
 - Does *not* include interest charges, amortization, or taxes
 - Analysts are looking for a positive trend – which means falling operating costs, relative to sales
- Dividend Record
 - Good reasons for lower payout – expansion, share buy-backs... Bad reasons for high payout – declining earnings, cyclical reasons



STATEMENT OF FINANCIAL POSITION ANALYSIS

- The Capital Structure – and leverage
- Leverage means either debt and/or preferred shares
- Impact of leverage: Magnifies earnings and ROE in good years and has the effect of greatly reducing earnings and ROE in bad years



OTHER FEATURES OF ANALYSIS

- **Qualitative analysis** is used to assess management effectiveness and other intangibles
- **Liquidity of common shares** measures how easy it is to buy or sell without causing a significant change in price... this is important if you are moving large blocs
- **Continuous monitoring** is possible through regular review of quarterly reports and other publications



INTERPRETING FINANCIAL STATEMENTS

- Caution *must* be used when analyzing and interpreting financial statements. IFRS conventions provide flexibility to companies with respect to issues like revenue recognition, inventory valuation methods, and amortization periods. The notes to the financial statements provide important information as well
- Trend Analysis – expresses EPS compared to a base year to facilitate easy comparison... Table 14.2, Page 14 – 8: Year 1 is the base year and to determine how much more profitable Year 3 is compared to Year 1, we divide Year 3's earnings, \$1.73 by \$1.18 and get the trend number of 147... which tells us that profits have increased by 47%. NOTE: The trend number is 147 rather than 1.47!



FINANCIAL RATIO ANALYSIS

- **Liquidity ratios** – used to judge the company's ability to meet its short-term commitments
- **Risk analysis ratios** – show how well the company deals with its debt obligations
- **Operating performance ratios** – illustrate how well management makes use of the company's resources
- **Value ratios** – tell investors what the company's shares are worth, or the return for owning them



LIQUIDITY RATIOS (2)

- **Working capital or current ratio:**
$$\text{Current Assets} / \text{Current Liabilities}$$
- **Quick or acid test ratio:**
$$(\text{Current Assets} - \text{Inventories}) / \text{Current Liabilities}$$
- Key points: The quick ratio is a *more* stringent liquidity test because it may be difficult to sell inventory quickly. These ratios are of interest to both shareholders and bondholders – and everything else being equal, the higher, the better



RISK ANALYSIS RATIOS (4)

- **Asset coverage ratio:**

What are the net tangible assets for each \$1,000 of total debt outstanding?

- **Debt-equity ratio:**

What is the debt relative to equity? Imagine a company has \$4 million in debt and \$8 million in shareholders' equity: Its debt-equity ratio would be \$4/\$8 or 50%

- **Cash flow/total debt outstanding ratio:**

What is the company's cash flow relative to its total debt?

- **Interest coverage ratio:**

What are the company's operating earnings relative to its total interest expense?

- Key points: With *most* of these ratios, the higher the better – with the exception of debt-equity ratio. Large amounts of debt imply greater financial risk for the company, because interest payments are a legal obligation and *must* be made in good times or bad ones



OPERATING PERFORMANCE RATIOS (4)

- **Gross profit margin:**
$$\frac{(\text{Net Sales} - \text{Cost of goods sold})}{\text{Net Sales}}$$
- **Net profit margin:**
$$\frac{\text{Net earnings}}{\text{Net Sales}}$$
- **Net (or after-tax) return on common equity:**
$$\frac{(\text{Net earnings} - \text{preferred dividends})}{\text{Shareholders' equity}}$$
- **Inventory turnover:**
$$\frac{\text{Cost of goods sold}}{\text{inventory}}$$
- Key points: gross profit margin is an indication of management's efficiency in turning over the company's goods at a profit. Net profit margin factors in everything. Investors look for ROE that at worst is stable or better increases over time. Everything else being equal, a high inventory turnover is considered good

VALUE RATIOS (6)

- **Percentage dividend payout ratios:**

Total dividends (preferred & common)/Net earnings

- **Earnings per common share:**

(Net earnings – preferred dividends)/# of common shares outstanding

EPS EXAMPLE: A company had net earnings of \$20,000,000. In its capital structure it had 1,000,000 \$25 Par Value Preferred Shares with an indicated dividend yield of 5%. The Preferred Shares are currently trading at \$30. The company has 10,000,000 million authorized shares and there are currently 8,000,000 issued and outstanding. What is earnings per share (EPS)?

Earnings available for common shareholders:

$$\$20,000,000 - (1,000,000 \times \$25 \times 5\%) = \$18,750,000$$

Number of shares outstanding: 8,000,000

$$\text{EPS} = \$2.34$$

- **Dividend yield:**

Annual dividend/Current market price

- **Equity value per common share:**

$$\frac{\text{Equity}}{\text{\# of Common Shares Outstanding}}$$

- **Price-earnings ratio or P/E multiple:**

Current market price/Earnings per share (last 12 months)

- **Equity value or book value per share:**

Common share capital/Common shares outstanding



DIVIDEND DISCOUNT MODEL (DDM)

- Illustrates how companies with stable growth are priced.
DDM assumes that there is an indefinite stream of dividend payments, whose present value can be calculated
- $$\text{Price} = \frac{\text{DIV}_0 \times (1 + g)}{(r - g)}$$
- Where Price = current intrinsic value; DIV_0 is the dividend paid out in the current year; DIV_1 is the expected dividend paid out by the company in one year; r is the required rate of return on the stock; g is the assumed constant growth rate of dividends

DDM Example: Coca-Cola is currently \$42. Its current dividend is \$1.40 and dividends are expected to grow at 5%. If the investor's required return is 8%, should she buy Coca-Cola?

According to the DDM, intrinsic value is:

$$(\$1.40 \times 1.05) / (.08 - .05) = \$49$$

According to this framework, she should buy Coca-Cola because it is currently under-valued.



ASSESSING PREFERRED SHARES

- Investment quality of preferred shares hinges on three questions:
 - Do the company's earnings provide ample coverage?
 - How many years has the company paid dividends without interruption?
 - Is there an adequate cushion of equity behind each preferred share?
- Four key tests:
 - Preferred dividend coverage ratio
 - Equity per preferred share
 - Dividend payments
 - Credit assessment
- Specific questions to preferreds:
 - What are the features and protective provisions?
 - How does the yield compare to other preferreds?
- Specific questions for convertible preferreds:
 - What is the outlook for the common stock?
 - Is the life of the conversion privilege long enough?



15. INTRODUCTION TO THE PORTFOLIO APPROACH

RISK AND RETURN

- “Given a choice between investments with the same amount of risk, a rational investor would always take the security with the higher return. Given a choice between two investments with the same expected return, the investor would always choose the security with the lowest risk”
- The promise of portfolio theory – average return and below average risk... Imagine two securities. One has an expected return of 10% and risk of 15%. The other has an expected return of 8% and risk of 12%
- An equally divided portfolio between the two securities would have an expected return of 9%... $50\% \text{ of } 10\% + 50\% \text{ of } 8\% = 9\%$. But the risk would *not* be the weighted average of the risk (13.5%) unless the two securities were perfectly correlated



RATE OF RETURN FORMULA

- $$\frac{\text{Ending value} + \text{Cash flow} - \text{Beginning value}}{\text{Beginning value}}$$
- A stock was purchased for \$20. Its dividend yield was 3%. If it were sold at \$22 after one year, its return would be...
- $$\frac{\$22 + \$20 \times .03 - \$20}{\$20} = 13.0\%$$
- A 6% bond with one year to maturity was purchased at 101.50. Its return would be...
- $$\frac{\$100 + \$6 - \$101.50}{\$101.50} = 4.43\%$$
- These are annualized returns because it is specified that the time period is one year. If the transaction period is either shorter or longer than a year, the return would be called the **holding period** return
- Rates of return can be **ex-ante** (expected) or **ex-post** (actual historical returns). Investors estimate ex-ante returns to determine where funds should be invested, and calculate ex-post returns to compare actual results against both anticipated results and market benchmarks



RISK – RETURN RELATIONSHIP

- Treasury bills are the *least* risky class of securities and their return is understood as the “risk-free rate”
- Bonds (secured debt) is next *least* risky
- Debentures (unsecured debt) follows
- Preferred Shares
- Common Shares
- **REAL RETURN = NOMINAL RETURN – INFLATION**
This is an equation and calculation for which you are 100% responsible for the CSC Volume Two Exam!
- T-bills pay the “risk-free rate of return”. All other securities must pay at *least* this, plus a premium for different risks assumed with the particular security



TYPES OF RISK

- **Inflation rate risk** – inflation reduces the real purchasing power and return on investments
- **Business risk** – associated with the variability of company's earnings. Both corporate stocks and bonds are subject to business risk
- **Political risk** – associated with unfavourable changes in government policy, such as tax changes
- **Liquidity risk** – risk that an asset cannot be bought or sold at a fair price and converted into cash
- **Interest rate risk** – fixed income securities and interest rates have an inverse relationship... if interest rates increase, fixed income securities decline in value – even if the coupon and principal payments are safe
- **Foreign exchange risk** – risk of losses from unfavourable changes in exchange rates
- **Default risk** – pertains to corporate debt



SYSTEMATIC & NON-SYSTEMATIC RISK

- **Systematic risk (market risk)** cannot be eliminated or diversified away. This is the risk associated with a particular asset class
- **Non-systematic risk (specific risk)** is the risk that the price of a security in a given market will decline more than the market itself. Non-systematic risk can be diversified away and eliminated by replicating the market
- Risk can be measured by **standard deviation** and **beta**. **Standard deviation** gives an indication of the risk associated with an individual security or portfolio. **Beta** links the risk of an individual security to the market as a whole
- **Beta** measures the risk of an individual equity to the market as a whole. The market has a **beta** of 1.0. Securities that have a **beta** greater than 1.0 are riskier than the market as a whole and securities that have a **beta** less than 1.0 are less risky than the market as a whole



RATE OF RETURN ON A PORTFOLIO

- This is a weighted average calculation – as depicted on Page 15 – 10
- Assuming that equities return 10%, fixed-income 6% and cash 3%, calculate the return of two investors, one of whom has a 70% equity, 25% bond and 5% cash allocation, while the other has a 30% equity, 60% bond and 10% cash allocation
- #1: $70\% \times .10 + 25\% \times .06 + 5\% \times .03 = 8.65\%$
- #2: $30\% \times .10 + 60\% \times .06 + 10\% \times .03 = 6.9\%$
- A client invests \$100 in two securities, \$60 in ABC and \$40 in DEF. The expected return for ABC is 15% and 12% from DEF. The portfolio's expected return is determined as follows: $(.15 \times .60) + (.12 \times .40) = 13.8\%$



COMBINING SECURITIES

- **Correlation** looks at how securities relate to each other when added to a portfolio
- Correlation must range between -1 to $+1$
- -1 : means that if the existing portfolio goes up, the security will go down – and vice-versa
- $+1$: means that if the existing portfolio goes up, the security will go up – and vice-versa
- For maximum diversification benefits, select the security with the highest negative correlation to the existing portfolio. -1 is better than $-.5$ which is better than 0 which is better than $.5$ which is better than 1.0 . With a correlation of 1.0 , there is no diversification benefit enjoyed by adding the security to the portfolio



PORTFOLIO BETA AND ALPHA

- Beta or the beta coefficient relates the volatility of a single equity or equity portfolio to the market as a whole. The market has a beta of 1.0. Any security/portfolio that is *more* volatile than the market, has a beta greater than 1.0. Any security/portfolio that is *less* volatile than the market, has a beta less than 1.0
- Imagine three securities: One has a beta of .75, the other has a beta of 1.0, and the third has a beta of 1.4. If the market fell by 10%, we would expect the first security to fall by 7.5%, the second by 10%, and the third by 14%
- Most portfolios have a beta which ranges between .75 and 1.40
- Alpha is the excess return a portfolio makes compared to what its beta predicts. A portfolio has a beta of 1.2 and the market goes up 10%. If the portfolio went up 14%, we would understand that 12% of its performance was due to “beta” and that 2% was due to “alpha”



PORTFOLIO MANAGER STYLES

- An active management style seeks to outperform a benchmark portfolio on a risk-adjusted basis
- **Bottom-up** analysis begins with a focus on individual stocks
- **Top-down** begins with a study of broad macroeconomic factors before the analysis narrows to individual stocks
- **Passive management** is consistent with the view that markets are efficient; passive managers use a buy-and-hold style
- **Indexing** involves buying and holding a portfolio of securities that matches the composition of a benchmark index



EQUITY MANAGER STYLES

- **Growth managers** – in the **bottom-up** approach, growth managers focus on current and future earnings of individual companies
- Valuation metrics: High P/E multiplies, High Price/Book Value, High Price/Cash Flow and low dividend yields
- Risk features: faltering EPS can lead to large percentage declines. Heavily reliant on meeting analysts' EPS estimates. Growth securities are vulnerable to market cycles

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- **Value managers** – bottom-up stock pickers with a research-intensive approach
- Valuation metrics: Low P/E multiples, Low Price/Book Value, Low Price/Cash Flow and high dividend yields
- Risk features: lower standard deviation, lower betas, less downside

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EQUITY MANAGER STYLES (Cont'd)

- **Sector rotation** – **top-down approach** focusing on prospects for entire economy and emerging trends
- Favour large cap stocks for liquidity
- Risk features: higher volatility caused by industry concentration



FIXED INCOME MANAGER STYLES

- **Term to maturity** – focus on length of maturity, specializing in short-term bonds (5 years or less), medium terms bonds (5 – 10 years) or long term bonds (10 years or longer)
- **Credit quality** – managers make decisions on the credit quality of issuer and whether there is opportunity in riskier corporate bonds or safer government issues
- **Interest rate anticipator** – managers will either extend the maturity (duration) of the portfolio if they believe interest rates will decline or shorten maturities (duration) if it's expected that interest rates will increase



16. THE PORTFOLIO MANAGEMENT PROCESS

PORTFOLIO MANAGEMENT PROCESS

- Seven steps to the portfolio management process:
 1. Determine investment objectives and constraints
 2. Design an investment policy statement
 3. Develop the asset mix
 4. Select the securities
 5. Monitor the economy, market, portfolio and client
 6. Evaluate portfolio performance
 7. Rebalance the portfolio

- Risk and return objectives must address two questions:
 1. What rate of return does the client need to attain the stated goals?
 2. What risk is the client willing and able to take on to achieve these goals?



SAMPLE RISK CATEGORIES WITHIN EACH ASSET CLASS

Cash or Cash Equivalents	
Government issues (less than 1 year)	Lowest risk, highest quality
Corporate issues (less than 1 year)	Highest risk, lowest quality

Fixed-Income Securities	
Short term (1 to 5 years)	Low risk, low price volatility
Medium term (5 to 10 years)	Medium risk, medium price volatility
Long terms (over 10 years)	High risk, maximum price volatility

Equities	
Conservative	Low risk; high capitalization; predictable earnings; high yield; high dividend payouts; lower price-to-earnings ratio; low price volatility
Growth	Medium risk; average capitalization; potential for above-average growth in earnings; aggressive management; lower dividend payout; higher price-to-earnings ratio; potentially higher price volatility
Venture	High risk; low capitalization; limited earnings record; no dividends; price-to-earnings ratio of little significance; short operating history; highly volatile
Speculative	Maximum risk; shorter term; higher price volatility; no earnings; no dividends; price-to-earnings ratio not significant



INVESTMENT OBJECTIVES

- Investment objectives – Three primary investment objectives
 1. Safety of principal or preservation of capital
 2. Income
 3. Growth of capital
- Two secondary investment objectives
 4. Liquidity
 5. Tax avoidance

SECURITIES & INVESTMENT OBJECTIVES

Type of Security	Primary Objectives		
	Safety	Income	Growth
Short-term bonds	Best	Very steady	Very limited
Long-term bonds	Next	Very steady	Variable
Preferred stocks	Good	Steady	Variable
Common stocks	Least	Variable	Most

INVESTMENT CONSTRAINTS

- Time horizon
- Liquidity requirements
- Tax requirements
- Legal and regulatory requirements
- Unique circumstances



INVESTMENT POLICY STATEMENT

- **The Investment Policy Statement (IPS)** contains the operating rules, guidelines, investment objectives and constraints, a list of acceptable and prohibited investments, and the method used for performance appraisal agreed to by the advisor and the client



DEVELOPING AN ASSET MIX

- **Cash**: currency, money market securities, bonds with a maturity of one year or less, redeemable GICs. Cash usually makes up at least 5% of a diversified portfolio's asset mix, with risk averse investors holding as much as 10% in cash
- **Fixed-income**: bonds due in more than one year, strip bonds, mortgage-backed securities, fixed-income exchange-traded funds, bond mutual funds, preferred shares
- **Equities**: common shares, equity ETFs, equity mutual funds, and both convertible bonds and convertible preferred shares
- Other asset classes: hedge funds, real estate, precious metals, collectibles (such as art or coins) and commodities (gold is considered a good hedge against inflation)



EQUITY CYCLE & BUSINESS CYCLE

- The Equity Cycle leads the Business Cycle
- End of expansion phase of business cycle means the contraction phase of the equity cycle: Recession conditions are apparent, therefore strategy is to buy long-term bonds and avoid or reduce exposure to stocks
- End of contraction phase of business cycle means the stock market trough of the equity cycle: Interest rates are falling, but recovery has *not* taken hold, therefore strategy is to sell long-term bonds and purchase cyclical stocks
- Expansion phase of business cycle means the expansion phase of the equity cycle: Sustained economic growth means rising corporate profits and a strong stock market
- Late expansion into peak of business cycle means the equity cycle has peaked: Strong economic growth has led to higher interest rates, which are bad for both stocks and bonds, therefore strategy is to hold cash



ASSET ALLOCATION

- Portfolio managers generate investment returns through four means:
 1. Choice of an asset mix
 2. Market timing decisions
 3. Securities selection
 4. Chance
- Asset allocation involves determining the optimal division of an investor's portfolio among the different asset classes. Asset allocation is the single most important step in structuring a portfolio



BALANCING THE ASSET CLASSES

- All portfolios should be balanced between the three major asset classes: Cash, fixed-income and equities. A good rule-of-thumb is that the average investor should have an equity allocation that is determined by: $100 - \text{Age}$... therefore, if you are thirty years old, your equity allocation should be 70%. If you are 50 years old, you should be 50% in equities. Every portfolio needs some cash – generally 5% to 10%. The remainder will be put into fixed income products
- A young healthy single professional should have:
5% cash, 25% fixed-income and 70% equities
- A senior citizen in a low tax bracket should have:
8% cash; 67% fixed-income, and 25% equities
- A middle-aged line factory worker, married with 3 children:
10% cash; 40% fixed-income, and 50% equities



PORTFOLIO REBALANCING

- “An investor’s base policy mix is 60% equities, 30% bonds and 10% cash. She begins the period with a \$250,000 portfolio. Over the year, equities appreciate by 12%, bonds decline in value by 5%, and the cash component appreciates by 4%. What will the portfolio manager have to do to properly re-balance the portfolio to the base policy?”

STEP ONE: Determine the original dollar value invested in each asset class: \$150,000 equities, \$75,000 bonds & \$25,000 cash

STEP TWO: Determine the end-of-period weightings by asset class – and end-of-period portfolio value:

Equities:	\$150,000	x	1.12	=	\$168,000
Bonds:	\$ 75,000	x	.95	=	\$ 71,250
Cash:	\$ 25,000	x	1.04	=	\$ 26,000
PORTFOLIO VALUE:					\$265,250

STEP THREE: Determine the new weightings as per the base policy mix as a function of the ending portfolio value:

Equities:	\$265,250	x	60%	=	\$159,150
Bond:	\$265,250	x	30%	=	\$ 79,575
Cash:	\$265,250	x	10%	=	\$ 26,525

STEP FOUR: Determine necessary adjustments by asset class:

Sell	(\$168,000 – \$159,150)	worth of equities
Buy	(\$ 71,250 – \$ 79,575)	worth of bonds
Buy	(\$ 26,000 – \$ 26,525)	worth of cash

This means selling \$8,850 worth of equities and buying \$8,325 worth of bonds and \$525 worth of cash



ONGOING ASSET ALLOCATION

- **Strategic asset allocation** – this is the base policy mix that each investor has... the “ideal” allocation, everything else being equal. Under the strategic asset allocation methodology of **dynamic asset allocation**, the portfolio is always returned to its base policy mix at each re-balancing date
- **Tactical asset allocation** – allows the asset manager to deviate slightly from the base policy, in order to take advantage of perceived opportunities in the marketplace



PORTFOLIO MONITORING

- The monitoring process involves three key areas of focus:
 1. Changes in the investor's goals, financial position and performance
 2. Expectations for individual securities and capital markets
 3. Industry trends and the overall economic climate
- Monitoring the Client – client profiles must be updated on a regular basis and New Account Application Forms amended as necessary
- Monitoring the Markets – markets constantly change as well – and new assumptions about GDP, interest rates, etc. *must* be incorporated into the portfolio
- Monitoring the Economy – involves taking expected capital gains/losses per Asset Class and adding these to expected cash flows to achieve a Total Return Forecast. For example: If bonds have a coupon of 5%, duration of 4 and interest rates are expected to increase by 50 basis points, the bonds will return $5\% + (2\%) = 3\%$



EVALUATING PORTFOLIO PERFORMANCE

- The basic calculation is:

$$\frac{\text{Increase in market value}}{\text{Beginning value}} \times 100$$

- When there are cash flows, a portion of the change comes from the contribution/withdrawals. The return on a portfolio is affected by both the amount and timing of the cash flows
- **Sharpe Ratio** – used by mutual fund companies and portfolio managers, it measures the risk-adjusted return of a portfolio:

$$\text{Sharpe Ratio} = \frac{\text{Portfolio Return} - \text{Risk-free Rate}}{\text{Standard Deviation of Portfolio}}$$



17. MUTUAL FUNDS: STRUCTURE & REGULATION

OVERVIEW OF MANAGED PRODUCT

- A **managed product** is a pool of capital gathered to buy securities according to a specific investment mandate. The pool is managed by an investment professional who receives a management fee for carrying out the mandate
- Active managers make decisions based on their outlook for the markets and securities in which they invest. Active managers look to outperform the return on a specific benchmark
- Passive managers do *not* make security selections. The manager assumes only the systematic risk associated with investing in a particular asset class. The *most* common type of passively managed fund is one that attempts to replicate the returns on a market index
- Examples of managed products include mutual funds, hedge funds, segregated funds, ETFs, private equity funds, closed end funds and LSVCCs



ADVANTAGES OF MANAGED PRODUCTS

- Professional management
- Economies of scale from pooled investment funds
- Low cost diversification – both among products and within the products themselves
- Liquidity and flexibility – managed products such as mutual funds can be bought and sold daily at their NAV
- Tax benefits – LSVCCs provide investors with tax credits that may total 30% of the purchase price
- Low cost investment options – ETFs have among the lowest management expense ratios among all funds



DISADVANTAGES OF MANAGED PRODUCTS

- Lack of transparency – hedge funds rarely disclose their holdings on a timely basis
- Liquidity constraints – products like hedge funds and private equity only offer liquidity on a delayed basis
- High fees – active fixed income and foreign equity mutual funds can charge up to 5% in fees, and private equity and hedge funds typically charge a 20% performance fee
- Volatility of returns – increased due to the use of leverage



OVERVIEW OF MUTUAL FUNDS

- A mutual fund is an investment vehicle operated by an investment company. In a mutual fund structure, investors pool their capital and professional money managers take care of the on-going investment decision-making. Mutual funds investment objectives are stated in a document called the **Fund Facts** document



ADVANTAGES OF MUTUAL FUNDS

- Low-cost professional management – a highly trained fund manager analyzes the financial markets to select the best investments possible
- Diversification – a typical large fund has a portfolio of 60 to 100 securities in 15 to 20 different industries
- Variety of funds and transferability – many fund families have numerous different funds and allow investors to switch between funds at little or no added fees
- Flexible purchase and redemption options – anything from lump-sum purchases to periodic accumulation plans (**pre-authorized contribution plans or PACs**)
- Liquidity – mutual fund shareholders have the continuing right to redeem their shares at the NAVPS
- Ease of estate planning – funds are actively managed through probate
- Loan collateral and eligible for margin – margin loan value is typically 50%
- Various special options:
 1. Reinvestment and contributions – mutual funds allow the reinvestment of dividends and monthly contributions as low as \$50 per month
 2. Regulatory filings – reports include the **annual information form (AIF)**, audited annual and interim financial statements. They are easily retrieved through the **System for Electronic Document Analysis and Retrieval (SEDAR)**
 3. Record-keeping – features assist with income tax reporting and other accounting requirements



DISADVANTAGES OF MUTUAL FUNDS

- Costs – perceived steepness of sales and management costs
- Short-term unsuitability – the exception to this is money market funds
- Systematic risk – mutual fund units can lose value in falling markets
- Tax complications – buying and selling by the manager within the fund causes a taxable event for unitholders



STRUCTURE AND ORGANIZATION

- Most common structure in Canada – **open-end trust**.
Open-end implies that investors can add more capital.
Trust implies that the fund itself does *not* incur any tax liabilities, but passes them through to investors
- The **trust deed** sets out the fund's principal investment objectives, its investment policy, restrictions on investments, identity of fund manager, distributor and custodian, and which fund's units are sold to the public
- Directors and trustees – ultimately responsibility for the fund – similar to the Directors of any publicly traded corporation
- Fund manager – provides day-to-day supervision of the fund's investment portfolio. The fund manager *must* calculate the fund's NAV, prepare the fund's prospectus and reports, supervise shareholder or unitholder record-keeping, and provide custodian with documentation for the release of cash and securities
- Distributors – group that actually sells the mutual fund units to the investing public
- Custodian – collects money received from fund's buyers and arranges for cash distributions through dividend payments, portfolio purchases, and share redemptions. Sometimes the custodian acts as the registrar and transfer agent, maintaining records of who owns the shares



PRICING MUTUAL FUND UNITS

- Investors have proportional ownership depending on their contributions relative to the total pool of capital when those contributions were made. An investor contributes \$2,000 when a mutual fund commences operations. If \$1,000,000 altogether were raised, she owns .2% of the mutual fund. Assume that a year later, the assets have appreciated to \$1,500,000 and she contributes another \$2,000. Now her additional ownership share is $\$2,000 / \$1,502,000$ or .13% of the mutual fund.
- Mutual fund units or shares are redeemable on demand at the fund's current price or **net asset value per share (NAVPS)**. The NAV is determined by summing the mutual fund's total assets and then deducting its total liabilities and dividing by the total number of units outstanding.
- A mutual fund has \$25 million in Assets and \$250,000 in Liabilities and there are 5.8 million units outstanding. The NAV is $(\$25,000,000 - \$250,000) / 5,800,000 = 4.267$ per unit.



CHARGES ASSOCIATED WITH MUTUAL FUNDS

- No-load funds have no sales charges when investors purchase or redeem units
- Sales commissions are also known as **loads**. These can be **back-end** or **front-end**. *Most* mutual funds allow the investor to choose between paying **front-end** or **back-end loads**
- Front-end loads – added to NAV... the offering or purchase price for a mutual fund sold with a front-end load of 3% when the NAVPS of the fund is \$25 would be as follows:

$$\frac{\$25}{100\% - 3\%} = \$25.77$$

Therefore, the units would cost the investor \$25.77 and the load/commission would be \$.77

- Back-end loads – levy a fee on redemption, based on a sliding scale, depending on how many years investors own the fund. Typically, it begins at 6% or 7% in Year One declining to 0% after six or seven years. Loads can be based on either the original purchase price or market value of units at time of redemption
- **Trailer fees** or **service fees** are annual fees paid to the distributor for ongoing services... they also provide an incentive to the distributor to keep clients in that particular mutual fund
- Other fees – include set-up fees on top of front-end or back-end load and **early redemption fees** on no-load funds. **Switching fees** may apply when investors exchange units of one fund for another in the same family



MANAGEMENT FEES AND THE MER

- **Management fees** compensate the fund manager and are generally expressed as a straight percentage of assets under management. They vary widely depending on the type of fund. Money market funds fees range from .5% to 1.0% while equity funds fees range from 2% to 3%
- The **management expense ratio (MER)** represents all the management fees and other expenses charged to a fund, expressed as a percentage of the fund's average net asset value for the year
- MER CALCULATION:

$$\frac{\text{Aggregate Fees and Expenses Payable During Year}}{\text{Average Net Asset Value for the Year}} \times 100$$

- Trading and brokerage costs are excluded from the MER because they are included in the cost of buying and selling the securities themselves. Operating expenses like interest charges, all taxes, audit and legal are included in the MER
- **F-class funds** – the “F” stands for fee-based. These funds are designed for fee-based accounts and charge a lower MER than traditional mutual funds

MUTUAL FUND REGULATORY ORGANIZATIONS

- The Mutual Funds Dealers Association (MFDA) is the SRO for the distribution side of the mutual fund industry. It does not regulate the funds themselves; that responsibility stays with the provincial securities commission
- National Instrument 81 – 101 deals with mutual fund prospectus and Fund Facts disclosure
- National Instrument 81 – 102 and its companion policy contain requirements and guidelines for the distribution and advertising of mutual funds
- Mutual funds require the following disclosure documents:
 1. A Fund Facts document
 2. A simplified prospectus
 3. The AIF
 4. The annual audited financial statements or interim unaudited financial statements
 5. Other information such as material change reports and information circulars



FUND FACTS DOCUMENT

- It is designed to give investors key information about a mutual fund. It must be written in plain language and consist of no more than two double-sided pages
- Pre-purchase delivery of the Fund Facts document to investor is mandatory for each class or series of mutual funds
- The following disclosure must appear in the Fund Facts document:
 1. Investors have the right to withdraw within 48 hours after confirmation of the purchase is received
 2. Depending on the province, they maintain their right of damages or to rescind the purchase if the Fund Facts document or AIF contain a misrepresentation
 3. Each province specifies a time limit within which investors must act to claim the right to damages or rescission
 4. Investors can request a copy of the simplified prospectus at no charge



COMPONENTS OF FUND FACTS DOCUMENT

- The Fund Facts document is divided into two major sections
- Section 1 has seven components:
 1. Introduction – provides document date, fund name, fund manager name
 2. Quick facts – provides key background points, including total value of all units in the fund, MER, identify of the portfolio manager
 3. Investment of the Fund – lists 10 ten investments
 4. Risks – rates risk from low, low-to-medium, medium, medium-to-high, and high
 5. Past performance – year by year over the past 10 years and a table showing both the best and worst returns for the fund in a three-month period over the previous 10 years
 6. Suitability – answers the question: “Who is this fund for?”
 7. Impact of incomes taxes on investor returns
- Section 2 has three components
 1. Cost of buying, owning and selling the fund – outlines sales charges, fund expenses, and any other fees
 2. Statement of Rights – including Withdrawal
 3. More information about the fund
- In addition to the Fund Facts document, the simplified prospectus must be filed and mailed or otherwise delivered to mutual fund investors upon request
- The Annual Information Form must be delivered to investors upon request



MUTUAL FUND RESTRICTIONS

- There are strict restrictions on what a mutual fund manager may and may *not* do
- Prohibited Mutual Fund Management Practices:
 1. Purchases of no more than 10% of voting stock
 2. Funds cannot buy shares in their own company
 3. Purchase of no more than 10% of the net assets in the securities of a single issuer or 20% in companies engaged in the same industry (specialty funds excepted)
 4. No purchases of the shares of other mutual funds
 5. No borrowing for leverage purposes
 6. No margin or short-selling
 7. Prohibition on commodities or commodity futures
 8. Limitations on illiquid securities and private placements
- The most prominent applications of derivatives:
 1. To hedge against risk
 2. To facilitate market entry and exit

The use of derivatives is strictly regulated by National Instrument 81 – 102, but the general rule is that they can be used for hedging purposes, *not* speculative purposes



PROHIBITED SELLING PRACTICES

- Quoting a future price – this means salespeople cannot guarantee prices or back-date orders
- Offer to repurchase – fund units can only be sold back to the fund itself
- Selling without a license – implies that the salesperson is *not* properly trained
- Advertising the registration – implies regulatory authorities sanction the salesperson's conduct or quality of funds
- Promising a future price – this effectively guarantees a return
- Sales made from one province to another – salespeople *must* be registered on a province by province basis
- Sale of unqualified securities – funds *must* be approved by the provincial regulators



KNOW YOUR CLIENT & SUITABILITY

- KYC means: Learn the essential facts relative to a client (age, net worth, investment knowledge and investment objectives); learn the facts relevant to every order; learn the circumstances behind each transaction; ensure that recommendations are appropriate
- Orders cannot be processed unless all know-your-client data is provided
- **Unsolicited orders** are client-directed orders. Where an unsolicited order is determined to be unsuitable for the client, the record of the order must include evidence that: the transaction was unsolicited; a suitability review was performed; and the client was advised



REQUIREMENTS WHEN OPENING ACCOUNTS

- Relationship disclosure *must* explain the relationship between the registrant and client
- Relationship disclosure information *must* include a description of the nature and type of account; a description of the products/services offered; a description of procedures involving cash; a description of reporting; a description of compensation that may be paid to the dealer
- A New Account Application Form is completed for each new client account. It will typically include the necessary KYC information



DISTRIBUTION OF MUTUAL FUNDS BY FINANCIAL INSTITUTIONS

There are rules that apply specifically to the distribution of mutual funds by financial institutions (FI) such as banks, trust companies, insurance companies and loan companies.

- **Control of Registrant** – can only sell mutual fund securities in its branches through a corporation (“dealer”) which it controls directly or indirectly
- **Registration of employees** – only registered mutual fund representatives can sell mutual funds
- **Dual employment** – employees of an FI may become registered if permitted by legislation
- **Conflicts of interest** – dealers *must* have supervisory rules in place to prevent conflicts of interest that arise out of dual employment. Potential conflicts of interest: There may be multiple lines of business through the same employee, leading to practices which do *not* serve the clients’ best interests



- **In-house funds** – requirements are based on the assumption that the only mutual fund securities traded by the dealer will be issued by a mutual fund sponsored by the FI
- **Proficiency** – officers, directors, and representatives of the dealer must satisfy normal proficiency requirements
- **Premises and disclosure** – the dealer *must* carry on business in such a way to make clear to clients that the business of the dealer and FI are separate



18. MUTUAL FUNDS: TYPES AND FEATURES

TYPES OF MUTUAL FUNDS

- There are eight categories of mutual funds:
 1. Money Market funds
 2. Fixed Income funds
 3. Balanced funds
 4. Equity funds
 5. Commodity funds
 6. Specialty funds
 7. Target-date funds
 8. Alternative funds
- **Money Market funds** – include Canadian money market and U. S. money market. These funds add liquidity to a portfolio and provide safety of principal. They keep their NAV at a constant \$10 per share and earned interest is credited with additional shares
- **Fixed-income funds** – include Canadian short-term fixed-income; Canadian fixed-income; Canadian long-term fixed income; Canadian inflation-protected fixed-income; Global fixed income; and High-yield fixed income



TYPES OF MUTUAL FUNDS (continued)

- **Balanced Funds** – a balanced fund invests in both stocks and bonds to provide a mix of income and capital growth. Different types include Canadian equity balanced; Canadian neutral balanced; Canadian fixed-income balanced; Global equity balanced; Global neutral balanced; Global fixed-income balanced; and Tactical balanced
- **Equity funds** – there are as many as 22 different categories, but the *most* important ones are: Canadian, U. S. and global equity; Canadian dividend; Canadian and U. S. small- and mid-cap equity; International, European and Emerging Markets equity; Asia Pacific and Japanese equity; and Health care, precious metals, natural resources, and real estate equity

Equity funds are the *most* popular type of fund and are purchased by investor whose primary investment objective is growth of capital.

- **Commodity funds** – invest either in physical commodities or gain exposure to commodities through the use of derivatives. Exposure is primarily long and must not exceed 100% by way of leverage



TYPES OF MUTUAL FUNDS (continued)

- **Specialty funds** – examples include Retail venture capital; Alternative strategies; and Miscellaneous funds that are leveraged or focus on commodities or specific areas or sectors
- **Target date funds** – have two characteristics: a maturity date and a **glide path**. The glide path refers to the change in the asset allocation over time – taking on less risk as the target date approaches
- **Alternative funds** – employ strategies such as short selling or other forms of leverage
- **Index funds** – track the performance of an underlying index. **Indexing** is understood as a passive strategy



COMPARING FUNDS

- In the continuum from *least* risky to *most* risky...
 1. Money Market Funds
 2. Fixed Income Funds
 3. Balanced Funds
 4. Equity Funds
 5. Specialty Funds



MANAGEMENT STYLES

- Two broad styles are active and passive
- Active management seeks to outperform the market
- Passive management seeks to mirror the market. Indexing represents passive management. **Closet indexing** sticks close to the market, but attempts to outperform it slightly



TAX CONSEQUENCES OF MUTUAL FUNDS

- Mutual funds generate taxable income in two ways:
 1. Through the distribution of interest income, dividends and capital gains
 2. Through capital gains realized when the fund is sold
- During any year, a mutual fund will generate capital gains and losses when it sells securities held in the fund. These gains must be distributed to unit holders, just as interest income and dividend income is also distributed
- Distributions are made near the end of the calendar year. Each unit holder receives an equal amount of the distribution, notwithstanding how long they have owned the units
- Distributions to a mutual fund will increase the number of units and decrease the price per unit by an equal proportion, such that the total value of the investment is *not* affected
- Most funds automatically reinvest distributions in the form of new shares at the prevailing NAV without a sales charge. These distributions increase the **adjusted cost base (ACB)** of the original purchase



TAX CONSEQUENCES OF MUTUAL FUNDS (Cont'd)

- An investor purchased \$10,000 worth of mutual funds in 2015. By the end of 2020, she had received \$3,500 in distributions and she sold the units for \$18,000. Therefore, the adjusted cost base of the units is \$13,500 and her capital gain is \$4,500



WITHDRAWAL PLANS

- Many mutual funds offer systematic withdrawal plans, with the withdrawals occurring at predetermined intervals. There are four types of withdrawal plans: Ratio withdrawal plan, fixed-dollar withdrawal plan, fixed-period withdrawal plan, and life expectancy-adjusted withdrawal plan
- **Ratio withdrawal plan** – a constant percent (or ratio) of assets is withdrawn in successive years. This tends to result in reduced payments as the years go by. Payments will only increase if the return enjoyed exceeds the percent withdrawn
- **Fixed-dollar withdrawal plan** – a specified dollar amount is withdrawn in successive years, resulting in identical payments. When withdrawals are greater than increases in the portfolio, the principal is encroached upon and will run down
- **Fixed-period withdrawal plan** – a specified amount is withdrawn over a pre-determined period with the intent to collapse the plan at the end. It tends to result in increased payments until the terminal year of the plan
- **Life-expectancy adjusted withdrawal plan** – a variation of the fixed-period withdrawal plan, adjusted to reflect higher life expectancy as time goes by



MUTUAL FUND PERFORMANCE

- Mutual fund quotes, much like stock quotes, show a year's high and low NAV. In addition, they provide information about the last day's close and its change compared to the previous day, weekly data, and percentage return data
- The preferred methodology for judging mutual fund performance is by a **time-weighted rate of return (TWRR)**. Methods include the **daily valuation** method and **Modified Dietz** methods
- Mutual funds tend to be judged on a comparative performance basis, relative to a relevant benchmark or by comparison with a **peer group** of mutual funds
- Risk measures include: standard deviation of returns, beta, number of years it has lost money, best and worst 12 month periods, worst annual, quarterly and monthly losses



MUTUAL FUND PERFORMANCE (Cont'd)

- Pitfalls to avoid in mutual fund performance:
 1. Past performance is *not* an indicator of the future
 2. Historical performance should be discounted if the fund has changed managers
 3. Average mutual fund returns are upwardly skewed by “survivorship bias” – the bad funds go out of business, leaving only the top performing ones
 4. Evaluation should take into account both the type of fund and its objectives
 5. Selective reporting of performance periods



19. EXCHANGE-TRADED FUNDS

REGULATION AND STRUCTURE OF ETFs

- **Exchange-traded funds (ETFs)** are regulated under two national instruments. If they are structured as mutual fund trusts, they are regulated according to NI 81 – 102. If set up as commodity pools, then they are regulated under NI 81 – 104
- **ETFs** must produce and file a summary disclosure document called **ETF facts**. This document is distributed through the dealer where the ETF is purchased. Dealers are required to make the prospectus available to investors, upon request



CREATION AND REDEMPTION OF A STANDARD EXCHANGE-TRADED FUND

- When an ETF provider wants to launch a new ETF, it does so through a **designated broker**. ETFs are created or redeemed in blocks of units known as a **prescribed number of units**. The designated broker then delivers the basket of shares to the ETF provider and in exchange, the ETF provider gives the designated broker the prescribed number of units, which the broker can break up and sell as individual ETF units in the open market
- A key reason why ETFs are relatively cheap in terms of MERs compared to mutual funds is because designated brokers normally pay trading costs and fees associated with the purchase and sale of the underlying securities that comprise the index. Designated brokers make their money from the bid/ask spread, as investors buy and sell the ETFs



KEY FEATURES OF EXCHANGE-TRADED FUNDS

- Low cost – generally have significantly lower MERs compared to other managed product and mutual funds.
- Tradability, Liquidity and Continuous Price Discovery – ETFs enable investors to buy and sell throughout the day, trade on margin, short-sell, and options can trade on them
- Low tracking error – tracking error is the difference between the return on the underlying index or reference asset and the return on the ETF. For ETFs, tracking error is usually less than what is apparent with mutual funds, primarily because the ETF administrative and trading costs are lower
- Tax efficiency – this results from lower portfolio turnover
- Transparency – index ETFs publish their holdings daily
- Low cost diversification – at a lower cost than mutual funds
- Targeted exposure – allow investors exposure to a broad range of sectors, regions, and asset classes



TYPES OF EXCHANGE-TRADED FUNDS

- Standard (index-based): The index can be constructed either by **full replication** or **sampling**. **Tracking error** refers to the ETF's performance relative to the underlying index or asset
- Rules-based exchange traded funds: Do *not* follow an index, but are constructed to achieve a specific objective
- Active-exchanged traded funds: Operate similarly to actively managed mutual funds, except the manager is generally restricted to making changes only at the end of a day or a week
- Synthetic exchange-traded funds: Constructed with derivative products such as swaps, these are less transparent and subject to counterparty risk
- Leveraged and inverse exchange-traded funds: Leveraged ETFs allow investors to make a leveraged return (usually 2:1) while taking on leveraged risk. Inverse ETF moves in the opposite direction of the index, showing a gain when the index falls and a loss when the index goes up
- Inverse-leveraged exchange traded funds: Take a leveraged opposite position to the index



TYPES OF ETFs (cont'd)

- Commodity exchange-traded funds can be either physical-based (buying the actual commodities); futures-based (buying futures contracts on actual commodities); or equity-based (buying companies associated with a commodity)
- Covered call exchange-traded funds: The ETFs execute covered call strategies for investors. Considerations when choosing a particular type of covered call ETF include what is the degree of management applied, are payments from the fund to the investor fixed or variable, and how high are the MERs



RISKS OF INVESTING IN ETFs

- Risk related to tracking error: These arise because of fees and expenses, sampling methods, liquidity, cash drag, rebalancing, and currency hedging
- Concentration risk – occurs when a small number of holdings make up a disproportionate amount of the overall ETF value
- Risk related to the composition of the ETF – ETFs can use different weighting methods than the index
- Risk related to securities lending – many ETFs are active in securities lending and there is the risk that loaned securities may not be returned in time of market stress



COMPARING ETFs AND MUTUAL FUNDS

- Table 19.1 – Pages 19 – 18 to 19 – 20 compare ETFs and mutual funds based on: Management style; Transparency; Cash drag flow management; Embedded fees; Advisor compensation; Distribution; Tradability; Minimum investment; Pre-authorized contributions (PACs) and systematic withdrawal plans (SWPs); Dividend reinvestment; Liquidity; Tax efficiency; and Tracking error



TAXATION OF INVESTORS IN ETFs

- Distributions from ETFs can be classified in three categories: Dividend and interest distribution; Capital gains distributions; Non-taxable distributions
- Distributions from dividends and interest from an ETF are typically paid in cash, either monthly, quarterly or annually
- The following two factors determine the size of any ETF's capital gains distribution in a given year: The net of the fund's current capital gains and any amount from the Capital Gains Refund Mechanism, a method recognized by the Income Tax Act that gives preferential treatment to capital gains generated by redemptions
- An ETF may distribute an amount that is not taxable to the investors, such as a return of capital. This distribution would decrease the ACB of the investor's units and the lower ACB would increase the amount of any capital gain that would otherwise be realized
- There are tax implications to buying and selling an ETF: A capital gain occurs when the ETF is sold for more than its ACB, net of selling costs such as commissions. Of these gains, 50% is taxable



INVESTMENT STRATEGIES USING ETFs

- General tips for trading ETFs:
 1. Use limit orders to attain protection from sudden price moves
 2. For large trades, place large portions of the trade at once, so the designated broker understands the need to create new ETFs to meet the demand
 3. Avoid trading ETFs when the market for their underlying securities is closed
 4. Be careful when trading in ETFs where any major underlying holding is halted based on news or a corporate action



MORE COMPLEX ETF ROLES

- Investment strategies using ETFs
 1. Core and satellite portfolio construction – core holdings are typically passive ETF holdings while satellite holdings are more focused on riskier sector ETF holdings
 2. Rebalancing – ETFs can provide a simple and liquid way to rebalance the asset allocation without affecting the core portfolio holdings
 3. Tactical asset allocation – ETFs allow investment managers to gain quick, diversified exposure to the targeted asset class
 4. Cash management – ETFs allow investors to temporarily invest their money in the stock market
 5. Exposure to once hard-to-access markets
 6. Tax loss harvesting – ETFs are useful in harvesting tax losses on an investment; they can be used to maintain exposure to a sector while respecting the Canada Revenue Agency superficial loss rules



OTHER RELATED PRODUCTS

- Mutual funds of ETFs – a type of mutual fund that holds a portfolio of ETFs, which combines the benefits of mutual funds and ETFs. They have the benefit of PACs and SWPs, in addition to advisor compensation options
- Exchange-traded Notes (ETNs) – very different investment vehicles from ETFs. ETNs are debt obligations issued by a bank, promising to pay investors a return on their investment based on the performance of an index or other benchmark. In exchange for the guarantee of delivering the total return of the underlying asset, ETNs charge an annual fee. ETNs do not have tracking error because the bank guarantees investment performance. ETNs face credit risk. ETNs can face call or early redemption risk which may adversely impact the ETNs' value



20. ALTERNATIVE INVESTMENTS: BENEFITS, RISKS & STRUCTURE

WHAT ARE ALTERNATIVE INVESTMENTS

- Alternative investments are asset class different from the traditional asset classes: Equities, bonds, and cash.
Alternative investments can be grouped into three groups: Alternative strategy funds, alternative assets, and private equity
- Alternative strategy funds have fewer or no regulatory restrictions on the use of short selling, leverage, and derivatives. The funds' strategies fall into these three general groups: Relative value, Event-driven, and Directional
- Common types of alternative assets:
 1. Commodities include agricultural, metals, and energy products
 2. Real estate is segmented into commercial, industrial, and residential
 3. Collectibles such as fine art, automobiles, rare stamps
 4. Infrastructure
 5. Natural resources, including timberland and farmland
- Private equity includes common stock, preferred stock, and debt securities of firms that are not publicly traded



WHY INVEST IN ALTERNATIVES

- Three main reasons for including alternative investments in their portfolio:
 1. Diversify the portfolio
 2. Add alpha
 3. Increase the portfolio's absolute return
- Diversification reduces volatility, provides downside protection in periods of market stress, and provides greater allowance for leverage
- The greater the alpha, the more value the manager has added



EFFICIENT FRONTIER

- Asset allocation is one of the most important decisions an investor can make. Adding alternative investments will improve the efficient frontier
- The efficient frontier shows a portfolio's expected return along the vertical or Y axis, and its standard deviation or risk along the horizontal or X axis
- By adding classes with low correlation to the existing portfolio, the efficient frontier is improved, or moved out



RISK

- The most frequently used measure of investment risk for alternative investments is standard deviation. It is used in two applications: Construct the efficient frontier and calculating risk-adjusted return measures, including the Sharpe ratio
- First-order risks relate to exposure to general changes in the market or systematic risk. First-order risk does not affect relative value strategies or event-driven strategies to any significant degree. It does impact directional strategies
- Second order risks include:
 1. Liquidity risk – inability to unwind illiquid positions
 2. Leverage risk – higher leverage leads to higher risk
 3. Deal breakage risk – risk that two companies fail to complete an announced merger
 4. Default risk – risk a debt instrument will not satisfy its obligations
 5. Counterparty risk – risk with OTC agreements
 6. Trading risk – risk of a poor fill price
 7. Concentration risk – risk of loss from heavily weighed position
 8. Pricing model risk – risk that models are incorrect
 9. Trading model risk – risk that models can be wrong
- Operational risk relates to the alternative strategy fund as a business entity



ALTERNATIVE INVESTMENT STRUCTURES

- Hedge funds (or exempt market alternative funds) are lightly regulated pools of capital which allow short positions, leverage, and the use of derivatives. Hedge funds offer tremendous flexibility
- Securities regulators permit the sale of securities without a prospectus. The exceptions include a minimum investment exemption, accredited investor exemption, and offering memorandum exemption
- The minimum investment exemption allows the sale of securities to non-individual investors who can make a minimum investment of \$150,000
- Accredited investors include institutional investors with net assets of \$5 million or more. Individuals are accredited if an individual's liquid assets exceed \$1 million, or if an individual makes \$200,000 or more annually, or a couple earns \$300,000. Individual with net assets of \$5 million or more also qualify
- Instead of a prospectus, potential investors receive an offering memorandum



HEDGE FUND FEATURES

- Incentive fees are frequently paid to managers to reward performance. The calculation of incentive fees can be subject to **high-water marks** or **hurdle rates**
- High water marks ensure that a fund manager is paid an incentive fee only on net new profits. A hedge fund starts with a NAV of \$10. The next year, it closes at \$12. The manager receives an incentive fee based on the \$2 gain. If the next year, the NAV is \$11 there is no incentive fee. If after that, it closes at \$13, the incentive fee is based on the difference between the previous high water mark of \$12 and the \$13 close
- Hurdle rate is the rate the manager must earn before the manager is paid an incentive fee. If the hurdle rate is 5% and the fund earns 20%, the incentive fee is paid on the 15% difference
- Liquidity can be limited with hedge funds. Hedge funds are usually priced at the end of each month and there may be quarterly redemptions with 30 days' notice
- Product transparency involves the level of detail provided, the frequency of communication, and the time between the fund reporting date and the date when the information is communicated to investors



ALTERNATIVE MUTUAL FUNDS

- Recent legislation has allowed Canadian investors to access alternative investments through alternative mutual funds. They are known as liquid alternatives or liquid alts. They are allowed greater use of derivatives, leverage and short selling
- Differences between conventional mutual funds and alternative investment vehicles include:
 1. Conventional mutual funds offered daily liquidity while hedge funds offer limited liquidity
 2. Conventional mutual funds offered good transparency while hedge funds offer limited transparency
 3. Conventional mutual funds attempt to return high relative returns while hedge funds seek high absolute returns
- Funds of Hedge Funds (FoHF) are portfolios of hedge funds. They can either be single-strategy or multi-strategy



FoHF – ADVANTAGES & DISADVANTAGES

Advantages:

- Due diligence – FoHF manager selects the best managers
- Reduced volatility – provided by diversification
- Professional management – risk reduction by effective correlation
- Access to hedge funds – many funds are capped or difficult to access for individual investors
- Ability to diversify with a smaller investment – some hedge funds have minimum investments in excess of \$1 million
- Manager and business risk control – FoHF manager monitors managers and their strategies

Disadvantages:

- Additional costs – FoHF managers will also charge base fees and incentive fees
- No guarantee of positive returns – FoHF managers cannot guarantee results
- Low or no strategy diversification – this is relevant for strategy-specific hedge funds
- Insufficient or excessive diversification – there could be too many hedge funds or too few
- Additional sources of leverage – FoHF managers may add a second degree of leverage



KEY DIFFERENCES BETWEEN CONVENTIONAL MUTUAL FUNDS AND ALTERNATIVE FUNDS

Main Product Feature and Regulatory Restrictions	Conventional Mutual Funds	Traditional Alternative Funds (Hedge Funds)	Alternative Mutual Funds
REGULATORY DISCLOSURES			
Offering documents	Simplified prospectus Annual information form (AIF) Fund Facts Document	Offering memorandum	If listed, long form prospectus and ETF facts If not listed, same as conventional mutual funds
Fund NAV calculation frequency	Required to calculate NAV weekly, unless they use derivatives or short-selling (daily)	Frequency set by offering memorandum (usually monthly or quarterly)	Same as conventional mutual funds
Fund holdings disclosure (transparency)	Monthly: Top 10 security holdings Quarterly: Complete fund holding report	Disclosure frequency stipulated in offering memorandum (typically semi-annual or annual)	Same as conventional mutual funds
Continuous disclosure	Mandatory disclosure: <ul style="list-style-type: none">• Annual audited and semi-annual unaudited financial statements• Management reports of fund performance• Annual information forms• Timely disclosure of material changes	As per offering memorandum	Same mandatory disclosures as conventional mutual fund. Also, leverage disclosure



Main Product Feature and Regulatory Restrictions	Conventional Mutual Funds	Traditional Alternative Funds (Hedge Funds)	Alternative Mutual Funds
INVESTMENT OBJECTIVES			
Investment Objective	Maximize relative return	Maximize absolute return, while providing downside protection in falling markets	Maximize absolute return, while providing downside protection in falling markets
STRATEGY ALLOWANCES AND LIMITATIONS			
Permitted borrowing	Maximum 5% of fund NAV at time of borrowing on a temporary basis	Limit set by offering memorandum	Maximum 50% of fund NAV for investment purposes
Permitted short sale of a single issuer	Maximum of 5% of fund NAV	Permitted as per offering memorandum	Maximum of 10% of fund NAV
Permitted total short sales for fund	Maximum of 20% of fund NAV	Permitted as per offering memorandum	Maximum of 50% of fund NAV
Permitted total fund leverage (combined limit on borrowing and short selling)	Maximum aggregate borrowing and short selling of 25% of fund NAV at any time	Limit set by offering memorandum	Maximum aggregate borrowing and short selling of 50% of fund NAV
Aggregate gross exposure	Maximum aggregate borrowing and short selling of 25% of fund NAV at any time	Limit set by offering memorandum	Maximum aggregate gross exposure through borrowing, short selling, and use of specified derivatives, of 300% of fund NAV
Cash cover for short positions	150% cash cover required	Limit set by offering memorandum	Not required
Diversification concentration (issuer level)	Maximum of 10% of NAV invested in securities of any one issuer	Limit set by offering memorandum	Maximum of 20% of NAV invested in securities of any one issuer
Control restriction	Maximum 10% of the (a) votes attaching to the outstanding voting securities of the issuer, or (b) the outstanding equity securities of the issuer, with limited carve-outs	As per offering memorandum	Same as conventional mutual funds



Limitation on exposure to alternative mutual funds	Can invest up to 100% of the fund's net assets in any other mutual fund Conventional mutual funds can invest up to 10% of fund's net assets in alternative mutual funds	As per offering memorandum	Can invest up to 100% of net assets in other mutual funds (including alternative mutual funds) thus creating a fund of funds structure
Investment in physical commodities	Without an exemption, conventional mutual fund can invest up to 10% of the fund's NAV directly in gold, silver, platinum and palladium or indirectly through specified derivatives	Limit set by offering memorandum	Permitted
Restrictions to trade in only "cleared specified derivatives"	Yes	Restriction, if any, set by offering memorandum	No restriction
OTC derivative single counterparty exposure	Maximum exposure of 10% of fund NAV to any one OTC derivative counterparty	Limit set by offering memorandum	Maximum exposure of 10% of fund NAV to any one OTC derivative counterparty
Restricted to deal only with OTC derivative counterparties that have an "approved credit rating"	Required to deal only with counterparties with an "approved credit rating"	Restriction, if any, set by offering memorandum	Maximum exposure of 10% of fund NAV to any one OTC derivative counterparty
Derivatives for non-hedging purposes	Cash cover required	No cash cover requirements	No cash cover requirements
LIQUIDITY			
Investments in illiquid assets	Maximum of 10% of fund NAV at time of purchase Hard cap of 15% of fund NAV for up to 90 days	Limit set by offering memorandum	Same as conventional mutual funds



FEES			
Charging management fees permitted	Yes	As defined in offering memorandum	Yes
Charging performance fees permitted	Yes, but can only charge performance fees tied to a reference benchmark or index	Yes, but performance fees normally charged based on the total return of the fund itself	Yes, but performance fees normally charged based on the cumulative total return of the fund itself for the period that began immediately after the last period for which the performance fee was paid
Commissions	Sales commissions cannot be charged to the fund but must be paid by the manager	As per offering memorandum	Same regulation as conventional mutual funds
REDEMPTIONS			
Product redemption	Usually daily	Usually monthly, sometimes quarterly	Usually daily
Initial redemption deferral	Normally no redemption deferral time period (however, prospectus normally allows for redemption deferral should manager deem appropriate in period(s) or market turmoil)	As defined in offering memorandum (typically 30 days, but can have provision for longer time periods under certain circumstances)	Redemptions can be deferred for a time period as long as six months after the date on which the receipt is issued for the initial prospectus (provided it is disclosed in the prospectus)
PERMITTED INVESTORS AND SIZE OF INITIAL INVESTMENT			
Permitted investors	General public		
Minimum initial investment size	Typically \$100 – \$1,000	Typically \$100,000 – \$150,000	Typically \$100 – \$1,000
Minimum fund seed capital requirement for new funds	\$150,000 provided by manager Manager is able to redeem this seed capital once the fund has raised at least \$500,000	No minimum	Same as conventional mutual funds



REGULATORY OVERSIGHT			
Investor rights of withdrawal	Right to cancel investment within 48 hours of receipt of confirmation purpose	No right of withdrawal except for as might be detailed in offering memorandum and associated purchase agreements	Same regulation as conventional mutual fund
Investor rights of rescission	Depending on the province, investors maintain their right of damages or to rescind the purchase if the Fund Facts document, simplified prospectus, AIF, or financial statements contain a misrepresentation	No right of rescission unless otherwise stated in the offering memorandum and associated purchase agreements	Same regulation as conventional mutual fund
Custodian	Custodian must meet requirements as defined in regulations	As per offering memorandum	Same regulation as conventional mutual fund
Ability for fund manager to receive reimbursement of organizational costs from the fund	Prohibited	As per offering memorandum	Prohibited



Security holder and regulatory approval of fundamental changes	All fundamental changes require security holder approval. The primary ones are: <ul style="list-style-type: none">• Management and/or performance fee increases• Changes in the methodology of fee calculations• Changes in the fund's fundamental investment objectives• Change of manager and/or any reorganization	As per offering memorandum	Same regulations as conventional mutual funds
Proficiency Requirement for MFDA Dealing Reps	Investment Funds in Canada course, or Canadian Funds Course or Canadian Securities Course	Canadian Securities Course, Derivatives Fundamentals Course, or Chartered Financial Analyst. These requirements are under review by the MFDA and CSA and are likely to change	Canadian Securities Course, Derivatives Fundamentals Course, or Chartered Financial Analyst. These requirements are under review by the MFDA and CSA and are likely to change
Proficiency Requirement for IIROC Registered Reps	Canadian Securities Course + Conduct and Practices Handbook + 90 Day Training + Wealth Management Essentials (within 30 months of licensing)	Basic licensing and a requirement to Know Your Product (KYP) before selling to clients	Basic licensing and a requirement to Know Your Product (KYP) before selling to clients



21. ALTERNATIVE INVESTMENTS: STRATEGIES & PERFORMANCE

Alternative investment strategies can be broken down into three general categories:

- Relative value strategies attempt to exploit inefficiencies or differences in the pricing of related securities
- Event-drive strategies seek to profit from unique corporate events such as mergers, acquisitions, stock splits, and stock buy-backs
- Directional strategies bet on anticipated movements in the market prices of equity securities, debt securities, foreign currencies and commodities

Relative Value Strategies (Low exposure to market direction)	Event-driven strategies (Medium exposure to market direction)	Directional strategies (High exposure to Market Direction)
Equity market neutral	Merger or risk arbitrage	Long/short equity
Convertible arbitrage	Distressed securities	Global macro
Fixed-income arbitrage	High-yield bonds	Emerging markets
		Dedicated short bias
		Managed futures



RELATIVE VALUE STRATEGIES

- Equity market neutral – involves long and short equity positions of approximately the same size to generate returns that do not depend on the direction of the stock market. Typically, the paired securities have similar business strategies
- Convertible arbitrage is designed to exploit mispricing between convertible securities (i.e. convertible bonds and convertible preferred shares) and the underlying stock. It typically involves buying undervalued convertible securities and hedging some of the equity risk by shorting an appropriate amount of the issuer's common shares
- Fixed-income arbitrage profits from price anomalies between related interest rate securities. Leverage is high, normally 10 to 30 times the capital employed. The two most popular fixed-income hedge fund strategies are credit spread arbitrage and yield spread arbitrage. Generally, bond portfolio managers initiate trades where the maturity of the risky bond and sovereign bond are equal. If the credit spread is wider than usual, the manager would buy the risky bond and sell the sovereign bond. If the credit spread is narrower than usual, the manager would sell the risky bond and buy the sovereign bond. In yield spread arbitrage, the manager is only concerned with the yield curve of a single issuer



EVENT-DRIVEN STRATEGIES

- Merger strategy (or risk arbitrage strategy) invests simultaneously in the long and short positions of companies involved in a proposed merger or acquisition. The strategy usually involves taking a long position in the company being acquired and a short position in the acquiring company. The returns on this strategy are generally uncorrelated to the overall stock market
- A high-yield bond strategy invests in below investment-grade bonds (otherwise known as junk bonds). These bonds have potentially higher returns with higher levels of default
- A distressed securities strategy invests in the equity or debt securities that are facing bankruptcy or reorganization. Restructuring can either be voluntary, where bondholders and managers come to new terms, and involuntary restructuring, where the bond issuer enters bankruptcy



DIRECTIONAL STRATEGIES

- Long/short equity involves taking long and short positions, depending on the outlook of specific securities. Net exposure:
$$\frac{\text{Long exposure} - \text{Short exposure}}{\text{Capital}}$$
- Global macro funds make bets on major events affecting entire economies. They participate in all major markets and frequently use leverage, often through derivatives
- Emerging markets alternative funds invest in equity and debt securities of companies in emerging markets. Managers rank emerging market countries based on GDP growth rate, political stability, financial market regulation, social stability and environmental stability. Risks to consider include currency risk, inflation risk, liquidity risk, wide bid/ask spreads, hedging risk, and transparency risks
- Dedicated short bias requires the fund to always be net short. This is different than a dedicated short strategy that takes short positions exclusively
- A managed futures strategy refers to a portfolio of futures contracts that is actively managed. Most futures managers follow a strategy called trend-following. Two common strategies are time-series momentum and cross-sectional momentum



- Currency managed futures can sometimes be classified under global macro. Managers invest in single or multiple currencies through the use of short-term money market instruments combined with derivatives
- Multi-strategy funds allow a single manager to invest in multiple strategies within a single fund vehicle
- Leveraged ETFs are designed to achieve returns that are multiples of the underlying index it tracks. Typically, it uses \$2 of leverage for every \$1 of investor capital. To maintain double leverage, the ETF must add to its leveraged position and borrow more to increase net assets. In effect, it averages up



INVESTMENT STRATEGIES FROM MOST LIQUID TO LEAST LIQUID

- Managed futures/commodities
- Equity market-neutral and long/short equity
- Global macro
- Dedicated short bias
- Merger or risk arbitrage
- Fixed-income arbitrage
- Convertible arbitrage
- High-yield bonds and distressed securities
- Emerging markets
- Private equity and equity real estate



RISK MEASURES

- Absolute risk is the total variability or volatility of returns
- Standard deviation has gained widespread acceptance. To calculate the annual standard deviation from the monthly standard deviation, you multiply by the square root of 12
- Standard deviation gives a good indication of the dispersion of returns when returns are normally distributed. If returns are normally distributed, approximately 68% of all returns lie within one standard deviation of the average, 95% lie within two standard deviations, and 99% lie within three standard deviations
- Skew measures the extent to which a distribution is tilted toward negative or positive returns
- Kurtosis measures the tendency of a return distribution either to have values that collect around the average of all returns (lower kurtosis) or values that collect toward the tails of the distribution (higher kurtosis)
- Downside risk can be measured by drawdown, which measures peak-to-trough decline. Time to recovery is the number of months required to move from a trough to a new peak



RISK MEASURES (Cont'd)

- Drawdowns represent peak-to-trough declines during a specific period of time. **Maximum drawdown** is the largest drawdown during a specific period of time. **Time to recovery** is the number of months required to move from a trough to a new peak
- Percentage of profitable months/losing months is another metric



SHARPE RATIO

- Measures excess returns generated above the risk-free rate per unit of risk as measured by standard deviation. It can be used to compare the returns across various investments. A positive Sharpe ratio indicates that the fund's average return was greater than the risk-free return, while a negative Sharpe ratio indicates its average return was less than the risk-free return
- Absolute returns are the key investment objective for alternative strategy fund investors



DUE DILIGENCE

- A comprehensive due diligence process includes the following eight areas:
 1. Structure of the investment management organization
 2. Investment management information
 3. Risk analysis
 4. Operations
 5. Fund structure
 6. Investment performance
 7. Account structure and composition
 8. Fees



22. OTHER MANAGED PRODUCTS

SEGREGATED FUNDS – AN OVERVIEW

- **Segregated funds** (or seg funds for short) are strictly speaking, insurance products; however they are most similar to investment products, mutual funds, that you are already familiar with. They are also known as **individual variable insurance contracts (IVICs)**
- Each province and territory has accepted the **Canadian Life and Health Insurance Association Inc.** guidelines as the primary regulatory requirements
- The **Office of the Superintendent of Financial Institutions** is responsible for ensuring that federally regulated insurance companies are adequately capitalized
- **Assuris** is in the insurance industry's self-financing provider of protection against the loss of policy benefits in the event of the insolvency of a member company. The maximum compensation under an individual contract is \$60,000 or 85% of the promised guaranteed amounts, whichever is higher



STRUCTURE OF SEGREGATED FUNDS

- A seg fund contract covers three parties:
 1. **Contract holder** – person who bought the contract
 2. **Annuitant** – person whose life the insurance benefits are based on
 3. **Beneficiary** – person who receives the benefits upon death. There may be more than one beneficiary

EXAMPLE: “Ms. X Chromosome took out an insurance policy on the life of Mr. Y Chromosome with their two children named as beneficiaries...” Therefore, Ms. X is the contract holder and Mr. Y is the annuitant and the two children are the beneficiaries

- Beneficiaries can be either **revocable** or **irrevocable**.
A **revocable designation** allows the contract holder to change the beneficiary without the beneficiary’s consent, offering greater flexibility. An **irrevocable designation** means that the contract holder cannot change the beneficiary unless the beneficiary agrees

MATURITY GUARANTEES

- The “key feature” of segregated fund contracts
- By law, the minimum guarantee must be 75% of the original purchase amount after a ten year holding period. By law, the maximum guarantee can be 100% of the original purchase amount after a ten year holding period. These guarantees result in seg funds having higher MERs than similar mutual funds
- If a policyholder sells a portion of his/her holdings, the protected amount will be adjusted to reflect the sale.

EXAMPLE: “An investor bought \$20,000 worth of segregated funds with the minimum guaranteed value. When the units were worth \$24,000, he sold \$6,000 worth.”

Originally, his guaranteed amount was \$15,000 (75% of \$20,000). When the units were \$24,000, he sold \$6,000 or 25% of his holdings. This means he kept 75% of his holdings... therefore, 75% of his original guaranteed amount or \$11,250 would be his new guaranteed amount

- Insurance companies may place age restrictions on how old someone may be from buying their segregated funds because of the maturity guarantee feature



OTHER BENEFITS OF SEG FUNDS

- **Reset dates** allow investors to “reset” the guaranteed amount and maturity date of their funds.

EXAMPLE: Mr. Singh purchased \$20,000 worth of segregated funds in 2008 with a 100% guaranteed amount. They appreciated rapidly and were worth \$32,000 in 2011. Mr. Singh can reset the guaranteed value to \$32,000 – to enjoy that guarantee he would have to hold them until 2021

- **Death benefits** ensure that beneficiaries receive the guaranteed amount immediately upon the death of the contract holder. Death benefits will “top up” the market value of the assets to the original amounts invested

EXAMPLE: Ms. Johnson purchased \$32,000 worth of segregated funds. When she died, they were worth \$28,000. The death benefit would be \$4,000

- **Creditor protection** means that if the contract holder dies, the segregated funds will pass directly to the beneficiaries, without creditors having a claim on those assets. Moreover, segregated funds bypass **probate**, the proving of the will.

EXAMPLE: When Mr. Jones died, he owned \$100,000 worth of mutual funds and \$125,000 worth of segregated funds, and owed \$175,000 in business related debts. His creditors could seize the \$100,000 worth of mutual funds; however the \$125,000 worth of segregated funds would go directly to the beneficiaries

- **Bypassing probate** is one of the key estate-planning advantages of segregated funds.

Because of all of these benefits, the MERs of segregated funds are higher than those of comparable mutual funds.



TAXATION OF SEG FUNDS

- Similar to mutual funds, a seg fund's net income is allocated to unitholders – seg funds are a “flow-through” vehicle
- Unlike mutual funds, the gains in seg funds flow through to the unit price without an adjustment being made to add the number of units. When gains occur in mutual funds, the unitholder has more units at the same price; when gains occur in seg funds, the unitholder has the same number of units at a higher price
- Unlike mutual funds, the gains in seg funds are allocated to unitholders throughout the year. Therefore, a unitholder who bought her units late in the year would only be subject to those gains which occurred while she was holding them. Had she purchased a mutual fund, she would have been allocated the same gains as someone who held the units throughout the entire year
- One advantage of segregated funds over mutual funds is that both capital losses and capital gains can be passed on to the contract holder
- Resetting the value of seg funds does *not* trigger a taxable event. Money received from maturity guarantees or death benefits is taxable as a capital gain



TAX TREATMENT OF GUARANTEES AND DEATH BENEFITS

- If an investor deposits \$100,000 into a seg fund contract and it grows to \$130,000, he/she would be responsible for paying taxes on those gains. If he/she deposits \$100,000 into a seg fund contract and it is sold after ten year for \$95,000, the \$5,000 is a taxable gain, offsetting the \$5,000 capital loss. If the investor deposited \$100,000, and then locked in a gain of \$130,000 and the fund were sold when it was \$110,000, there would be a \$30,000 taxable gain
- When the insured person dies, the contract is terminated and beneficiaries receive the market value of the segregated fund plus death benefits. This is a deemed disposition and will normally trigger a capital gain or loss; however the contract holder may name his or her spouse as the successor owner and then the contract is transferred at its adjusted cost base, deferring any capital gains liability.

EXAMPLE: A client purchases a segregated fund contract for \$100,000. The contract provides for a 100% guarantee. If the contract is worth \$90,000, there is a \$10,000 death benefit. However, the client would not have to report a gain of \$10,000 because it was offset by the capital loss.



COMPARING SEG & MUTUAL FUNDS

- Pages 20 – 8 to & 20 – 9 summarize the differences very nicely in chart form... familiarize yourself with the information – it is very straightforward

LABOUR SPONSORED VENTURE CAPITAL CORPORATIONS (LSVCCs)

- Labour-sponsored venture capital corporations (LSVCCs) are investment funds sponsored by labour organizations to provide capital to small to medium-sized and emerging companies
- The main attraction of LSVCCs is their federal and provincial tax credits. The federal tax credit is 15% to a maximum of \$750 (implying a purchase of \$5,000) and *most* provinces have matching credits

EXAMPLE: John invests \$3,000 in LSVCCs. His federal and provincial combined tax credit is \$900. Mary invests \$5,000 in LSVCCs. Her combined tax credit is \$1,500. Jane invests \$8,000 in LSVCCs. Her combined tax credit is \$1,500.

EXAMPLE: An investor in a 40% marginal tax bracket purchased \$5,000 worth of LSVCCs and contributed them to her RRSP. Assuming that they were subject to the full federal and matching provincial tax credit, what is the effective after-tax cost of the investment?

Contributing them to the RRSP reduces taxable income by \$5,000, which means paying \$2,000 less in tax. The tax credits are \$1,500. Therefore, the after-tax cost is:

$$\$5,000 - \$2,000 - \$1,500 = \$1,500$$



LABOUR SPONSORED VENTURE CAPITAL CORPORATIONS (LSVCCs)

- The Income Tax Act requires that LSVCCs *must* be held for eight years in order to avoid recapture of federal tax credits
- LSVCCs are considered a speculative investment only suitable for investors with a high risk tolerance

CLOSED-END FUNDS

- **Closed-end funds** – pooled investments that trade on a stock exchange. Closed-end funds issue a limited number of shares. Canadian closed-end funds usually trade a discount to their NAV. They are bought and sold like any other stock
- Closed-end fund advantages (compared to mutual funds):
 1. Diversification through a portfolio of different closed-end funds
 2. Short-selling is allowed and typically the closed-end fund is more fully invested than an open-end fund
 3. Money managers have the flexibility to concentrate on long-term investment strategies
 4. Capital gains, dividends and interest are paid directly to investors rather than reinvested in additional units.
This makes tracking the cost base easier
- Closed-end fund disadvantages (compared to mutual funds):
 1. Do not necessarily trade at NAVPS – they can trade at a discount
 2. Less liquid than open-end funds
 3. Commissions could make selling the closed-end fund more expensive than selling a comparable mutual fund
 4. Closed-end funds on a foreign exchange may trigger higher taxes on dividends than dividends from taxable Canadian corporations



INCOME TRUSTS

- **Income trusts** – exchange-traded securities that have been created to purchase and hold interests in the operating assets of a company
- Primary category of income trusts:
 1. **Real estate investment trusts** (REITs)
 2. **Business trusts** – a company engaged in retail, manufacturing or a service industry
- REITs allow investors to pool capital and invest in a large, diversified pool of real estate assets. REITs generally pay a high percentage of their income, typically 95%. Risks of REITs are similar to other real estate investment – as well, REITs *tend* to be highly leveraged. Liquidity is a major benefit of REIT ownership compared to traditional real estate. REITs offer a good hedge against inflation as well
- Business trusts operate in a wide variety of businesses, therefore are subject to the risks of equities. Prior to 2007, there was a corporate tax advantage to being organized as a business trust (compared to a corporation); however this benefit has been eliminated
- Tax treatment of income trusts is like that of taxable Canadian corporations. The income tax pays tax, and the distributions from the trust are taxed in the hands of the investor, as are dividends received from a corporation



LISTED PRIVATE EQUITY

- A listed private equity company is an investment company that uses its capital to purchase or invest in a wide range of other companies
- There are several means by which private equity finances firms:
 1. Leveraged buyout – the acquisition of a company, financed with equity and debt
 2. Growth capital – to finance acquisitions of expanding firms
 3. Turnaround – for underperforming or out of favour businesses
 4. Early stage – earliest stages of development
 5. Late stage – established firms that are still not profitable
 6. Distressed debt – purchase of debt securities trading below par



ADVANTAGES OF LISTED PRIVATE EQUITY

- **Access to legitimate inside information** – there is a greater depth of information because of the structure of private equity
- **Influence over management and flexibility** – private equity managers often have active participation in the strategic direction of the company

DISADVANTAGES LISTED PRIVATE EQUITY

- **Illiquid investments** – often the holding period is at least three to seven years
- **Dependence on key personnel** – private equity funds rely on the general partners and relatively small staff for all key investment decisions



23. STRUCTURED PRODUCTS

OVERVIEW OF STRUCTURED PRODUCT

- A **structured product** is a passive investment vehicle financially engineered to provide a specific risk and return characteristic. The value of the structured product tracks the returns off a reference security known as the underlying asset. That reference security can be a single security, a basket of securities, currencies, commodities, or an index
- Examples of underlying assets include mortgage loans, credit card receivables, car loans, equity indexes, and home equity loans
- A structured product is designed to have less risk than its constituent underlying asset(s), yet provide higher risk-adjusted returns than conventional investments
- The issuer of a structured product takes advantage of its economies of scale and market reach to package underlying assets that individuals couldn't assemble on their own – for example, a mortgage-backed security
- There is no active management of the underlying assets and the structured product is closed-ended in nature



- Types of structured products:
 1. Principal-protected notes
 2. Market-linked GICs
 3. Split shares
 4. Mortgage-backed securities
 5. Asset-backed securities



ADVANTAGES OF STRUCTURED PRODUCTS

- Experience of professional management
- Economies of scale from pooled investment funds
- Diversification
- Higher yield – securitization allows products to combine high risk, illiquid securities into one lower risk, high yield security
- High probability of return of principal

DISADVANTAGES OF STRUCTURED PRODUCTS

- Complexity – those that make extensive use of derivatives (such as CDOs) are complex instruments
- High cost – there may be several fees involved in some products such as principal protected notes (PPNs)
- Illiquidity of secondary market – *most* structured products lack an active secondary market



RISKS INVOLVED WITH STRUCTURED PRODUCTS

- The general investment risks include default risk, inflation and interest rate risk, currency risk, and manager risk
- Structured products also carry **prepayment risk**. This shortens the life of a mortgage-backed security and could lead to a lower return over the life of the product



PRINCIPAL-PROTECTED NOTES:

- These are debt-like instruments with maturity dates
- The issuer agrees to pay the amount originally invested (principal) plus interest. The interest rate is tied to the performance of an underlying asset, such as a portfolio of mutual funds or common stocks, a market index, or a hedge fund or portfolio of hedge funds
- PPNs are *not* protected by CDIC even though they are issued by chartered banks
- There are three entities involved in bringing a PPN to the market:
 1. Guarantor or issuer is the entity that guarantees the principal and return at maturity.
 2. Manufacturer helps design the issue and market them to investors and distributors
 3. Distributors are investment dealers and mutual funds which employ advisors to sell PPNs



THE STRUCTURE OF PPNs

- PPNs issued in Canada in recent years use zero-coupon bonds plus call options
- In the zero-coupon bond plus call option structure, the investor puts *most* of his/her money in a zero-coupon bond that has the same maturity as the PPN. This guarantees principal. The remainder is invested in a call option on an underlying asset, providing the potential return
- Index-linked PPNs come with a participation rate or performance cap. A participation rate of 75% means that if the index increases by 30%, the investor will receive 75% of that, or 22.5%. A performance cap of 30% means that if the index increases by 30% or less, the investor receives all of that appreciation; however if the index increases by 50%, the investor only gets 30%
- Stock-basket linked PPNs consist of 10 to 15 securities and the investor receives a return equal to the average return on the individual common shares in the basket. In some cases, a participation rate is applied to the average return



RISKS ASSOCIATED WITH PPNs

- Liquidity risk – the PPN is constructed with illiquid securities
- Performance risk – the performance of the PPN may *not* mirror the performance of the underlying assets, particularly in the early years
- Credit risk – the issuer may be unable to return the investor's principal at maturity
- Currency risk – many PPNs track returns from a foreign currency

PPNs are *not* appropriate for investors who rely on a regular and predictable investment income to fund their lifestyle. For diversified investors with lengthy time horizons, a small allocation to cash may be warranted – and PPNs may be appropriate for them.

- When PPNs are held to maturity, the return is taxed as interest income. If a PPN is sold prior to maturity, the gain is taxed either as interest income or capital gains



MARKET-LINKED GUARANTEED INVESTMENT CERTIFICATES

- Linked GICs are hybrid investments that combine the safety of a deposit instrument with some of the growth potential of an equity instrument
- They are CDIC insured and typically offered in terms of 3 to 5 years. They are usually non-redeemable until maturity
- The main variables used to determine the overall return include: The initial index level, the ending index level, index growth over the term, and any maximum cap on returns of participation rate
- Page 23 – 13 demonstrates the return calculation: The index returned 39.53% over the five years. This is multiplied by the 60% participation rate to arrive at a return of 23.72%. The principal is multiplied to get the dollar value of the return, in this case: $\$10,000 \times 23.72\% = \$2,372$
- The main risk associated with linked GICs is that the underlying index will *not* appreciate in value. In this case, the principal will be returned. Many of these products may not be redeemed prior to the maturity date. The return on a linked GIC is classified as interest income



SPLIT SHARES

- Split shares are securities that have been divided to create the investment objectives of growth and income. The split share corporation takes the proceeds from the sale of the split share units and purchases the equivalent amount of common shares of one or more common stock issuers. Then two types of shares are issued: **Preferred** and **capital**. The preferred share receives the majority of dividends from the common share; the capital share receives the majority of the capital gains. Leverage is frequently employed
- Split shares are issued for a specific term stated in the prospectus. At the end of the term, the split-share company will redeem the shares. Once the preferred shareholders get back their principal, the capital shares receive the remaining value



RISKS WITH SPLIT SHARES

- There are several risks associated with the capital shares:
 1. Inherent leverage – investors can lose their entire investment if the common shares decline sufficiently
 2. Volatility – they are *more* volatile because of the leverage
 3. Dividend cuts – even the capital shares are susceptible to dividend cuts, especially if the corresponding preferred has a guaranteed dividend
- There are risks associated with the preferred shares:
 1. Reinvestment risk – if the shares are redeemed prior to maturity, the investors must find replacement investments
 2. Early redemption – a split-share corporation often reserves the right to wind up early and redeem the shares
 3. Credit risk – a reduction in the credit rating will lower its price
 4. Decline in value of underlying portfolio
 5. Taxation risk – rules around dividends could change
 6. Dividend cuts



ASSET-BACKED SECURITIES

- Asset securitization is a process that aggregates and transforms financial assets such as mortgages. In its most basic form, securitization is a two-step process:
 1. The originator pools these assets and sells them to a separate legal entity, called a **special purpose vehicle (SPV)**.
 2. The issuer finances the purchases of the assets by selling marketable securities, called **asset-backed securities (ABS)** to (largely) institutional investors
- The SPV can either issue one class of securities or different **tranches** – each of which would have different levels of risk and return associated with it. The standard securitization scheme assumes a 3-tier tranche hierarchy:
 1. Senior – the most creditworthy level, it has the first claim on any income generated by the SPV
 2. Mezzanine – until this tranche is fully paid, the junior tranche is not entitled to any interest payments
 3. Junior – normally the smallest of the three, it has the greatest amount of credit risk and has the highest expected return



ASSET-BACKED COMMERCIAL PAPER (ABCP)

- ABCP has a maturity date of one year or less. ABCP was initially designed to match short-lived assets with short term funding to minimize **roll-over risk**

MORTGAGE-BACKED SECURITIES (MBS)

- MBS are bonds that claim ownership to a portfolio of the cash flows from a group or pool of mortgages. They are also known as **mortgage pass-through securities**. Every month, holders receive a proportionate share of the interest and principal payments associated with those mortgages. The possibility of higher than anticipated prepayments exposes investors in MBSs to **prepayment risk**
- Advantages of MBS: fully guaranteed by the government of Canada, the CHMC guarantee does *not* limit the holding's size; monthly payments are guaranteed; yields are higher than equivalent GOC bonds; liquid; low minimum investment (usually \$5,000) and RRSP/RRIF eligible
- Disadvantages of MBS: prepayment possibility introduces prepayment risk; in default investors receive principal payments only; legal risk if properties are damaged; a capital loss is possible if an MBS is sold prior to maturity



24. CANADIAN TAXATION

CALCULATING INCOME TAX

- The taxation year for all individuals and personal service corporations is the calendar year, ending December 31st. A corporation can choose any **fiscal year** as long as it remains consistent
- Income tax is calculated as per these steps:
 1. Calculate all sources of income
 2. Make allowable deductions
 3. Calculate the gross or basic tax payable
 4. Claim various tax credits on tax payable
 5. Calculate net tax payable
- Types of income:
 1. Employment income – taxed on a gross receipt basis
 2. Capital property income – dividends and interest
 3. Business income – taxed on a net income basis
 4. Capital gains and losses



CALCULATING INCOME TAX PAYABLE

Federal Income Tax Rates for 2020:

Taxable Income	Tax
up to \$48,535	15%
over \$48,535 – \$97,069	20.5%
over \$97,069 – \$150,473	26%
over \$150,473 – \$214,368	29%
over \$214,368	33%

EXAMPLE: “Mr. Sharma earned \$105,000 in 2020. What is his Federal Tax Payable?”

On the first \$48,535, he will be responsible for \$7,280 in taxes.

On the next \$48,534, he will be responsible for \$9,949 in taxes.

On the last \$7,391, he will be responsible for \$2,062 in taxes.

In total, he will owe federal taxes of \$19,291.

His **average tax rate** is 18.4% ($\$19,291 / \$105,000$) while his **marginal** tax rate is 26%.



TAXATION OF INVESTMENT INCOME

- Interest is taxed at an inclusion rate of 100%, also referred to as regular income. This means that every dollar of interest earned is added to taxable income
- Capital gains are taxed at an inclusion rate of 50%. Every dollar of capital gains means that the investor receives \$.50 tax free, and must include \$.50 in taxable income
- Dividends from taxable Canadian corporations receive the following treatment:
 1. \$1.00 in dividend income received
 2. Dividend income “grossed-up” by 38%
 3. Gross up is \$.38 and taxable income is \$1.38
 4. 15.02% tax credit applied to taxable income, or \$.2073
 5. \$1.38 is taxed at the investor’s marginal rate and the tax credit of \$.2073 is applied to that amount to reduce the taxes payable
- Dividends from foreign corporations are taxed as regular income – identically to interest income



TAX-DEDUCTIBLE ITEMS

- Tax rules permit individuals to deduct certain carrying charges for tax purposes. Acceptable examples:
 1. Interest paid on funds borrowed to earn investment income
 2. Fees for certain investment advice
 3. Fees paid for management, administration or safe custody of investments
 4. Accounting fees paid for the recording of investment income

- These charges may *not* be deducted:
 1. Interest paid on funds to buy investments that generate capital gains only
 2. Brokerage fees or commissions paid to buy or sell investments (included in cost base)
 3. Interest paid on funds borrowed to contribute to a registered retirement savings plan, registered education savings plan, or tax-free savings account
 4. Administration or counseling fees for registered retirement savings accounts
 5. Fees paid for advice such as financial planning
 6. Safety deposit box charges



TAX-DEDUCTIBLE ITEMS (Cont'd)

- An investor may deduct the interest paid on funds borrowed to purchase securities if:
 1. The taxpayer has a legal obligation to pay the interest
 2. The purpose of borrowing the funds is to earn income
 3. The income produced from the securities is *not* tax-exempt

- Generally the CRA treats share dispositions as being capital in nature. However, if the taxpayer's actions show that by intention the taxpayer is in the business of trading securities to earn a speculative profit, the gains may be fully taxable. Factors considered include:
 1. Short periods of ownership
 2. A history of extensive buying and selling
 3. Special knowledge of securities markets
 4. Substantial time spent studying the markets
 5. Financing share purchases through margin
 6. Nature of the shares themselves (speculative)



INVESTMENT GAINS AND LOSSES

- When shares are sold, the difference between the (sale price minus commission) and the (purchase price plus commission) is the capital gain. 50% of that is the taxable capital gain

EXAMPLE: “An investor purchased 1,000 shares of XYZ Security at \$5.00, paying a \$25 commission. When they were \$7.00, she sold them and the commission was 1% of the sale. What was her taxable capital gain?”

$$(\$7,000 - \$70) - (\$5,000 + \$25) = \$1,905 \times .5 = \$952.50$$



INVESTMENT GAINS AND LOSSES (Cont'd)

- When an investor purchases identical shares, the adjusted cost base (ACB) is the weighted average of those purchases, including commissions

EXAMPLE: “An investor purchased 200 shares of DEF Security at \$10.00 and there was a \$100 commission. A year later, she bought an additional 300 shares at \$12.00 and the commission was \$125. What is the ACB?”

$$(200 \times \$10 + \$100 + 300 \times \$12 + \$125)/500 = \$11.65$$

- When an investor purchases a convertible security, the conversion is *not* deemed to be a disposition. Rather, the ACB of the shares received is based on the original purchase price of the convertible security

EXAMPLE: “An investor purchased a \$1,000 face value convertible bond, convertible into 20 common shares, at 95 plus accrued interest. Her ACB for the shares would be...”

$$950/20 = \$47.50$$

- If warrants or rights are employed:
 1. If direct purchase, the tax treatment is similar to that for convertible securities
 2. If received from direct share ownership, the cost base of the original shares purchased *must* be adjusted
 3. If warrants and rights are *not* exercised, the deemed sale price is zero



INVESTMENT GAINS AND LOSSES (Cont'd)

- When an investor purchases a debt security, the ACB is the principal amount less accrued interest

EXAMPLE: “An investor purchases \$1,000 face value of a 6% bond at 101 with accrued interest of \$10. What is the ACB of the bonds?”

He would have paid \$1,020 altogether - \$1,010 principal amount plus \$10 of accrued interest; however the ACB is the \$1,010 only.



CAPITAL LOSSES AND TAX LOSS SELLING

- **Capital losses** are calculated in the same way as capital gains. They are deducted from capital gains to arrive at taxes payable
- When a security becomes worthless due to bankruptcy of the underlying company, there is a deemed disposition for proceeds of nil. This allows the investor to capture the loss even though the security is *not* formally sold to anyone
- A **superficial loss** occurs when securities sold at a loss are repurchased within 30 calendar days before or after the sale and are still held at the end of 30 days after the sale. This prevents the investor from claiming the loss for tax purposes
- Tax loss selling occurs when investors decide to sell shares prior to year end to capture the capital loss for that calendar year. Trades *must* settle in that year; therefore the trade date must be two business days before the end of the year



TAX DEFERRAL PLANS

- **Registered Pension Plans (RPPs)** are workplace sponsored trusts to provide for the retirement needs of workers. A **pension adjustment (PA)** is applied which reduces the amount that workers can put into their RRSP plans
- Two types of RPPs
 1. **Money purchase plan** or **defined contribution plan**
 2. **Defined benefit plans**
- In a money purchase plan, the contributions are known but the benefit is *not* known. The annuitant assumes the investment risk. The combined employer/employee contributions cannot exceed the lesser of 18% of employee's current year compensation or MPP (same as RRSP) contribution limit
- In a defined benefit plan, the contributions are *not* known but the benefit is known. The employer assumes the investment risk, responsible for making up shortfalls in the plan. The contributions are determined by a qualified actuary



TAX DEFERRAL PLANS (Cont'd)

- **Registered retirement savings plans (RRSPs)** defer tax and facilitate savings for retirement. Annual contributions are tax deductible to specified limits and the growth in the plan accumulates tax free in the plan. There are two types of RRSPs – **single vendor** and **self-directed**
 1. Single vendor – the holder invests in a variety of different securities, but no day-to-day investment decisions are made by the holder
 2. Self-directed – the holder actively manages the portfolio, making the day-to-day decisions



QUALIFIED/NON QUALIFIED RRSP INVESTMENTS

The following are among the more popular qualified RRSP investments:

- Money on deposit in a bank of similar institution
- GICs
- Government-guaranteed bonds
- Shares and debt obligations of Canadian public companies
- Shares of foreign public corporations listed on a prescribed exchange
- Foreign government bonds with investment grade ratings

The following investments do not qualify for investment in an RRSP:

- Shares and debt obligations of private corporations
- Real estate (other than REITs)
- Commodity and financial futures contracts
- Artwork, jewelry, rare manuscripts, and stamps



RRSP CONTRIBUTIONS

- There is no limit to the number of RRSPs an investor may hold. There are maximum allowable annual tax deductible contributions based on 18% of earned income to the RRSP dollar limit for that year. The dollar limit in 2017 was \$26,010
- Unused contribution room may be carried forward indefinitely. Over-contributions of up to \$2,000 may be made without penalty; anything over that is subject to a penalty tax of 1% per month
- Earned income for RRSP contribution purposes include:
 1. Total employment income
 2. Net rental income and net income from self-employment
 3. Royalties from a published work and research grants
 4. Some alimony or maintenance payments
 5. Disability payments from CPP and QPP
 6. Supplementary Employment Insurance Benefits

NOTE: Anything deemed investment income (which means interest, dividends and capital gains) is *not* included for RRSP contribution limit purposes!



RRSP CONTRIBUTIONS (Cont'd)

EXAMPLE: “Sarah Li made \$50,000 in salary and received \$12,000 in commissions. In addition, she had gross rental income of \$10,000 and net rental income of \$5,000, and received interest payments in the amount of \$2,000. Her RRSP contribution limit for that year would be...”

$$(50,000 + \$12,000 + \$5,000) \times .18 = \$12,060$$



CONTRIBUTIONS IN KIND

- When a plan holder contributes securities they already own to an RRSP, a contribution in kind is recorded. This is a deemed disposition and a capital gain is included in income tax for the year. A capital loss cannot be used and is deemed to be nil for tax purposes



WITHDRAWALS FROM A RRSP

- Withdrawals from a RRSP are subject to a graduated withholding tax. They must be included in income in the year they are withdrawn



SPOUSAL RRSPs

- A taxpayer may make RRSP contributions to an RRSP registered in the name of a spouse or common-law spouse and still claim a deduction. The amount of money that the spouse who owns the plan makes is irrelevant in determining how much the other spouse may contribute

EXAMPLE: “Mr. X is married to Ms. Y. Both of them make \$100,000. Ms. Y has made the maximum allowable contribution of \$20,000 to her own plan. Mr. X has contributed \$5,000 into his own plan. How much could he contribute to Ms. Y’s spousal plan?”

Because he has already contributed \$5,000 to his own plan, he could only contribute \$15,000 more into her plan. In total, their combined contributions could not exceed \$40,000

- If a spouse de-registers money from a spousal plan, the contributing spouse *must* pay tax on those withdrawals if contributions were made in the previous two years



TERMINATION OF RRSPs

- Mandatory de-registration occurs in the calendar year when an RRSP plan holder reaches age 71
- The following options are available:
 1. Withdraw the proceeds as a lump sum
 2. Purchase a life annuity
 3. Purchase a fixed-term annuity to a specified age
 4. Transfer the proceeds to a RRIF
 5. Any combination of the above



ADVANTAGES OF RRSPs

- The major advantages of RRSPs include:
 1. A reduction in annual taxable income during high-taxation years
 2. Shelter of certain lump-sum types of income from taxation through tax-free transfer
 3. Accumulation of funds for retirement, with the funds compounding on a tax-free basis until withdrawal
 4. Deferral of income taxes until money is withdrawn from the plan
 5. Opportunity to split retirement income (using spousal RRSPs)

DISADVANTAGES OF RRSPs

- The major disadvantages of RRSPs include:
 1. The plan holder pays income tax on the entire amount of the withdrawal
 2. The plan holder cannot take advantage of the dividend tax credit on eligible shares
 3. If the plan holder dies, all payments out of the RRSP to the plan holder's estate are subject to tax as income of the deceased
 4. The assets of an RRSP cannot be used as loan collateral



REGISTERED RETIREMENT INCOME FUNDS

- RRIFs require holders to make minimum annual withdrawals as per a prescribed schedule. The percentage is calculated as follows: $1/(90 - \text{age})$. At age 71, this works out to 5.26%
- RRIF owners must adhere to the minimum amount, but there is no mandatory maximum amount
- **Annuities** are investment contracts where the holder deposits money to be invested in an interest-bearing vehicle that will return interest and a portion of principal. They can be **immediate** (payments start right away) or **deferred** (payments start later). Deferred annuities are available only through life insurance companies



TAX-FREE SAVINGS ACCOUNTS

- TFSAs have been in existence since 2009. Any Canadian resident aged 18 or older can open a TFSA. The contribution limit in 2014 was \$5,500 per year, raised to \$10,000 in 2015, then reduced to \$5,500 for 2016
- All gains within a TSFA accumulate tax free
- Money contributed into the TFSA is *not* tax-deductible
- Qualified investments include stocks, bonds, GICs and mutual funds – the same products an investor can put into an RRSP
- The contribution room for each year consists of the TFSA dollar limit for that year plus any withdrawals made in the preceding year



REGISTERED EDUCATION SAVINGS PLANS

- Tax-deferred savings plans intended to help pay for post-secondary education of a child or grandchild
- Contributions to the plan are *not* tax-deductible; however growth in the plan is *not* subject to tax until withdrawals are made. Those withdrawals are taxed at the child's marginal tax rate
- There is no single maximum amount that can be contributed in a calendar year. However, the lifetime maximum is \$50,000 per beneficiary. Contributions can be made for up to 31 years, but the plan *must* be collapsed within 35 years of its starting time
- The **Canada Education Savings Grants (CESGs)** means that the Federal Government makes a matching grant of 20% of the first \$2,500 contributed each year to the RRSP of a child under 18. Depending on family income, there may be additional enhancements



POOLED REGISTERED PENSION PLANS (PRPPs)

- New retirement savings plan offered by the federal government. They hold pooled assets from multiple participating employers, allowing workers to take advantage of lower investment management costs
- PRPPs are administered by eligible financial institutions such as banks and insurance companies. This design reduces the risk and cost that employers would normally bare when offering a retirement plan for employees
- Like an RRSP, contributions to PRPPs are limited to available contribution room based on earned income, and contributions are tax deductible



TAX PLANNING STRATEGIES

Tax evasion is against the law. Tax avoidance is legitimate, assuming any of the following tactics:

1. Full use of allowable deductions
 2. Conversion of non-deductible expenses into deductible expenses
 3. Postponing the receipt of income
 4. Splitting income with family members
 5. Selecting investments with a better after-tax yield
- **Income splitting** is a tax savings strategy that involves transferring income from a family member in a higher tax bracket to a spouse or children or parents in a lower tax bracket. Allowable under limited circumstances only
 - **Transferring income** can trigger **attribution rules** which means that if property or income-producing assets are transferred to other family members “improperly”, the tax consequences are passed back to the taxpayer
 - **Paying expenses**: When both spouses have earnings, the higher income spouse should pay all family expenses, allowing the lower income spouse to invest as much income as practical



TAX PLANNING STRATEGIES (con't)

- **Making loans:** Attribution rules do not apply when money is loaned from one spouse to another at a rate prescribed by CRA
- **Discharging debts:** Attribution rules do not apply if a taxpayer directly discharges the debt of his or her spouse, or a designated minor or other non-arm's length individual
- **CPP & QPP splitting:** The legislation permits spouses to share their pension benefits according to the length of time the couple lived together
- **Gifting:** Investments may be transferred by way of gift, but such dispositions are deemed to have been made at fair market value



25. FEE-BASED ACCOUNTS

OVERVIEW OF FEE-BASED ACCOUNTS

There are several key reasons why fee-based accounts are growing:

- **More services:** High-net-worth clients need more from their advisors than stock and bond picking. They require advice on risk management, estate planning, debt management, insurance and retirement planning
- **Payment tied to performance:** Fees vary with performance which puts both the client and the advisor on the same side
- **Greater transparency:** Fees are paid directly and the amounts appear on their regular account statements
- **Greater trust:** Fee-based relationship means the investor is more confident in the relationship

MANAGED (DISCRETIONARY) FEE-BASED ACCOUNTS

- Professional investment management
- Assets within the account held exclusively for the client
- Package of services
- Services beyond investment management
- An investment policy statement
- Greater transparency

Fees paid for managed accounts differ in the following ways from the management expense ratio that is commonly charged for mutual funds:

- Fees are tax deductible for non-registered accounts
- Depending on the client's assets, the fees tend to be lower than on mutual funds
- Fees are generally negotiable – not true with mutual funds
- All fees on a managed account are transparent

TYPES OF FEE-BASED ACCOUNTS

There is a continuum in these accounts where there is a positive correlation between minimum account size and product sophistication:

- Mutual fund wraps and ETFs
 - Advisor-managed accounts
 - Separately managed accounts
 - Household accounts
 - Private family offices
- ETF wraps: Directed by a single portfolio manager who creates the model for a specific managed account. The approach can be passive or active – with key advantages to the active management approach: Client fees are relatively low; Portfolio Manager provides expert evaluation of ETFs; Selection of standardized asset allocation models; Greater ability to hedge currency exposure; Greater focus on planning instead of trading; and marketing support provided
- Mutual fund wraps: Composition and weighting of individual funds directed by an **overlay** manager. Mutual fund wraps have the following key advantages: Coordinated investment account optimized on the asset allocation and selection of managers; Selection of standardized asset allocation models; Ability to hedge currency exposure; and ongoing oversight management of funds



TYPES OF FEE-BASED ACCOUNTS (Cont'd)

- Advisor-managed accounts: gives discretion to another person to make investment decision on the client's behalf. Key advantages: Cost may be lower; Advisor understands the client's specific needs; Some programs permit client accounts to exclude certain securities; and program allows for tax selling. Advisors use two types of programs to serve their clients: **Model-based account management** (ongoing programs) and **Non-model-based account management** (typically used temporarily)
- Separately managed accounts (SMAs): The external portfolio manager (called the sub-advisor) controls the holdings based on a portfolio model. SMAs have the following key advantages: Provide access to dedicated and sophisticated external portfolio managers; Supplemental reports collectively report on the performance of each separate account; and the client directly holds the securities in an SMA



TYPES OF FEE-BASED ACCOUNTS (Cont'd)

An SMA with an external portfolio manager can be either a single-mandate or a multi-mandate managed account, also called a **unified managed account (UMA)**.

- Household accounts: this is a type of separately managed account that involves the coordination of holdings across a family or household
- Private family offices: A team of professionals handles all of a high-net-worth client's financial affairs within one central location. Key advantages: High-net-worth clients are completely free to concentrate on matters other than their financial affairs; and given that all professionals are concentrated in one service, they are aligned with the recommendations on the client's investments, taxes, legal matters, estate and corporate needs



DOCUMENTATION FOR MANAGED ACCOUNTS

- Discretionary authority with respect to a managed account must be given in writing and accepted in writing by the designated supervisor
- Document cannot include clauses that attempt to limit the application of securities laws
- All conflicts of interest must have the client's written acknowledgment
- Termination of the agreement must be in writing



FULL-SERVICE BROKERAGE ACCOUNTS

- Fees for full-service brokerage accounts provide clients with financial planning services, combined with a fixed or unlimited number of trades
- The annual fee is paid out quarterly and depends on the following criteria:
 1. Dollar size of the account
 2. Estimated number of trades
 3. Type of investment (Equity, bond, GICs)
 4. Ancillary services (Financial planning, estate planning)



SELF-DIRECTED BROKERAGE ACCOUNTS

- Self-directed brokerage accounts have begun to offer fee-based accounts and the services fall into two categories: Direct security and asset mix guidance and robo-advisory services
- Direct guidance models are provided with these bundled services: Unlimited trading, tools to build and monitor an asset allocation; and investment recommendations and alerts
- Robo-advisory builds on the concept of ETF wraps, with the key difference that with robo-advisory, the role of the advisor is done remotely and mostly online. Advantages of robo-advisory: They cost less than traditional managed accounts; Many investors prefer online services; and minimum account sizes are lower. Disadvantages: One-to-many service may not appeal to high-net-worth investors; financial planning is supported by technology in early stages of development; local service is limited; and because the service is new, it has not gone through a major market correction.



26. WORKING WITH THE RETAIL CLIENT

THE FINANCIAL PLANNING APPROACH

- There are four characteristics of any Financial Plan:
 1. Should be achievable
 2. Should accommodate changes in lifestyle and income level
 3. Should be realistic, rather than daunting
 4. Should provide not only for necessities but also for rewards

- The steps in the financial planning process:
 1. Establish the Client-Advisor relationship
 2. Collect data and information
 3. Analyze data and information
 4. Recommend strategies to meet goals
 5. Implement recommendations
 6. Conducting a periodic review or follow-up



LIFE CYCLE HYPOTHESIS

This is based on the premise that the risk-return relationship of a portfolio changes over time because investors have different needs at different stages of their lives

- **Early earning years, 18 to age 35** – a person begins working and ends when family commitments start to impose financial demands. A typical asset allocation for long-term goals might be 80% equities and 20% bonds
- **Family commitment years, 25 to 50** – distinguishing characteristic is lack of liquidity because of mortgage and car payments and arrival of children. Life insurance becomes a requirement. Asset allocation would shift to something closer to 60% equities and 40% bonds
- **Mature earning years, 45 to 60** – clients are not much more risk averse than in the previous stage; tax minimization is frequently a more important goal.



LIFE CYCLE HYPOTHESIS (Cont'd)

- **Nearing retirement, 55 to 70** – clients are generally in their peak earning years and they are moving to a more risk averse strategy
- **Retired, age 60 and onwards** – faced with a conflict between relying on savings to maintain a certain standard of living and on the other hand, they need to keep their remaining funds invested so that they generate enough return on which to live

Table 26.1, Pages 26 – 11 summarizes the Life Cycle Hypothesis.



ETHICS AND THE FINANCIAL ADVISOR

Ethics can be defined as a set of moral values that guide behaviour, enduring beliefs that reflect standards of what is right and what is wrong.

Ethics can be defined more specifically in the following three ways:

- The rules or standards governing the behaviour of a particular group or profession
- A set of moral principles or values
- The study of the general nature of morals and the moral choices made by individuals

The securities industry has a Code of Ethics based upon the principles of trust, integrity, justice, fairness, honesty, responsibility and reliability

- The Code encompasses five primary ethical values:
 1. Standard 1: Duty of Care
 2. Standard 2: Integrity
 3. Standard 3: Professionalism
 4. Standard 4: Compliance
 5. Standard 5: Confidentiality



STANDARD 1 – DUTY OF CARE

- There are three major components of Duty of Care
 1. **Know your client.** This rule is paramount in the industry. Registrants *must* make a diligent effort to learn essential facts and properly document this knowledge
 2. **Due diligence.** Recommendations *must* be based on both the client and investment characteristics of the security
 3. **Unsolicited orders.** Even if orders are unsolicited, the registrant *must* be aware of the objectives and strategies behind each order



STANDARD 2 – INTEGRITY

- **Priority of the client's interests** – if the registrant's interest competes with the client's, the client's interests come first
- **Respect for client's assets** – registrants shall *not* utilize clients' assets in any way
- **Complete and accurate information relayed to client** – this covers confirmation slips, monthly statements, and any review materials prepared
- **Full disclosure** – registrants *must* disclose all real and potential conflicts of interest



STANDARD 3 – PROFESSIONALISM

- **Client business** – all methods of soliciting business *must* be above-board
- **Client orders** – every client order *must* be cleared in advance with the client unless the account is designated as Managed or Discretionary
- **Trades by registered and approved individuals** – *must* be properly registered with the appropriate SROs
- **Approved securities** – only approved securities may be distributed
- **Personal business** – all personal affairs *must* be conducted in a professional and responsible manner
- **Personal financial dealings with clients** – registrants should avoid personal financial dealings, including the loaning or borrowing of money, paying client losses with personal funds



STANDARD 3 – PROFESSIONALISM (Cont'd)

- **Personal trading activity** – should be limited and *not* get in the way of registrant's primary duty and that is to represent the client's interest
- **Other personal endeavours** – all public activities should present a favourable image
- **Continuous education** – registrants *must* continually upgrade their technical and general knowledge



STANDARD 4 – COMPLIANCE

- **Compliance with securities acts and SRO rules** – the requirements of all SROs of which a registrant's firm is a member *must* be observed. If two rules apply in the same circumstance, adherence to the more stringent rule is required
- **Inside information** – a registrant shall *not* trade or cause others to trade on material, non-public information



STANDARD 5 – CONFIDENTIALITY

- **Client information** – registrants *must* maintain the confidentiality of identities and personal and financial circumstances of their clients
- **Use of confidential information** – this extends to *not* using client orders as a basis to trade in the registrant's personal account or to base investment recommendations for other clients



27. WORKING WITH THE INSTITUTIONAL CLIENT

SELL SIDE AND BUY SIDE

- **Sell side** refers to dealers in the business of selling securities and other services to investors. **Buy side** refers to investors, both institutional and retail
- The term, sell side, stems from the role that dealers play in selling trading/investing/ideas/research; advice; trade execution; corporate finance services; and securities
- The term, **buy side**, is usually used to describe investors, both institutional (mutual funds and pension funds) and retail clients



INVESTMENT DEALERS

- There are three types:
 1. Full-service dealers are involved in almost every aspect of the securities markets and offer their services to both retail and institutional investors
 2. Investment banking boutiques focus on a combination of debt and equity security underwriting, sales and secondary market trading, and M&A advisory services. They generally cater to institutional clients only
 3. Self-directed dealers focus primarily on offering secondary equity trading services for retail investors for small to medium-sized account who prefer to manage their own portfolios



INSTITUTIONAL CLIENTS

- Corporate treasury departments are responsible for managing the firm's assets in support of the company's business activities. This includes hedging currency risk and accessing capital as cheaply as possible by selling equity or debt
- Insurance companies accept premiums from policyholders, then *must* invest those premiums until claims are made. The investment dealer buys and sells securities and supplies research to support trading activity
- Pension funds represent the interests of employees. They have long investment horizons and require brokerage services
- Mutual funds hire the investment dealer to buy and sell on their behalf and hedge currency risk
- Hedge funds may have long or short time horizons and require brokerage services



INSTITUTIONS (continued)

- Endowments are created by gifts and donations to support organizations to achieve their goals – such as education, health care funding, etc.
- Trusts are pools of assets, created by a settlor, whereby another party is the beneficiary
- Investment management firms focus on managing investments for institutional clients
- Investment dealers trade securities for their own accounts or on behalf of their customers. Investment dealers represent the sell side of the market



DIRECT ELECTRONIC ACCESS

- Investment dealers now provide **direct electronic access (DEA)** to their institutional investment clients. Under this arrangement, the institutional investment management firm uses the dealer's participating organization number for the purpose of electronically sending orders directly to a marketplace without the dealer's trader being involved
- Investment dealers must establish appropriate standards and controls prior to offering DEA to a client that includes ensuring that the client has: Sufficient resources to meet their trading obligations; knowledge in using the order entry systems provided; and knowledge and ability to comply with all applicable marketplace and regulatory requirements



BUY SIDE PMs and TRADERS

- **Buy-side portfolio managers** have the following roles and responsibilities:
 1. Creating the investment mandate, goals and guidelines
 2. Developing and executing portfolio strategy
 3. Providing pertinent and timely information
 4. Supervising portfolio management staff
 5. Providing information to the firm's marketing departments
 6. Representing the firm at marketing meetings

- **Buy-side traders** roles and responsibilities:
 1. Providing the most effective trade execution
 2. Remaining informed at all times of the PM's strategy
 3. Informing the PM about market conditions and trends
 4. Explain how market conditions can affect the portfolio managers investment strategies
 5. Being aware of trade opportunities
 6. Maintaining good relationships with sales and trading staff



CRITERIA FOR SELECTING A SELL-SIDE BROKER

- The buy-side portfolio manager or trader will look to obtain the best price for their order from a broker. The PM or trader typically deals with multiple sell-side firms that meet a variety of criteria, including:
 1. Strong existing relationship with a trader or sales rep
 2. Speed and efficiency of trade execution
 3. Block trading capability
 4. Availability of the desired product
 5. High quality research
 6. Access to industry experts
 7. Frequently updated daily market commentary



ORGANIZATIONAL STRUCTURE OF A SELL-SIDE TRADING FIRM

- Back office includes: operations and information technology
- Middle office includes: risk management; legal and compliance; and corporate treasury
- Front office includes: sales and trading; corporate finance; government finance; mergers and acquisitions/divestitures; corporate banking; merchant banking; securities services; and research
- Depending on the size of the firm, sales and trading can include equities, fixed income, foreign exchange, commodities, and related structured products



EQUITY SALES AND TRADING

- Primary activities include:
 1. Equity trading services – relationship manager
 2. Program trading – uses computers to execute complicated stock and derivatives orders
 3. Structured finance – involves creation of derivatives or structured products that offer a unique combination of risk and reward
 4. Futures and options – specific expertise required
- **Prime brokerage** is a bundling of equity trading-related services used primarily by hedge funds. Services offered include: Pre-trade compliance testing; security lending (for settlement of short sales); margin and portfolio financing; security settlement; portfolio accounting; and capital introductions (source of funding for hedge funds)
- **Research** is *not* formally a large part of the equity sales and trading department; however it forms a large component of its success



REVENUE SOURCES FOR SELL-SIDE TRADING FIRMS

- Sell side firms have an important obligation to their clients. The **Universal Market Integrity Rules (UMIR)** create the framework for the integrity of trading activity on the marketplace. Best execution requirements are set out and agreed-upon key elements include price, speed, certainty, and total cost
- Business opportunities for a sell-side trading desk include equity underwriting and mergers and acquisitions; second equity market making and agency trading; and prime brokerage
- Sell-side revenue streams are grouped into:
 1. Trading – making money on the **price spread**, the difference between the bid and ask. Revenue depends on skill of traders and volume, or **order flow**
 2. Commissions – earned when acting in an agency manner
 3. Fees – equity underwriting
 4. Interest – based on margin account balances



REVENUE SOURCES OF A SELL-SIDE FIXED-INCOME TRADING DESK

- The three areas of operations that bring in revenue are trading, sales and origination
- Trading revenue is generated by the moment-to-moment market movements and their daily effect on inventory values. The trader's inventory is valued by using the observed or estimated bid-side price in the OTC market. Activities that affect traders' daily P&L include: Charges for capital used; earn or incur costs from repurchase or reverse repurchase agreements; and earning the coupon on long bond positions
- Sales revenue is generated through transactions with clients
- **Origination** or Debt Capital Markets or underwriting is the process of bringing new debt issues to market. The dealer buys the debt from the issuer, then sells at a slightly higher price to its clients
- **Soft dollar arrangements** occur when an institutional client purchases services via commission dollars rather than an invoice. They can only be used for order execution and research services and the institutional client must ensure that the arrangement benefits the client and that this is disclosed to the client



CLEARING AND SETTLEMENT

- **Clearing** is the process of confirming and matching security trade details
- **Settlement** is the moment of irrevocable exchange of cash and securities. The process has been highly automated through the **straight-through processing (STP)** system
- The typical institutional trade involves three parties: the investment manager, the dealer, and the custodian. After receiving a trade execution notice from a dealer, the investment manager must provide the dealer and custodian with trade and account details, known as **trade-matching elements**
- Three areas in the clearing and settlement process could cause errors and delays: Inadequate technology; timing of activities; and data integrity and accounting issues
- **Straight-through processing (STP)** is a continuous real-time investment management database that tracks all security transactions and investments, and links the various operating departments of the firm. The STP system is designed to avoid human errors associated with security trading, settlement and record-keeping activities



ROLES AND RESPONSIBILITIES IN THE INSTITUTIONAL MARKETPLACE

- **Research associates** are the entry-level position for other jobs in the equity and fixed income markets. Associates report to a senior analyst and mainly builds financial or planning models
- **Analysts** are also known as sell side and they are experts in respect to a specific company or sector
- **Institutional sales** is the relationship manager between the dealer and client
- **Institutional traders** execute orders on behalf of clients or on behalf of the dealer (liability traders)
- **Investment bankers** are responsible for building the following areas of business: Corporate finance (raising debt and equity for corporations); public finance (raise capital for government and its agencies); and mergers and acquisitions. Analysts and associates are responsible for the analytical work, the vice-presidents or associate directors are responsible for day-to-day management, and managing directors are responsible for strategic direction



INSTITUTIONAL SALESPEOPLE

To succeed in his/her career, the institutional salesperson *must*:

- Build and maintain strong relationships with clients
- Provide access to good research and investment banking services
- Develop your knowledge of your firm's products and the market factors that affect their pricing

Accounts among salespeople are typically divided geographically, by account type, and by relationship.



INSTITUTIONAL TRADERS

- **Agency traders** (also called **coverage traders**) execute large trades, called block trades, for institutional clients. Their responsibility is to fill orders with minimal market impact, making the transaction as inexpensive as possible for the client. Agency traders also provide clients with ideas
- **Liability traders** (also called **proprietary traders**) manage the dealer's trading capital to encourage market flows and facilitate client orders that go to market. Liability traders walk a fine line between market share and profitability

Liability traders can trade reactively or proactively.

A reactive trade occurs when the trader has a client who wants to sell shares and the trader buys those shares.

A proactive trade occurs when the trader makes a market in a security that is deemed favourable by one of the dealer's analysts. By accumulating inventory, the dealer is ready to fill orders by the time that institutional clients are solicited by the dealer's salespeople

- **Market makers** perform a valuable function for the exchange by improving liquidity and increasing trading volume. Their primary role and responsibility is to provide a constant, two-sided (bid/ask) market for equities under their responsibility. The exchange will approve a dealer as the **responsible designated trader (RDT)** for each security



INVESTMENT STYLES, GUIDELINES AND RESTRICTIONS

- Fixed-income styles include: buy-and-hold; indexing; and immunization (protecting the bond portfolio from losing value)
- Active bond management styles include: interest rate anticipation and bond swaps
- Equity styles include: buy-and-hold and indexing
- Active equity styles include: sector rotation, market timing, value, growth, and market capitalization



TYPICAL INVESTMENT GUIDELINES AND RESTRICTIONS FOR EQUITY MANDATES

- Table 27 – 1, Pages 27 – 28 to 27 – 29 presents a sample of Guidelines and Restrictions for a Canadian Large Cap Equity Fund



ALGORITHMIC TRADING

- **Algorithmic trading** involves the use of sophisticated mathematical algorithms to execute equity trades over electronic trading systems. It is used extensively by buy-side institutional investors and its goal is to optimize the execution of individual large sized trades by reducing market impact
- **High frequency trading (HFT)** is a sub-set of algorithmic trading and is characterized by a very large number of orders for individual trades of very small size that are done at extremely high speed. HFT attempts to profit from small price imbalances
- Proponents of HFT suggest that its advantages include lower bid/ask spreads, volatility, and trading costs as well as higher liquidity and execution speed. Detractors argue that its impacts include unfair trading advantages and greater systematic risk
- A **dark pool** is a specific equity marketplace that does *not* offer pre-trade transparency. In Canada, dark pools are generally regulated as alternative trading systems (ATSs). Dark pools allow institutional investors to trade large blocks of equities without affecting the market price. Detractors of dark pools believe that they are detrimental to the process of price discovery, and reduce market fairness and market integrity