



1. THE CANADIAN SECURITIES INDUSTRY

OVERVIEW OF CANADIAN SECURITIES INDUSTRY

- The Canadian securities industry is mainly regulated by the provinces. There are **self-regulatory organizations (SROs)** such as the **Investment Industry Regulatory Organization of Canada (IIROC)**
- Major participants in the industry include: Suppliers of Capital; Investment Dealers; Users of Capital (Borrowers); Self-regulatory Organizations; Markets; Clearing and Settlement; Canadian Securities Institute; Canadian Investor Protection Fund; and Provincial Regulators
- Figure 1.1 Page 1.4 provides a flow-chart diagram of the Canadian Securities Industry



FINANCIAL INTERMEDIARY

- This term describes any organization that facilitates the trading or movement of financial instruments
- Investment dealers act on their clients' behalf as **agents** and sometimes act as **principals**, risking their own capital
- Two main functions: They help to transfer capital from suppliers to users through the underwriting and distribution of new securities (**primary market distribution**) and maintain **secondary markets** in which previously issued or outstanding securities can be traded
- Three categories of investment dealers are: **Retail firms** which include full-service investment dealers and **self-directed brokers (discount brokers)**; **Institutional firms** that service clients like **pension funds** and **mutual funds**; and **integrated firms**



ORGANIZATION WITHIN FIRMS

- There is a three level organization structure: Front office, middle office and back office
- Front office performs all staff functions pertaining directly to portfolio management activities. Functions include: Portfolio management, Trading, Sales, Marketing
- Middle office performs functions critical to the efficient operation of the firm. Functions include: Compliance, Accounting, Audits, Legal
- Back office settles the firm's security transactions. Functions include Trade settlement

PRINCIPAL VERSUS AGENCY FUNCTIONS

- Most of the time, securities firms act as agents, buying and selling on behalf of clients without taking title (ownership) to those securities. Broker is a synonym for agent
- Securities firms *tend* to act as principals in the underwriting function (this is the primary market) and in secondary trading of non-equity securities (fixed income products)... “Generally, for most secondary trading of debt securities, the investment dealer acts as principal...”
- When acting as an agent, an investment dealer does not own the securities. Their profit is the commission they charge for both buying and selling those securities
- Services provided by the investment dealer include: providing informed advice about the terms and features for new issues in the primary market; adding liquidity to the market; acting as **market makers** in assigned listed stocks; and buying listed stock as principals

THE CLEARING SYSTEM

- During the day, an exchange member will buy and sell many different listed stocks. A designated clearing system handles the daily settlement process between members, which means exchanging securities for cash
- Securities in Canada are cleared through **CDS Clearing and Depository Securities**. Marketplaces like the TSX and TSX Venture and ATSs report trades to CDSX clearing and settlement. Participants with access to the clearing system include banks, investment dealers and trust companies
- The clearing system reduces the number of securities and amount of cash that has to change hands among the various members each day. The central clearing system uses a process called *netting* to establish and confirm a credit or debit position

BANKS AS FINANCIAL INTERMEDIARIES

- Banks operate under the Bank Act, which specifies what they can and cannot do. Banks are the *most* important player in the Canadian Securities Industry and each Bank is designated as either Schedule I, Schedule II or Schedule III
- **Schedule I Banks**: *most* Canadian owned banks are designated Schedule I. There are ownership rules – voting shares must be widely held and subject to no more than 20% ownership by any individual or group. There are more than 30 Schedule I Banks altogether – including Royal Bank, CIBC, TD, Bank of Nova Scotia, Bank of Montreal and National Bank
- **Schedule II Banks**: incorporated and operate in Canada, but are owned by a foreign parent – examples include Citibank Canada, AMEX Bank of Canada and BNP Paribas (Canada). By law, may engage in all types of business permitted to a Schedule I Bank; however *most* derive their greatest share of revenue from retail banking and electronic financial services
- **Schedule III Banks**: foreign bank branches of foreign institutions. Schedule III banks tend to focus on corporate and institutional finance and investment banking



OTHER FINANCIAL INTERMEDIARIES

- Credit unions and caisses populaires offer businesses and consumer a wide variety of banking services. Federal rules require these organizations to adhere to a “prudent portfolio approach”
- Trust and loan companies are the only corporations authorized to engage in a trust business
- The insurance industry has two main lines of business: Life insurance and property and casualty insurance. Life insurance products include: Health and disability insurance; term and whole life insurance; pension plans; registered retirement savings plans; and annuities. Property and casualty insurance encompasses protection against: Home; auto; and commercial business. Underwriting is the most important aspect of the insurance business in Canada



OTHER FINANCIAL INTERMEDIARIES

- Investment funds sell shares or units to the public and invest the proceeds. **Closed-end funds** issues shares at start-up or infrequently. **Open-end funds** or **mutual funds** continually issue shares
- Alberta Treasury Branches (ATB) are known as **savings banks** and provide a full range of financial services to Albertans
- **Consumer finance companies** make direct cash loans to consumers, typically charging higher rates of interest than banks
- **Sales finance companies** purchase instalment sales contracts from retailers and dealers at a discount when products like new cars or appliances are bought on instalment plans
- **Pension plans** have accounted for remarkable growth in the institutionalization of savings

FINANCIAL MARKET TRENDS

- Financial technology companies, known collectively as **fintech** take advantage of computer technology to support or enable a variety of banking and financial products and services
- **Robo-advisors** provide clients with goal-based online investment management. Portfolios are created using algorithms based on modern portfolio theory. Advisor support is offered to varying degrees, typically online or by phone. Portfolios are built with exchange-traded funds. Portfolios are regularly rebalanced
- Social and economic shifts include demographics (an aging country); defined benefit and defined contribution plans (defined benefit plans provide pre-determined payment amounts); savings rates (common notion is that Canadians need 70% of their income at retirement); and household debt (has increased from 100% to disposable income in 2000 to 172% currently)
- Cryptoassets have been gaining popularity. These are assets that exist only in digital form and relies on peer-to-peer networking and a public ledger. Bitcoin is the largest and most actively traded cryptocurrency and is powered by blockchain, which creates a shared public ledger. Its value is derived from its use as a medium of exchange and as a store of value



2. THE CAPITAL MARKET

INVESTMENT CAPITAL

- Capital is a fancy word for money
- **Direct investing** – when investments are made in “hard” assets. Couple investing their savings in a home, government investing in a new highway, and a company paying start-up costs for a new plant are examples of direct investing.
- **Indirect investing** – purchases of securities issued (which means sold) by governments or corporations. An investor buying stocks or bonds, a parent investing in an educational savings plans, and a couple depositing savings in a bank are examples of indirect investing
- Capital characteristics: **mobility, sensitivity to its environment, scarcity**



COUNTRY RISK EVALUATION

- **Political environment** – is internal or external conflict likely
- **Economic trends** – favourable or unfavourable?
- **Fiscal policy** – taxing and spending policies
- **Monetary policy** – how sound are the policies?
- **Investment opportunities**
- **Labour force** – What percentage is skilled and productive?



SUPPLIERS AND USERS OF CAPITAL

- Suppliers of Capital include: Individuals and Non-financial domestic corporations; Governments and Foreign investors
- Sources of Capital include: Retail investors; Institutional investors; and Foreign investors
- Users of Capital include: Individuals; Businesses; Governments

THE FINANCIAL INSTRUMENTS

- Fixed-income securities
- Equities – Common and Preferred Shares
- Derivatives – Options and Forwards
- Managed products – Mutual funds, Exchange-traded funds and private equity funds
- Structured Products – principal-protected notes and index-linked guaranteed investment certificates



FINANCIAL MARKETS

- **Primary market**... money flows from investors to issuing company or issuing government unit
- **Secondary market**... money flows from investors to other investors

AUCTION MARKETS IN CANADA

- Markets can be divided into auction and dealer markets
- When a trade is made, the price represents the lowest price a seller is willing to sell at and the highest price a buyer is willing to buy at
- The **bid** is the highest price a buyer is willing to pay
- The **ask** is the lowest price a seller will accept
- The **spread** is the difference between the bid and ask prices.
The **last price** is the price at which the last trade on that stock took place



CANADIAN STOCK EXCHANGES

- **Stock Exchanges** – the name says it all. A “place” to exchange stock!
- **Toronto Stock Exchange (TSX)** lists equities, some convertible debt instruments, income trusts and ETFs
- **TSX Venture Exchange** – equities and a few debentures
- The **TSX Alpha Exchange** lists equities, debentures, ETFs and structured products. It will also offer trading in TSX and TSX Venture Exchange securities
- **Montreal Exchange (MX)** – financial and equity futures and options
- **ICE NGX Canada** provides electronic trading and clearing to the North American natural gas and electricity markets
- The **Canadian Securities Exchange (CSE)** – equities of emerging companies
- **NEO Exchange** – provides listing services and facilitates trading in securities listed on the NEO Exchange, TSX and TSX Venture Exchange

DEALER MARKETS

- Dealer markets, or **over-the-counter markets**, consist of a network of banks and investment dealers. **Market makers** post bid-and-ask-quotations via electronic platforms, with the investment dealer typically acting as a principal. This provides liquidity to the system
- Almost all bonds and debentures are sold through dealer markets
- Dealer markets are also called **unlisted markets**
- The OTC derivatives market is dominated by large international financial institutions. One of the attractive features is that they can be custom designed
- In Ontario, trades in unlisted securities must be reported through the web-based system of the **Canadian Unlisted Board**
- **Alternative trading systems (ATSs)** are electronic marketplaces that provide automated matching and execution of trades in both the equity and fixed-income markets. ATSs and traditional exchanges are subject to regulatory filings

FIXED-INCOME ELECTRONIC TRADING SYSTEMS

- **CanDeal**: fixed income trading system, a joint venture between Canada's six largest investment dealer, both an ATS and an investment dealer. Offers institutional investors access to government securities and money market instruments
- **CBID** and **CBID Institutional**: is an ATS, it operates two distinct fixed-income marketplaces, retail and institutional
- **MarketAxess** provides market data and a trading platform with access to multi-dealer competitive pricing for a wide range of corporate bonds. It is a member of IIROC and operates in Ontario and Quebec
- **CanPX**: joint venture between several Canadian investment dealers. It combines digital feeds from participating dealers to provide a composite display of real-time bid and offer quotations for Government of Canada bonds and Treasury bills



3. THE CANADIAN REGULATORY ENVIRONMENT

THE REGULATORS

- Each province and territory is responsible for creating the legislation and regulation under which a business in the securities industry must operate. Outside of Quebec (where the regulatory body is the **Autorite des marchés financiers**), the financial sector is regulated separately by the **Office of the Superintendent of Financial Institutions (OSFI)**
- The **Canadian Securities Administrators (CSA)** is an umbrella organization of Canada's ten provincial and three territorial securities regulators. Its mission is to develop a national regulatory system that fosters fair, efficient, and vibrant capital markets in which investors are protected from unfair, improper and fraudulent practices
- **Self-regulatory organizations (SROs)** are private industry organizations to which the provincial regulatory bodies have granted the privilege of regulating their own members. SROs include the **Investment Industry Regulatory Organization of Canada (IIROC)** and the **Mutual Fund Dealers Association (MFDA)**. If an SRO rule differs from a provincial rule, the *more* stringent rule applies

IIROC & MFDA

- IIROC's mandate is to “set high quality regulatory and investment industry standards, protect investors, and strengthen market integrity while maintaining efficient and competitive capital markets”
- IIROC is involved with financial compliance, business conduct compliance, registration, enforcement and market surveillance
- IIROC's market surveillance includes real time monitoring of trading activity on stock exchanges, the Natural Gas Exchange, and ATSs. It also ensures that dealer members comply with the timely disclosure of information by publicly traded companies, and carries out trading analysis and compliance with trading rules
- MFDA is the mutual fund industry's SRO responsible for regulating the distribution and sales of mutual funds by its members in Canada. The MFDA does *not* regulate the funds themselves

THE OFFICE OF THE SUPERINTENDENT OF FINANCIAL INSTITUTIONS (OSFI)

- OSFI is the regulatory body for all federally regulated financial institutions
- It is responsible for regulating and supervising the following institutions:
 1. Deposit-taking institutions including banks, trust and loan companies, and co-operative credit associations
 2. Insurance companies, including life and property and casualty
 3. Foreign bank representative offices licensed or chartered by the federal government
 4. Federally-regulated pension plans
- OSFI does *not* regulate the securities industry



INVESTOR PROTECTION FUNDS

- The Canadian Investor Protection Fund (CIPF) protects eligible customers in the event of the insolvency of an IIROC dealer member
- CIPF does *not* protect against “normal” market losses
- All accounts are covered, either as part of the customer’s general account or as a separate account. Accounts such as cash, margin, short sale, options, futures and foreign currency are combined and treated as one account. Separate accounts, such as registered accounts and trusts, receive separate coverage
- The maximum coverage is \$1 million

EXAMPLE: Mr. Huang has \$500,000 in a Canadian dollar trading account and \$750,000 in an American dollar trading account. As well, he has \$450,000 in an RRSP Account. His maximum protection under CIPF would be: \$1,450,000. The trading accounts would be “combined” to arrive at a total of \$1,000,000 in protection and his RRSP Account would receive up to an additional \$1,000,000 in protection.

INVESTOR PROTECTION FUNDS (Con't)

- The **Mutual Fund Dealers Association Investor Protection Corporation** (MFDA IPC) provides protection for eligible customers of insolvent MFDA member firms. Coverage provided is limited to \$1,000,000 per customer account – similar to CIPF
- The **Canada Deposit Insurance Corporation** (CDIC) is a federal Crown Corporation that provides deposit insurance. CDIC insures eligible deposits up to \$100,000 per depositor in each member institution
- To be eligible for insurance, deposits must be held with a member institution in Canadian currency and payable in Canada. Term deposits must be repayable no later than five years from the date of deposit

EXAMPLE: Assume that you have \$80,000 cash on deposit in your name and \$120,000 on deposit in a RRSP. In the institution were to fail, CDIC would insure up to \$180,000: \$80,000 is fully covered for the cash deposit, and \$100,000 of the \$120,000 in the RRSP

REGULATION AND SUPERVISION

- Regulators have four primary objectives in imposing regulation:
 1. Consumer protection
 2. Fairness – markets must perceive that markets are fair
 3. Economic stability – efficient flow of capital
 4. Social objectives
- The Canadian securities industry follows a principles-based regulatory model, rather than a rules-based model. Regulators set objectives for securities dealers and allow the firms themselves to decide how best to meet those objectives
- “Full, true and plain disclosure” of all pertinent facts is the general principle underlying Canadian securities legislation
- Securities acts use three methods to protect investors:
 1. Registration of securities dealers and advisors
 2. Disclosure of facts necessary to make reasoned investment decisions
 3. Enforcement of laws and policies

NATIONAL REGISTRATION DATABASE

- **The National Registration Database (NRD)** is a web-based system to file registration forms electronically. It is designed to enable a single electronic submission satisfy all jurisdictions in Canada. Both the IA and dealer member are required to notify the applicable SROs in writing of any material changes in the original answers to the questions on the NRD application (such as change of address)
- **Gatekeepers** in the securities industry include dealers and all of their employees, particularly in front line roles. A gatekeeper must: Collect and record client information to identify potentially suspicious clients; monitor activity in client accounts for possible illegal transactions; and report any transactions or proposed transactions in client accounts that are suspicious
- Money laundering, terrorist financing, financial fraud and illegal trading are of particular concern to gatekeepers

NRD (Con't)

- Compliance with gatekeeper obligations begins with the Know Your Client (KYC) rule. The SROs require that securities dealers and their IAs take the following steps to meet their KYC obligations:
 1. Learn the essential facts relative to every client and to every order or account accepted
 2. Verify that the acceptance of any order for any account is within the bounds of good business practice
 3. Verify that the recommendations made for any account are appropriate for the client's investment objectives, personal circumstances, and tolerance to risk
- First step in complying with KYC is completion of a **New Account Application Form**. A partner, director, officer or branch manager must approve the application prior to or promptly after the first transaction

CLIENT RELATIONSHIP MODEL (CRM)

- IIROC introduced new requirements for dealers in 2012, requiring greater disclosure requirements for advisors
- Firms are required to develop and maintain policies to identify, disclose and address existing and potential material conflicts involving clients. Firms must either: **Avoid the conflict** or **disclose the conflict** or **Otherwise control the conflict of interest situation**
- CRM Guidelines require that the suitability of an investment decision be conducted whenever any of these trigger events occur: a trade is accepted; a recommendation is made; securities are transferred or deposited to an account; there is a change of representative or portfolio manager; there is a material change to the KYC information for the account

REMEDIATION

- **Arbitration** is an option for clients who feel that they have been treated unfairly. An independent arbitrator listens to the facts, decides how the dispute should be resolved, and decides what penalty/remedy should be imposed. To be eligible for arbitration: The client must have first tried to have resolved the issue and the claim is \$500,000 or less. Decisions are binding on both parties
- **Ombudsman for Banking Services and Investments (OBSI)** – independent of the financial services industry, its final decision is *not* binding for either the investor or the financial services provider

ETHICAL STANDARDS IN THE FINANCIAL SERVICES INDUSTRY

- High ethical standards are of paramount importance. The exchanges and the SROs have extensive rules and regulations that govern trading on an exchange and industry practices in general. Infractions may lead to fines, suspensions, expulsion and even criminal charges
- Examples of unethical practices include: Deceiving the public about the price or value of any security; Creating the misleading appearance of active public trading to make a profit; Manipulating or attempting to manipulate the market; Making a fictitious trade that involves no change of beneficial ownership; Using high-pressure or otherwise undesirable selling techniques; Violating any statutes or laws; Misleading a client as to the risk involved in a security; Trading in one's own account before effecting the same trade (**front-running**); Conducting oneself in a way that would bring the securities business, the exchange or IIROC into disrepute
- All telemarketers must subscribe to the **National Do Not Call List (DNCL)** which prohibit telemarketers from calling any number that has been registered for more than 31 days



4. OVERVIEW OF ECONOMICS

DEFINING ECONOMICS

- Economics is a social science that focuses on an understanding of production, distribution, and consumption of goods and services. The focus is on how consumers, businesses, and governments make choices
- Two branches of economics – **microeconomics** and **macroeconomics**
- **Microeconomics** generally applies to individual markets of goods and services, looking at how businesses decide what to produce and who to produce it for, and how individuals and households decide what to buy
- **Macroeconomics** focuses on broader issues such as employment levels, **interest rates**, **inflation**, recessions, government spending, and the overall health of the economy



- **Microeconomic concerns include:** How are prices for goods and services established? Why did the price of bread go up? How do minimum wage laws affect the supply of labour and company profit margins? How would a tax on softwood lumber imports affect growth prospects in the forestry industry? If a government places a tax on the purchase of mutual funds, will consumers stop buying them?
- **Macroeconomic concerns include:** Why did the economy stop growing last quarter? Why have the number of jobs fallen in the last year? Will lower interest rates stimulate growth in the economy? How can a nation improve its standard of living? Why do stock prices rise when the economy is growing? How is inflation controlled?
- The three broad groups that interact in the economy include consumers, businesses, and governments



DEMAND AND SUPPLY

- In a market economy, prices are established by **supply and demand**. If **demand** increases (relative to **supply**) prices increase... if **supply** increases (relative to **demand**) prices fall. The **equilibrium** price is set where **demand** and **supply** are equal
- The Law of Demand states: The higher the price, the lower the quantity demanded
- The Law of Supply states: The higher the price, the greater the quantity supplied



ECONOMIC GROWTH

- **Gross domestic product (GDP)** is the value of all goods and services produced in a country in a given time period, usually a quarter or year
- Three approaches to measuring **GDP**: the **income approach**, the **expenditure approach**, and the **production approach**
 - Expenditure** approach: $C + I + G + (X - M)$
 - Income** approach: Looks at total income earned
 - Production** approach, also known as value-added approach, calculates an industry or sector's output
- **Nominal GDP** is the value of all goods and services produced in that year at that year's prices. **Real GDP** is the dollar value of all goods and services valued at prices in some base year

PRODUCTIVITY AND ECONOMIC GROWTH

- **Productivity** is used to describe output per unit of input.
There is a link between growth in real GDP and productivity gains
- **Growth in GDP** results from...
 - Technological advances
 - Population growth
 - Improvements in training, education and skills
- If productivity growth exceeds increases in the unit costs of production, firms are able to lower the prices of the goods and services they sell
- The analysis of long-term trends in GDP growth is important.
Countries with higher expected growth rates can provide investors with superior investment returns

THE BUSINESS CYCLE

- “Average” economic growth is 3.0% per year... but this growth does *not* occur at a constant rate. Rather, it varies over the business cycle – which has five distinct phases
- **Expansion**: in times of normal growth, the economy is steadily expanding... inflation is stable... businesses are investing in new capacity... corporate profits are rising... business start-ups outnumber bankruptcies... stock market is strong... good job creation with steady or falling unemployment. Growth rate of real GDP is rising
- **Peak**: final stage of expansion, demand begins to outstrip the economy’s capacity to supply it. Labour and product shortages cause wage increases and inflation... interest rates rise and bond prices fall... business investment is dampened... retail sales decline (particularly of big-ticket items like cars and houses)... leading to falling profits and declining stock prices

THE BUSINESS CYCLE (Cont'd)

- **Contraction:** level of economic activity declines as measured by real GDP... layoffs occur... business failures outnumber start-ups... higher defaults of corporate borrowers
- **Trough:** the recessionary conditions lead to falling inflation which leads to lower interest rates which triggers a bond rally. Consumers who postponed purchases are spurred by lower interest rates to invest... stock prices rally
- **Recovery:** GDP returns to its previous peak, beginning with the purchase of interest-rate sensitive items like cars and houses... capacity utilization is still low so prices remain stable... unemployment is still high so wage pressures are restrained

ECONOMIC INDICATORS

- **Leading indicators** peak and trough before the overall economy
Most important leading indicators: housing starts, manufacturers' new orders, commodity prices, average hours worked per week, stock prices and the money supply
- **Coincident indicators** change at the same time and direction as the whole economy
Most important coincident indicators: personal income, GDP, industrial production and retail sales
- **Lagging indicators** change after the economy as a whole changes
Most important lagging indicators: unemployment, inflation, labour costs, private sector plant and equipment spending, and business loans and interest on such borrowing
- **Leading indicators** tell us where we're going, **coincident indicators** where we are and **lagging indicators** where we were. For this reason, **leading indicators** are thought to be the *most* important indicators and receive the greatest attention



IDENTIFYING RECESSIONS

- Statistics Canada definition: judged by the depth, duration and decline of business activity.

Depth: decline must be of substantial depth

Duration: must last more than a couple of months

Diffusion: Must be a feature of the whole economy



CANADIAN LABOUR MARKET

- Statistics Canada defines the working age population as people over age 15. It further divides the population into three groups:
 1. Those who are unable to work
 2. Those who are not working by choice
 3. The labour force
- Unable to work includes people in psychiatric hospitals and correctional facilities
- Not working by choice includes full-time students, homemakers, retirees and **discouraged workers**
- The labour force includes people who are working and people who are not working but are actively looking for work



LABOUR MARKET INDICATORS

- Two key labour market indicators:
 1. **Participation rate** – the share of the working-age population that is in the labour force
$$\frac{\text{Labour Force}}{\text{Working Age Population}} \times 100$$
 2. **Unemployment rate** – represents the share of the labour force that is unemployed and actively looking for work. If you are unemployed and *not* actively looking for work, you are *not* considered unemployed
$$\frac{\text{Not working but actively looking for work}}{\text{Labour force}} \times 100$$
- **Underemployed** people could be working part-time (instead of full-time) or are in jobs that do *not* make good use of their skills

TYPES OF UNEMPLOYMENT

- Types of unemployment:
 1. **Cyclical** – tied directly to the business cycle... high during recessionary conditions, lower during periods of expansion
 2. **Seasonal** – Some industries operate only during part of the year – for example, the agriculture industry.
 3. **Frictional** – result of normal labour turnover. Part of a normal, healthy economy
 4. **Structural** – when workers are unable to find jobs because they lack the necessary skills, do *not* live where the jobs are available, or choose *not* to work at that wage rate. Structural unemployment tends to last longer than frictional unemployment and is part of a normal, healthy economy
- Frictional and structure factors will always exist. The **natural unemployment rate** is where the economy is operating at full capacity

INTEREST RATES

- One of the *most* important financial variables affecting securities markets
- Determinants of interest rates:
 1. Demand and supply of capital
 2. Default risk – the higher it is, the more expensive that money becomes
 3. Foreign interest rates and the exchange rate
 4. Central bank credibility – the Bank can act to lower or raise short-term rates directly and influence long-term rates in the process.
 5. Inflation – the higher the expected inflation rate, the higher the interest rates
- Interest rates affect the economy:
 1. They reduce business investment. The higher, the *less* likely businesses are going to borrow and invest for the future
 2. They encourage savings. Higher interest rates lead people to save more money
 3. They reduce consumption. Higher interest rates discourage consumers from spending on big ticket items like cars and houses

MONEY AND INFLATION

- Inflation – defined as a generalized, sustained trend of higher prices. A one-time jump in prices is *not* inflationary unless it feeds into wages and other costs.
- Money functions as:
 1. A **medium of exchange**
 2. A **unit of account**
 3. A **store of value**
- Inflation is measured by the **Consumer Price Index (CPI)**. It measures a shopping basket of goods and services and compares one period's cost to the previous one... if the CPI was 135.4 last year and 136.6 this year, then inflation would be:
$$\frac{136.6 \text{ (this year)} - 135.4 \text{ (last year)}}{135.4} \times 100 = .89\%$$
- Costs of inflation:
 1. Erodes the standard of living of those on fixed incomes
 2. Reduces the real value of investments such as fixed-rate loans
 3. Distorts the price signals to participants in market economies
 4. Accelerating inflation generally leads to rising interest rates and recessions

CAUSES OF INFLATION

- **Demand-pull inflation** occurs when actual output is greater than potential output, or there are more dollars in the hands of consumers than there are goods and services to meet that demand
- **Cost-push inflation** occurs when there are shocks to the supply side of the economy – such as sharply higher commodity prices.
- **Disinflation** is a decline in the rate of inflation. **Deflation** is a sustained fall in prices where the annual CPI is negative. The potential costs of inflation and disinflation is captured by the Phillips Curve that says that when unemployment is low, then inflation *must* be high and that when inflation is low, unemployment *must* be high
- The **Phillips Curve** argues that unemployment and inflation have an inverse relationship. Lower unemployment is achieved by increasing inflation. Lower inflation is achieved by increasing unemployment and slower economic growth



INTERNATIONAL FINANCE AND TRADE

- A country's economic transactions with the rest of the world are captured in its **Balance of Payments**. There are two elements to the Balance of Payments – the **Current Account** and the **Capital and Financial Account**
- **Current account** measures the exchanges of goods and services between Canadian and foreigners. The largest element of the current account is merchandise trade
- **Capital and Financial account** measures financial flows between Canadians and foreigners
- The **Balance of Payments** *must* balance for every country... if one has a surplus in its current account, then it *must* have a deficit in its capital account... and vice-versa



EXCHANGE RATE AND THE CANADIAN DOLLAR

- The **exchange rate** is the price that one currency can be exchanged for another currency. If a currency goes up in value (as the Canadian dollar has recently against the American) then the Canadian dollar is appreciating and the US dollar is depreciating. An appreciating currency means that this currency has more buying power abroad and a depreciating currency means that the country's export products are becoming relatively cheaper. Exchange rates can either be **floating** (Canada – U. S., for example) or **fixed** (U. S. – China)



DETERMINANTS OF EXCHANGE RATES

- The following factors are widely accepted as influencing the exchange rate, although the weight ascribed to each factor is widely debated:
 1. Commodities – higher commodity prices lead to an appreciation of the Canadian dollar
 2. Inflation – lower inflation rates leads to appreciation
 3. Interest rates – high domestic interest rates attract investment capital
 4. Trade – surpluses lead to an appreciation of the Canadian dollar
 5. Economic performance – strong relative performance leads to appreciating currencies
 6. Public debts and deficits – large debts and deficits lead to a lower Canadian dollar
 7. Political stability – stable politics leads to a stronger currency



5. ECONOMIC POLICY

FISCAL POLICY

- Defined as the use of government's power to tax and spend to pursue social goals such as full employment and long-term sustained economic growth
- If government revenues exceed spending, it is running a **surplus**. If spending exceeds revenues, it is running a **deficit**. When governments run deficits, they *must* compete for capital with private institutions
- The **national debt** consists of accumulated past deficits minus accumulated past surpluses

BANK OF CANADA

- Main role of the Bank is “to promote the economic and financial welfare of Canada”
- Bank has four main areas of responsibility:
 1. Monetary policy – designed to preserve the value of the Canadian dollar by keeping inflation low, stable, and predictable
 2. The Canadian financial system – Bank of Canada is the ultimate source of liquidity and is referred to as the lender of last resort
 3. Physical currency – designs, prints, and distributes Canadian bank notes
 4. Funds management – manages the government’s accounts and government’s foreign currency reserves

CANADA'S MONETARY POLICY FRAMEWORK

	Interest Rates	Money Supply
<p>Inflation</p> <p>Demand for goods and services is growing faster than supply, which causes prices to increase</p> <p>The Bank wants to slow down the pace of demand</p>	<ul style="list-style-type: none"> • The Bank raises interest rates • Borrowing becomes more expensive • Borrowing decreases and consumption and business investment decreases 	<ul style="list-style-type: none"> • The Bank reduces the money supply • Interest rates rise in response • Borrowing becomes more expensive • Borrowing decreases and consumptions and business investment decrease
<p>Recession and Unemployment</p> <p>Demand for goods and services is lower than supply, which causes growth in the economy to decline</p> <p>The Bank wants to stimulate spending to increase demand</p>	<ul style="list-style-type: none"> • The Bank lowers interest rates • Borrowing becomes more affordable • Borrowing increases and consumption and business investments go up 	<ul style="list-style-type: none"> • The Bank increases the money supply • Interest rates go down in response • Borrowing becomes more affordable • Borrowing increases and consumption and business investment go up



IMPLEMENTING MONETARY POLICY

- Bank of Canada carries out monetary policy through changes in the Target for the **Overnight Rate**; Open market operations; and **Drawdowns** and **redeposits**
- **Overnight rate** – interest rate set in the overnight market, where major Canadian financial institutions lend each other money on a short-term basis. The band for the overnight rate is 50 basis point – $\frac{1}{2}$ of 1%. The **Bank Rate** is the minimum rate at which the Bank of Canada will lend money on a short-term basis to the Chartered Banks and other members of the **Canadian Payments Association (CPA)**. The **Bank Rate** is the upper limit of the operating band for the **Overnight Rate**
- Open market operations – these are voluntary transactions conducted between the Bank of Canada and Chartered Banks to influence the level of interest rates. The two main open market operations are **Special Purchase and Resale Agreements (SPRAs)** and **Sale and Repurchase Agreements (SRAs)**

IMPLEMENTING MONETARY POLICY (Cont'd)

- **SPRAs** (also known as **overnight repos**) are used by the Bank to relieve undesired upward pressure on interest rates. The Bank will purchase government securities from a primary dealer with an agreement to buy them back the next day at a predetermined price. In the short run, this means that more money is in the system, which has a downward effect on interest rates
- **SRAs** (also known as **overnight reverse repos**) are used by the Bank to relieve undesired downward pressure on interest rates. The Bank will sell government securities to a primary dealer with an agreement to sell them back the next day at a predetermined price. In the short run, this means that less money is in the system, which has an upward effect on interest rates
- The Bank of Canada can also influence short-term interest rates with drawdowns and deposits, moving federal government money to and from the Bank of Canada and Chartered Banks. If the Bank wants to lower interest rates, it will effect a **redeposit**, moving funds into the Chartered Banks. If the Bank wants to increase interest rates, it will effect a **drawdown** which takes funds from the Chartered Bank system



CHALLENGES OF GOVERNMENT POLICY

- Timing lags – both fiscal policy and monetary policy have lags for a variety of reasons
- Political considerations
- Future expectations – these can cause a policy to fail
- Coordination of federal, provincial, and municipal policies
- High federal debt
- Impact of international economics



FISCAL AND MONETARY ECONOMIC POLICY

Economic Issue	Fiscal Policy	Monetary Policy
Unemployment and recession Increase consumer spending and investment with expansionary policies	<ul style="list-style-type: none">• Increase spending• Decrease taxes	<ul style="list-style-type: none">• Increase money supply• Decrease interest rates
High inflation Reduce consumer spending and investment with contractionary policies.	<ul style="list-style-type: none">• Decrease government spending• Increase taxes	<ul style="list-style-type: none">• Decrease money supply• Increase interest rates

ADVANTAGES AND DISADVANTAGES OF MONETARY AND FISCAL POLICY

Monetary Policy	Fiscal Policy
<p>Advantages</p> <ul style="list-style-type: none"> • The effect on the economy may be more immediate • The initiative (e.g., lower or higher interest rates) can be reversed once the objective is achieved • It is independent of political considerations 	<p>Advantages</p> <ul style="list-style-type: none"> • Government spending can be targeted to specific regions • Tax cuts and increased benefits are popular • Consumers can more easily understand and experience the impact
<p>Disadvantages</p> <ul style="list-style-type: none"> • It can be difficult to target a specific region • Lowering interest rates may not have any impact if the consumer doesn't feel confident enough to spend • If interest rates are already too low, lowering them even more may have no impact 	<p>Disadvantages</p> <ul style="list-style-type: none"> • Tax increases and government spending cuts are unpopular • There are challenges in stopping a project once it has been implemented, even if the initiative is no longer necessary • Higher government spending can raise debt levels and lead to a great proportion of revenue going towards interest payments



6. FIXED INCOME SECURITIES: FEATURES AND TYPES

THE FIXED-INCOME MARKETPLACE

- Companies issue bonds to take advantage of their “**leverage**” potential. This means that they hope to borrow money at 6% and reinvest it in their operations and make 10% – and keep the spread as a reward for the company owners/shareholders
- Governments issue bonds when they are running deficits: Spending exceeds revenue and there is a shortfall that must be financed
- Details of a bond issue are outlined in a **trust deed** and written into a bond contract
- A **bond** is secured by physical assets. A **debenture** is secured by “something other than a physical asset” – which means the residual assets of the company. It is equally legally binding to pay interest and principal on both bonds and debentures



BASIC FEATURES OF A BOND

- Most bonds/debentures pay interest semi-annually or twice a year. This means that a bond with a 5% **coupon rate** or **interest rate** actually pays 2.5% every six months. Coupon payments are based on the **face, par value** or **maturity** amount of the bond. These payments do *not* change if and when the market value of the bond/debenture changes
- Consider the cash flows of a two-year “straight bond” (which means no special features) with a face value of \$1,000,000 and a coupon of 4% that was issued on May 1st, 2021:
 1. May 1st 2021, issuing company would receive \$1,000,000
 2. Nov 1st 2021, issuing company would pay \$20,000
 3. May 1st 2022, issuing company would pay \$20,000
 4. Nov 1st 2022, issuing company would pay \$20,000
 5. May 1st 2023, issuing company would pay \$1,020,000



BOND TERMINOLOGY

- **Par Value** – also called **face value**, this is the principal amount the bond issuer contracts to pay at maturity
- **Coupon rate** – this is the interest rate paid by the bond issuer relative to the bond's par value
- **Maturity date** – date at which the bond matures, which is when the principal is paid back
- **Term to maturity** – time that remains before a bond matures
- **Bond price** – present discount value of all the future payments
- **Yield to maturity** – annual return on the bond that is held to maturity

BOND FEATURES

- Interest payments can take the following forms: Coupon rates can change over time, as with step-up bonds; Interest can be compounded over time and paid at maturity, as with zero-coupon bonds; and a rate of interest does not have to be applied but the return can be based on a future factor, such as the change in the level of the index
- Denominations – bonds can be purchased only in specific denominations
- Bond pricing – a bond trading below par (98) is trading at a discount while a bond trading above par (104) is trading at a premium. “98” means 98% of the par value, while “104” means 104% of the par value

TERM TO MATURITY

- The term to maturity of a bond is determined from the present to its maturity date. Therefore, if a bond had been issued four years ago for a ten year term, this would be understood as a bond with six years to maturity
 1. Bonds with one year or less until maturity are considered Money Market instruments
 2. Bonds with one to five years to maturity are short-term
 3. Bonds with five to ten years to maturity are medium-term
 4. Bonds with greater than ten years are long-term

EXAMPLE: “A bond was issued in the Year 2010 that would mature in 2025. In the year 2021, this would be understood as a medium-term bond.” The fact that it was originally issued as a long-term bond is irrelevant

- Bonds that trade on the secondary market can be understood as being **liquid**, **negotiable**, or **marketable**
 1. Liquid bonds trade in significant volumes and can be traded without making a significant sacrifice in price
 2. Negotiable bonds can be transferred because they are in deliverable form
 3. Marketable bonds have a ready market because their price and features are attractive – however, they may *not* be liquid



STRIP BONDS

- **Strip bonds** or **zero coupon bonds** are created when a dealer acquires a block of high-quality bonds and separates the coupon payments and principal, and sells each separately at a discount. The amount of discount determines the annualized rate of return the investor will enjoy

BOND FEATURES

- **Callable** or **redeemable** feature gives the issuer the right to call or redeem the debt before its stated maturity. Generally, this feature is exercised if interest rates have decreased since the bond was issued
- Standard call features – the call price is usually set higher than the par value of the bond. Provincial bonds are usually callable at 100 plus **accrued interest**. The period before the first possible call date is the **call protection period**
- **Extendible bonds** allow the investor the option to extend the maturity at the same or a slightly higher rate of interest
- **Retractable bonds** allow the investor the option to receive principal back prior to the stated maturity date

CONVERTIBLE BONDS

- **Convertible bonds** provide the investor the option of receiving common shares instead of principal. This is why they are called “convertible” – the investor has the choice of converting a debt investment into an equity investment. The right to exchange a bond for common shares is called the **conversion privilege**

EXAMPLE: “A \$1,000 face value convertible bond pays 4% interest and is convertible into 50 common shares.” In this case, the decision to convert would be driven by the common share price. If it exceeded \$20 per share, it would be attractive to convert – because $50 \times \$20 = \$1,000$... the break-even price

- Convertible shares are issued by companies to help reduce their borrowing costs. Convertible shares are purchased by investors because they are a “two-way” security... there’s the security of debt with the potential for significant capital appreciation
- The **conversion price** of most convertible bonds goes up gradually over time



- **Forced conversion** is a feature built into convertible bonds where the company can force the investor to convert the bonds into common shares, if the share price exceeds a stipulated level
- When the common share price exceeds the break-even conversion price, the convertible bonds are said to be “selling off the stock”. In our example: If the common shares are \$25, then the convertible bond will be worth at least \$1,250 (50 x \$25)



SINKING FUNDS AND PURCHASE FUNDS

- **Sinking funds** and **purchase funds** mean that the issuer may repay portions of their bonds before maturity
- **Sinking fund** provisions are sums of money set aside to retire debt at stipulated prices and are as binding on the issuer as any mortgage provision
- **Purchase fund** provisions kick in if the bonds fall below a certain market price – purchase funds are intended to act as a price support. Purchase funds generally retire less of an issue than a sinking fund

PROTECTIVE PROVISIONS

- These are safeguards provided to bond investors to help protect their payments of interest and principal
 1. **Security** means that details of the assets that support the debt are provided (e.g., mortgage-backed or asset-backed securities)
 2. **Negative pledge** means that the borrower will *not* pledge any assets if the pledge results in less security for the debt holder
 3. **Limitation on Sale and Leaseback** protects the debt holder against the firm selling and leasing back assets that provide security for the debt
 4. **Sale of Assets or Merger** means that in the event that all of the firm's assets are sold or the company is merged with another company, the debt must be retired or assumed by the new merged company
 5. **Dividend Test** establishes the rules for the payment of dividends by the firm
 6. **Debt Test** limits the amount of additional debt that a firm may issue by establishing a maximum debt-to-asset ratio
 7. **Additional Bond Provisions** state which financial tests and other circumstances allow the firm to issue additional debt
 8. **Sinking or Purchase Fund and Call Provisions** outline the provisions of the sinking or purchase fund, and the specific dates and price at which the firm can call the debt

FEDERAL GOVERNMENT SECURITIES

- The Government of Canada issues a variety of fixed-income securities
 1. Marketable bonds – largest single issuer in the Canadian marketplace. All GOC bonds are noncallable
 2. **Treasury bills** – short-term government obligations, offered in denominations from \$1,000 to \$1,000,000. These are auctioned every two weeks by the Minister of Finance through the Bank of Canada with original terms to maturity of 3 months, 6 months and 1 year. T-bills are issued at a discount and mature at 100. The difference between the issue price and maturity value is taxable as interest income; however we do *not* consider T-bills as interest-paying instruments
 3. **Canada Savings Bonds (CSBs) and Canada Premium Bonds** – were a secure savings product; however due to declining sales, the sale was discontinued in November 2017. These bonds are not transferable, therefore have no secondary market. The bonds can be redeemed by investors at any time throughout the year
 4. **Real return bonds** – the coupon payments and principal repayment are adjusted for inflation to provide a fixed real coupon rate. At each interest payment, the real coupon is applied to a principal balance that has been adjusted for the cumulative level of inflation

PROVINCIAL AND MUNICIPAL SECURITIES

- Provincial bonds are second in quality only to Government of Canada direct and guaranteed bonds
- Provinces offer direct bonds and guarantee the bonds of provincially appointed authorities and commissions. Guaranteed bonds are as secure as direct bonds
- Some provinces issues their own savings bonds. They can be purchased only by residents of the province, can only be purchased at a certain time of the year, and they are redeemable every six months
- Municipal (city) governments use **instalment debentures** or **serial bonds**. With these bonds, a portion of the principal amount is paid annually – a ten year debenture issue with a face value of \$10,000,000 would be structured such that \$1,000,000 is retired at the end of each year



CORPORATE BONDS

- **Mortgages** or **mortgage bonds** are loans secured by a pledge of land, buildings or equipment. These are very secure borrowings. **First mortgage bonds** are the senior securities of a company
- **Floating-rate securities** automatically adjust their payments based on an underlying agreed upon formula

DOMESTIC, FOREIGN AND EUROBONDS

- **Domestic bonds** are issued in the currency and country of the issuer. **Foreign bonds** are issued in a currency and country other than the issuer. **Foreign pay bonds** are issued in a currency other than the issuer's currency, but sold in the issuer's country. **Eurobonds** are issued and sold outside a domestic market and are typically denominated in a currency other than that of the domestic market

Issuer	Issued in	Currency of issue	Called
Canadian	Canada	CAD	Domestic bond
Canadian	Mexico	MXN	Foreign bond
Canadian	France	USD	Eurobond (Eurodollar)
Canadian	European Market	CAD	Eurobond (EuroCanadian)
Canadian	United States	USD	Foreign (Yankee) bond



OTHER TYPES OF CORPORATE DEBT

- **Collateral trust bonds** are loans secured by a pledge of securities – such as common shares. Collateral trust bonds are issued by holding companies
- **Equipment trust certificates** are loans secured by real property – such as transportation companies like CP Locomotives
- **Subordinated debentures** are junior to other securities or other debts – they are the riskiest kind of debt; therefore provide the highest return
- **Corporate notes** are unsecured promises to pay interest and are junior to all other fixed-interest securities of the borrower. Finance companies frequently use a type called a **secured note** or **collateral trust note**
- **High-yield bonds** are considered non-investment grade. They have higher risk; therefore these bonds typically pay higher coupons and have higher yields



OTHER FIXED-INCOME SECURITIES

- **Bankers' Acceptances** are commercial drafts drawn by a borrower for payment on a specific date. They are guaranteed at maturity by the borrower's bank
- **Commercial Paper** is an unsecured promissory note issued by a corporation or an asset-backed security backed by a pool of underlying financial assets
- **Term Deposits** offer a guaranteed rate for a short-term deposit (usually up to one year) with penalties for early withdrawal (the first 30 days after purchase)
- **Guaranteed Investment Certificates (GICs)** offer fixed rates of interest and have a variety of special features:
 1. Escalating rate GICs – the interest rate increases each year
 2. Laddered GICs – the investment is equally divided into multiple term lengths to reduce interest rate risk
 3. Instalment GICs – an initial lump sum contribution is followed by weekly, bi-weekly or monthly additions
 4. Index-linked GICs – the return is linked to an underlying equity market such as the TSX or S&P 500
 5. Interest-rate-linked GICs – offer returns linked to other interest rates, such as prime or money market rates



FIXED-INCOME MUTUAL FUNDS AND EXCHANGE-TRADED FUNDS

- These managed products provide investors with easy access to a diversified portfolio of debt
- These products are particularly attractive for investors who have a limited amount of money to invest or who find investing in individual bonds too complex

READING A BOND QUOTE

Issue	Coupon	Maturity	Bid	Ask	Yield
ABC Company	11.5%	July 1/28	99.25	99.75	11.78%

- This bond was issued by ABC Company. From the bond quote, we cannot determine the date of issue
- The coupon rate of 11.5% is based on the par value of the bond
- The maturity date establishes when the principal amount will be returned to the investor
- The “bid” price of 99.25 means that if an investor had \$1,000 face value, it could be sold for \$992.50 plus accrued interest
- The “ask” price of 99.75 means that if an investor wanted to purchase \$1,000 face value, it would cost \$997.50 plus accrued interest
- Because the bond is trading at a discount, the yield is higher than the coupon. The yield of 11.78% implies that this would be the investor’s effective return when both coupon payments and capital gains are factored in



BOND RATING SERVICES

- In Canada, the **DBRS**, **Moody's Canada** and **Standard & Poor's Bond Rating Service** provide independent ratings for debt securities. The following ratings categories are used by Moody's:
- “Aaa” rating implies the highest quality of bond, subject to the lowest level of credit risk
- “Baa” rating implies that these are medium-grade and subject to moderate credit risk
- “Caa” rating implies speculative quality, of poor standing, and are subject to very high credit risk



7. FIXED INCOME SECURITIES: PRICING AND TRADING

CALCULATING PRICE AND YIELD

- The most accurate method of determining the value of a bond is its **present value**. When you purchase a bond, you know the future receipts – interest payments and principal. An investor must determine what they are presently worth
- To determine the present value, an appropriate **discount rate** must be applied to the future cash flows. The discount rate is, effectively, the rate of return required by an investor
- There are four steps in calculating a bond's present value:
 1. Choose the appropriate discount rate
 2. Calculate the present value of the income stream from the bond's coupon payments
 3. Calculate the present value of the bond's principal
 4. Add the present value of the coupon payments and principal



PRESENT VALUE CALCULATION

- A 6% semi-annual pay bond has two years to maturity. What is its present value assuming an investor has a i) 5% discount rate and ii) 8% discount rate?
- This bond would have the following cash flows:
 - \$3 in six months' time (first cash flow)
 - \$3 in twelve months' time (second cash flow)
 - \$3 in eighteen months' time (third cash flow)
 - \$103 in twenty-four months' time (fourth cash flow)
- Because the bonds pay interest semi-annually, the discount rate must also be adjusted for semi-annual. Therefore, you would discount the cash flows by the following factors:
(1.025)¹ & (1.025)² & (1.025)³ & (1.025)⁴ for the 5% factor
and (1.04)¹ & (1.04)² & (1.04)³ & (1.04)⁴ for the 8% factor



CALCULATOR KEYSTROKES:

- The present value with the 5% discount rate would be:
$$\$3/1.025^1 + \$3/1.025^2 + \$3/1.025^3 + \$103/1.025^4 = \$101.88$$
 1. Program your calculator to END & P/Y = 2
 2. [2ND][PMT]... you will see either END or BGN. If BGN, then [2ND][ENTER]... and you should see END which is what you want.
 3. [2ND][I/Y]... you should see P/Y = ???... [2][ENTER].
 4. [4][N]... this represents the number of coupon payments
 5. [5][I/Y]... this represents the discount rate
 6. [3][PMT]... this represents the coupon payment
 7. [100][FV]... this represents the value at maturity
 8. [CPT][PV]... 101.88. This represents the current price that an investor would pay today in order to realize a yield to maturity of exactly 5%.
- The present value with the 8% discount rate would be:
$$\$3/1.04^1 + \$3/1.04^2 + \$3/1.04^3 + \$103/1.04^4 = \$96.36$$



PRESENT VALUE CONCEPTS

- KEY POINTS:
 1. If this were an annual pay bond, the cash flows would be \$6 and \$106 and the discount factors 1.05^1 and 1.05^2 or 1.08^1 and 1.08^2
 2. The higher the discount rate, the lower the present value of the bond
- If you are asked to calculate the PV of the coupons, then make the FV equal to zero
- If you are asked to calculate the PV of the principal, then make the PMT equal to zero



OTHER BOND YIELDS

There are three yield formulas that you are responsible for: T-bill yield, current yield, and yield to maturity

- **T-bill yield**: T-bills are issued at a discount and mature at par. The return that the investor makes is the difference between the discount and maturity value.

EXAMPLE: A T-bill is priced at 97.50 with 310 days to maturity. What is its yield?

$$\frac{100 - 97.50}{97.50} \times \frac{365}{310} \times 100 = 3.02\%$$

- **Current yield**: This is the annual cash flow from an instrument, relative to the purchase price (necessary to receive that cash flow)
- **Yield to maturity**: Takes into account the annual cash flow from the bond, plus/minus the gains/losses received if the bond is purchased at a discount/premium. An approximate calculation takes:

$$\frac{\text{Interest income} + / - \text{Price Change per compounding period}}{(\text{Purchase price} + \text{Par Value}) \div 2} \times 100$$

If a bond has a 4% coupon, two years to maturity, and is priced at 101:

$$\frac{\$4 - (\$101 - \$100)/2}{(100 + 101) \div 2} \times 100 = 3.48\%$$

TERM STRUCTURE OF INTEREST RATES

- The graph that shows the time to maturity (along the “X” axis) and the required yield (along the “Y” axis) is known as the **yield curve**. The yield curve shows the required return, or yield, for a given class of bond in relation to its time to maturity
- **NOMINAL RETURN = REAL RETURN + INFLATION**
Bonds are quoted in the marketplace as per their nominal return; however what investors are *most* interested in is the bond’s real return. To determine this, investors must make their own assumptions about inflation
- Two factors affect forecasts for the real interest rate:
 1. The real interest rate rises and falls through the business cycle, becoming lower during recessions and rising during the expansion phase
 2. An unexpected change in the inflation rate also affects the real interest rate – unexpectedly high inflation leads to lower real interest rates

EXPLANATIONS FOR THE YIELD CURVE

There are three theories that have been developed to explain the shape of the yield curve: Expectations Theory, Liquidity Preference Theory, and Market Segmentation Theory

- **Expectations Theory** – the slope of the yield curve reflects expectations about future interest rates. An upward sloping yield curve means that the market believes that interest rates will increase in the future; a downward sloping yield curve that interest rates will decrease in the future
- **Liquidity Preference Theory** – investors prefer liquid investments, and when a bond matures, it will convert into cash. Therefore, investors prefer short-term bonds and to get them to invest in long-term bonds, they must enjoy higher yields. According to this theory, an upward sloping yield curve reflects additional return for assuming additional (term) risk
- **Market segmentation theory** – the yield curve represents the supply and demand for bonds of various terms, primarily influenced by the bigger players in each sector. According to this theory, the yield curve can be any slope or shape

BOND PRICING PROPERTIES

- The stronger the borrower's financial position and higher its credit rating, the lower the interest rate it has to pay investors for using their funds
- Long-term bonds are *more* volatile in price than short-term bonds. This is because there is a longer term over which the change in interest rates can affect the value of the bond
- Low coupon bonds are *more* volatile in price than high coupon bonds. This is because with low coupon bonds, the return of the investor is *more* dependent on the capital gain
- Special features like the callable or retractable or extendible or convertible features also impact the pricing of bonds
- The relative yield change is *more* important than the absolute yield change – a drop in yield from 12% to 10% will have less of an impact than a drop in yield from 4% to 2%

DURATION

- Bond prices have an inverse relationship to interest rates: An increase in interest rates leads to lower bond prices and a decrease in interest rates leads to higher bond prices
- **Duration** quantifies the relationship between bond prices and interest rates. Duration is a measure of the sensitivity of a bond's price to changes in interest rates
- A bond with a duration of 5 implies the following: If interest rates increase by 1%, then the bond will fall in value by 5%. If interest rates decrease by 1%, then the bond will rise in value by 5%

EXAMPLE: A bond priced at 95 has a duration of 4. What is its price assuming that interest rates increase/decrease by 1%? The bond's change in price will be $95 \times .04 = 3.80$. Therefore, its new prices will be 91.20 (assuming higher interest rates) and 98.80 (assuming lower interest rates)

EXAMPLE: A bond priced at 102 has a duration of 6. What is its price assuming that interest rates increase/decrease by 1.5%? The bond's change in prices will be $102 \times .06 \times 1.5 = 9.18$. Therefore, its price would be 92.82 (higher) and 111.18 (lower)

EXAMPLE: A bond priced at 110 has a duration of 8. What is its price assuming that interest rates increase/decrease by 25 basis points (or $\frac{1}{4}$ of 1%)? The bond's change in price will be $110 \times .08 \times .25 = 2.20$. Therefore, its price would be 107.80 (higher) and 112.20 (lower)

HOW BOND MARKET TRADING WORKS

- Fixed income trading in the investment banking business is divided between two separate areas of operation – the sell side and the buy side
- **Sell side** is the investment dealer side. Sell-side institutions trade for their own accounts. Sell-side services include everything related to creating, producing, distributing, researching, marketing and trading fixed-income products
- **Buy side** is the investment management side. They are typically engaged buying and holding securities on behalf of their institutional clients. Most buy-side firms divide fixed-income investment management duties into two primary occupational roles: Portfolio manager and trader
- **Inter-dealer brokers** act as agents, bringing together institutional buyers and sellers in matching trades. They perform similar functions to those of a market exchange
- All non-electronic trades are carried out over the telephone, and then a **trade ticket** or electronic confirmation is sent out which contains the following information: Specifics of the counterparties to the trade; identification of the bond; the bond's CUSIP number; the par value of bond; price and often yield; settlement date; custodian's name; and total settlement amount, sometimes with the amount of accrued interest shown separately

CLEARING AND SETTLEMENT

The settlement date of a trade is when the investor must pay for the security purchased.

- T-bills have same day settlement
- All other bonds and debentures settle on the second clearing day after the transaction takes place
- **Bearer bonds** – bonds where coupon payments are detached and treated like “cash”. The bearer is the rightful owner
- **Registered bonds** – bear the name of the rightful owner and can only be sold or transferred when the owner signs the back of the certificate
- Bonds today are issued in a **book-based format** with depository, trade clearing and settlement services provided by participating clearing providers

ACCRUED INTEREST

Bond owners can sell their bonds in between the payment or coupon dates. If they do so, the buyer of the bond must compensate the owner for interest *not* received – because the bond issuer promises to pay interest only twice a year

- Calculating accrued interest:
 1. Work out the two dates of the year that coupon payments are made. One is the day of the maturity date and the other is six months after that... e.g, January 15th and July 15th or February 1st and August 1st or March 10th and September 10th
 2. Work out the interest earned on a daily basis. This is the face value multiplied by the coupon rate divided by 365.
 3. Count the number of days from the last coupon payment to the settlement date of the trade.
 4. Multiply #2 by #3 – this is the accrued interest

ACCRUED INTEREST (con't)

EXAMPLE: A \$250,000 face value bond with a 5% coupon matures October 1st, 2030. If the bond is priced at 102, what is the i) accrued interest and ii) total that the buyer of the bond would have to pay the seller of the bond, assuming the trade settles on June 5th?

1. This bond pays interest on October 1st and April 1st.
2. Daily interest: $\$250,000 \times .05 \text{ divided by } 365 = \34.25
3. Number of days: 29 in April, 31 in May and 5 in June for a total of 65 days.
4. Accrued interest: $\$34.25 \times 65 = \$2,226.25$
 - i) \$2,226.25
 - ii) $\$250,000 \times 1.02 + \$2,226.25 = \$257,226.25$

BOND INDEXES

Bond indexes are samples drawn from the bond market to provide investors with an indication of how the overall bond market is doing.

- Bond indexes are used in three ways:
 1. As a guide to performance of the overall market
 2. As a performance measurement tool to assess managers
 3. To construct **bond index funds**

- FTSE Global Debt Capital Markets offers a comprehensive set of Canadian bond issues. The best known is the FTSE Canada Universe Bond Index. The index consists of bonds representing a full cross-section of government and corporate bonds. Bonds in the index are grouped into sub-indexes according to whether they are government or corporate bonds, their time to maturity, and the bond rating

GLOBAL INDEXES

- Global bond indexes:
 - FTSE World Government Bond Index
- U. S. bonds:
 - Bloomberg Barclays U. S. Aggregate Bond Index
 - FTSE US Broad Investment-Grade Bond Index
- Government bonds:
 - FTSE UK Actuaries Gilts Index Series
 - S&P France Sovereign Inflation-Linked Bond Index
- Emerging market bonds:
 - J. P. Morgan Emerging Markets Bond Index
- High-yield bonds:
 - Credit Suisse High Yield Index
 - ICE Bank of America US High Yield Master II Total Return Index



8. EQUITY SECURITIES: COMMON AND PREFERRED SHARES

COMMON SHARES

- Common shareholders are the owners of the company. Therefore, their claims on the company's revenues and assets are (in the following order) behind:
 1. Bondholders
 2. Debenture holders
 3. Preferred shareholders
 4. Common shareholders
- Dividend payments are *not* “guaranteed” in the manner that interest payments are. Dividends are paid at the discretion of the Board of Directors
- Common shares are now registered in **street certificates** – in the name of the securities dealer rather than the investor. This facilitates easy trading
- Clearing and settlement: CDS Clearing and Depository Services offers computer-based systems to replace certificates
- Trading units: A **standard trading** unit is usually 100 shares and a group of shares less than that is called an **odd lot**

BENEFITS – COMMON SHARE OWNERSHIP

- Potential for capital appreciation – for many investors this is the main attraction of common shares. There is the potential for a compounding effect of one's returns, assuming that the company retains its earnings over time and reinvests them profitably in the business
- Right to receive dividends
- Voting privileges – including ability to elect directors and vote on other important issues affecting the company
- Favourable tax treatment of dividends and capital gains
- Marketability – facilitated through stock exchanges
- Right to receive copies of annual reports and quarterly financial reports
- Right to examine company documents
- Right to attend Annual General Meetings and question management at those meetings
- Limited liability – the *most* that an investor can lose is his/her original investment in the company



RISKS – COMMON SHARE OWNERSHIP

- The issuer has no obligation to pay dividends
- Common shareholders generally have very little influence over the day-to-day operations of the company
- Common share prices can be volatile, and price changes can lead to investors losing money
- In terms of claims to assets, common shareholders fall behind creditors, bondholders, and preferred shareholders in the case of bankruptcy or dissolution

DIVIDENDS

- A company's net earnings after payment of preferred dividends belong to the common shareholders. Mature companies (such as banks) pay a high ratio of their earnings out as dividends; growing companies (technology) typically retain a high proportion of earnings within the company
- Most established companies pay a **regular dividend**, which is usually paid quarterly. In addition, some companies may pay an extra dividend, usually at the end of the Fiscal Year
- When the Board of Directors decides to pay a dividend, the amount, record date and payment date are part of that announcement

EXAMPLE: “The Board of Directors of Canadian National Railway Company has declared a quarterly dividend of \$.375 per share on the outstanding common shares. The quarterly dividend is payable on June 30, 2018 to shareholders of record at the close of business on June 9, 2018.”

- Dividends may be paid in the form of additional stock rather than cash. **Stock dividends** are treated as regular cash dividends for tax purposes

DIVIDEND PAYMENT DATE CHRONOLOGY

- There are four important dates in the dividend chronology: cum-dividend date, ex-dividend date, record date and payment date
- The **cum-dividend** date is always two business days prior to the record date. This is the latest date an investor can purchase the shares and receive the dividend
- The **ex-dividend** date is the next business day after the cum-dividend date. Investors who held the shares on the cum-dividend date could sell their shares and still receive that dividend on the payment date. Alternatively, an investor who purchased the shares on the ex-dividend date and held the shares on the payment date, would *not* receive that dividend
- The **record date** is important to the extent that with it, investors can determine the cum and ex-dividend dates
- The **payment date** is the date on which the money is actually received by the investor

VOTING PRIVILEGES

- Not all common shares have voting privileges – or the same voting privileges relative to other common shares
- **Restricted shares** are common shares that give the shareholder the right to participate to an unlimited degree in the earnings of the company, but do *not* have full voting rights. There are three categories of restricted shares:
 1. **Non-voting** – have no right to vote, except in limited circumstances
 2. **Subordinate voting** – have the right to vote, but another class of shares carry a greater voting right on a per share basis
 3. **Restricted voting** – carry a right to vote, subject to a limit or restriction on the number or percentage of shares that may be voted by a person, company or group
- Stock exchanges require that restricted shares are identified by the appropriate term and disclosure documents such as information circulars and annual reports are sent to shareholders describing the restrictions on the voting rights of the restricted shares

STOCK SPLITS AND CONSOLIDATIONS

- **Stock splits** generally occur when a company's common shares have been appreciating rapidly in price. The Board of Directors submits a by-law for approval, whereby common shareholders will exchange their current number of shares for a greater number – the typical formula is 2 for 1
- A stock split of 4 – 1 means that an investor will have four times the number of shares at approximately one-quarter the previous price. A stock split should *not* affect either the value of the investor's holdings, or his/her proportionate ownership in the company

PRE-SPLIT: 100 shares at \$25

POST-SPLIT: 400 shares at \$6.25

EXAMPLE: “An investor purchased 500 shares of ABC Company when it IPO'd, paying \$30 per share. When the shares reached \$45, the company executed a 3 for 1 split. When the shares were \$22.50 on a post-split basis, the investor sold 500 shares. What is her profit on this sale?”

To solve this type of question, adjust the original purchase price by the terms of the split: 500 shares at \$30 is the equivalent of buying 1,500 shares at \$10. Therefore, her profit would be $(\$22.50 - \$10.00) \times 500 = \$6,250$



SPLITS AND CONSOLIDATIONS (cont'd)

- A **reverse split** or a **consolidation** has the opposite effect – it means a reduced number of shares at a proportionally higher price per share
- A common motivation for a stock split is to increase the marketability of the common shares, making it more affordable for an investor to purchase one board lot
- A common motivation for a consolidation is to increase the market price of the common shares, allowing them to remain listed on a major exchange such as the TSX or NYSE

READING STOCK QUOTATIONS

52 weeks

High	Low	Stock	Div.	High	Low	Close	Change	Volume
12.55	9.25	BEC	.50	10.65	10.25	10.35	+.50	6,000

- The “High” of 12.55 refers to the highest price the security has traded at over the past 52 weeks
- The “Low” of 9.25 refers to the lowest price the security has traded at over the past 52 weeks
- “BEC” is the trading symbol, or ticker symbol of the stock. This is an abbreviation that traders use when they enter orders for the stock on their computer systems
- “.50” is the annual dividend that BEC has paid over the past 52 weeks
- “10.65” is the highest price BEC traded at in the last day’s session
- “10.25” is the lowest price BEC traded at in the last day’s session
- “10.35” is the last price BEC traded at in the last day’s session
- “+.50” refers to the change in the closing price from the previous day. This means that BEC closed at 9.85 the day before
- “6,000” is the number of BEC shares that changed hands that day

PREFERRED SHARES

- Preferred shares occupy a position between common shareholders and bondholders
- Preferred shares are “preferred” because they receive dividends before common shareholders and have preference with respect to assets upon dissolution of the company
- If a company has a series of preferred shares and they all rank equally with each other, they are described as **pari passu**
- Companies issue preferred shares because they involve a fixed payment – like debt instruments – without the payments of interest being legally binding
- Investors buy preferred shares because they provide income and the income is tax-advantaged compared to the receipt of interest income



PREFERRED SHARE FEATURES

- Most shares have a **cumulative** feature. If the company misses a preferred share dividend payment, the unpaid dividends accrue in **arrears** and must be fully paid out before the common shareholders receive any dividend payment
- Many preferred shares have the **callable** feature, which is a convenience to the issuer rather than the purchaser
- Preferred shares generally only have voting privileges after a stated number of dividends have been omitted
- Many preferred shares have purchase funds and/or sinking funds. The purchase fund feature is advantageous to the purchaser, acting as a price support



CONVERTIBLE PREFERRED

- Similar to convertible bonds and debentures in that these securities allow the investor to receive a stipulated number of common shares at predetermined times
- At issue, the conversion price is above the market price of the common – in selecting convertible preferred shares, investors look at the conversion cost premium and payback period to make their decision on which convertible preferred is *most* favourable



OTHER TYPES OF PREFERRED SHARES

- **Retractable preferred shares** allow the investor to force a redemption, either in cash or in common shares (in which case it is a **soft retractable**)

EXAMPLE: An investor purchased a 6%, \$50 par value retractable preferred share at \$49, retractable at the holder's option in two years and three months. What is the yield?

$$\frac{\text{Annual dividend income} + \text{Annualized Gain}}{(\text{Purchase price} + \text{Redemption price})/2}$$
$$= \frac{\$3 + \$1/2.25}{(\$49 + \$50)/2} = \$3.44/\$49.50 = 6.96\%$$

- **Floating-rate preferreds** pay dividends that change with changes in interest rates
- **Foreign-pay preferreds** pay dividends in a foreign fund – generally American dollars in the Canadian marketplace
- **Participating preferreds** have rights to a share in the earnings of the company over and above their specified dividend rate
- **Deferred preferreds** do *not* pay out a regular dividend. Instead, the shares mature at a preset future date and the return is based on the future price and the redemption value

STOCK INDEXES AND AVERAGES

- Stock indexes and stock averages are used to measure changes in a representative grouping of stocks
- Stock indexes weight the stocks according to their market capitalization. Stock averages weight the stocks according to their market price

EXAMPLE: ABC Company is \$20 and there are 10 million shares outstanding. DEF Company is \$10 and there are 50 million shares outstanding.

Stock Average: $(\$20 + \$10)/2 = \$15$

Stock Index: $(\$20 \times 10\text{mil} + \$10 \times 50\text{mil})/60 \text{ mil} = \11.67

- A stock average gives the heaviest weighting to those shares with the highest market price. A stock index gives the heaviest weight to those shares with the highest market capitalization

CANADIAN MARKET INDEXES

- There are two major indexes calculated in Toronto, the **S&P/TSX Composite Index** and **S&P/TSX 60 Index**
- To be included in the S&P/TSX Composite, a stock *must* meet specific criteria based on price, length of time listed on the exchange, trading volume, capitalization and liquidity
- The S&P/TSX 60 Index comprises the 60 largest companies (by market capitalization) on the TSX. It is divided into 10 sectors, the heaviest weightings belonging to the Financials, Energy and Materials sectors and the lightest weights belonging to Utilities, Health Care, Consumer Staples and Consumer Discretionary
- **The S&P/TSX Venture Composite Index** is the benchmark for the public venture marketplace

UNITED STATES MARKET INDEXES

- **Dow Jones Industrial Average (DJIA)** – made up of 30 stocks that trade on the NYSE and Nasdaq. This is an average – or price-weighted – which means that it does *not* take market capitalization into effect. The DJIA is composed of blue-chip stocks with a lower risk profile than the overall market, hence it tends to under-perform the broader markets in the long run
- **S&P 500** – market capitalization weighted, consists of the 500 largest companies that trade in the United States. This has become the main gauge for measuring the investment performance of institutional investments in the United States
- **The NYSE Composite Index** – includes all listed common equities on the New York Stock Exchange. There are additional indices for industrial, transportation, utility and financial corporations



UNITED STATES MARKET INDEXES (Cont'd)

- **NYSE American Index** – market weighted index is based on all the stocks listed on the NYSE American exchange. This is a leading exchange for small cap companies
- **Nasdaq Composite Index** – market capitalization weighted index of more than 4,000 stocks that trade over-the-counter... often used as a proxy for the Tech sector
- **Value Line Composite Index** – an equal-weighted index of 1,600 stocks, this is the broadest available barometer of all the U. S. indexes, including companies that are listed on the NYSE, NASDAQ, NYSE MKT, and the TSX

INTERNATIONAL MARKET INDEXES

This will likely be tested in the following way: “Investment Advisor John Doe’s client, Jane Smith, believes that Japan’s (or the UK’s or France’s or Germany’s) economy will outperform over the next decade. Therefore, John Doe should overweight Jane Smith in which of the following international indexes or averages?”

- **Nikkei Stock Average (225) Price Index** – calculated like the Dow Jones Industrial Average, the Nikkei tracks performance in Japan
- **FTSE 100 Index** – 100 largest listed companies by market capitalization in the United Kingdom
- **DAX Performance Index** – Germany’s DAX consists of 30 blue-chip stocks
- **CAC 40 Index** – based on 40 of France’s largest 100 companies, calculated by market capitalization
- **Swiss Market Index** – Switzerland’s blue-chip index, made up of a maximum of 20 of the largest and *most* liquid stocks on the Swiss market, ranked by market capitalization



9. EQUITY SECURITIES: EQUITY TRANSACTIONS

CASH ACCOUNTS

- Under cash account rules, an investor must fully pay for purchases and delivery of securities by no later than the settlement day of the trade. For equity securities, this is two business days after the trade date
- Free credit balances are uninvested funds held in client accounts. These are payable on demand to clients; however may be used in the “conduct” of the member firm’s business. What this means is that free credit balances count towards the investment dealer’s capital base for regulatory purposes
- A **long position** represents actual ownership in a security
- A **short position** is created when an investor sells a security that the investor does *not* own

MARGIN ACCOUNTS

- **Margin** refers to the portion of funds the investor must personally provide for a purchase. The remaining amount is the **loan value** that the investment dealer will provide to the client
- Investment dealers loan money to investors because this generates more trading activity (higher commissions) and because loaned money is charged interest. Because these are secured loans – secured by the stocks being purchased – they *tend* to be very safe loans
- A long margin position allows an investor to partially finance the purchase of securities by borrowing money from the dealer
- A short margin position allows an investor to sell securities short by arranging for the dealer to borrow the securities to cover the short position
- A **Margin Account Agreement Form** must be obtained from a potential margin client before business is transacted
- Interest on the loan is calculated daily and charged monthly

LONG MARGIN ACCOUNTS

- The IIROC establishes Maximum Loan Values – member firms may loan *less* at their discretion, but *not* more. The loan value is based on the market price of the security and is constantly re-adjusted as the market price of the security changes
- Loan values (For information purposes only):
 1. \$2.00 and over – 50% of market value
 2. \$1.75 to \$1.99 – 40% of market value
 3. \$1.50 to \$1.74 – 20% of market value
 4. Under \$1.50 – No loan value
 5. Securities Eligible for Reduced Margin – 70% of market value
- There are five distinct steps that must be performed in order to calculate the margin required for an investor at any one time:
 1. Calculate total cost of the purchase
 2. Calculate the loan value, based on *most* current market close
 3. Calculate the margin: #1 – #2
 4. If the price changes, re-calculate the loan value
 5. Compare the original loan value to new loan value. If #4 is greater than #2, there is a margin surplus. If #2 is greater than #4, there is a margin deficit

LONG MARGIN EXAMPLES:

EXAMPLE: An investor purchases 2,000 shares at \$1.70. What is the margin required? What is the margin surplus or deficit the next day, assuming the shares close at \$1.82?

1. Total cost of purchase: $2,000 \times \$1.70 = \$3,400$
2. Loan value: $20\% \text{ of } \$3,400 = \680
3. Margin required: $\$3,400 - \$680 = \$2,720$
4. New loan value: $40\% \times \$1.82 \times 2,000 = \$1,456$
5. Margin surplus: $\$1,456 - \$680 = \$776$

EXAMPLE: An investor purchases 1,000 shares at \$15, believing that the security was common stock (50% loan value). After making the appropriate margin deposit, she learns that it was eligible for reduced margin (option-eligible) the next day when it closes at \$17.50. What is her margin surplus or deficit?

1. Total cost of purchase: $1,000 \times \$15 = \$15,000$
2. Original loan value: $50\% \text{ of } \$15,000 = \$7,500$
3. Margin required: $\$15,000 - \$7,500 = \$7,500$
4. New margin: $70\% \text{ of } 1,000 \times \$17.50 = \$12,250$
5. Margin surplus: $\$12,250 - \$7,500 = \$4,750$



MARGIN RISKS

- Margin increases market risk – margin leverages returns and losses
- Loan and interest must be repaid – this is regardless of the value of the security purchased
- Margin calls must be paid without delay – and this could result in losses

SHORT SELLING

- **Short selling** is the sale of securities that the seller does *not* own. The motivation is to sell the securities today and buy in the future at a lower price. Short selling is done by Investor One borrowing the shares from Investor Two through the investment dealer

- **Short selling – Simplified Steps**
 1. Your client calls you and instructs you to sell 10,000 shares of ABC stock
 2. Your firm lends the ABC shares to your client
 3. The proceeds from the short sale are deposited in the client's account
 4. The client deposits the required margin into the account
 5. The share price falls and you buy back the shares and return them to the firm

Margining Short Positions

- Margining Short Positions (For information only):
 1. \$2.00 and over – 150% of market value
 2. \$1.50 to \$1.99 – \$3.00 per share
 3. \$.25 to \$1.49 – 200% of market value
 4. Under \$.025 – 100% of market value plus \$.25 per share
 5. Securities Eligible for Reduced Margin – 130% of market value



SHORT SELLING EXAMPLE

EXAMPLE: An investor short-sold 3,000 shares of DEF Security, eligible for reduced margin, at \$22 per share and bought it back at \$20. What is his margin requirement and profit/loss on the position?

Margin requirement:

Minimum account balance: $3,000 \times \$22 \times 130\% = \$85,800$

Less proceeds from short sale: $3,000 \times \$22 = \$66,000$

Minimum (additional) margin required: \$19,800

Profit/loss:

Sale proceeds: $3,000 \times \$22 = \$66,000$

Buy-back: $3,000 \times \$20 = \$60,000$

Profit: $\$66,000 - \$60,000 = \$6,000$



SHORT SELLING – MAJOR POINTS

- There is no time limit on short sales. Short positions can be maintained indefinitely, provided that the stock does *not* become de-listed or worthless, as long as the investor can borrow the shares, and adequate margin is maintained in the short account
- If the investment dealer cannot borrow shares, the investor may have to cover the position immediately, regardless of its prevailing market price
- All exchanges require that their members determine whether a sell order is a short or long sale, and total short positions are compiled and reported twice a month

DANGERS OF SHORT SELLING

- There are numerous dangers:
 1. Borrowing shares: There can be difficulties borrowing a sufficient quantity of the shorted stock
 2. Adequate margin: The short seller is responsible for maintaining adequate margin
 3. Liability: The short seller is liable for paying any dividends
 4. Buy-in requirements: Become effective if adequate margin cannot be maintained by the client
 5. Insufficient information: It is difficult to obtain up-to-date information on total short sales of a security
 6. Price action: A shorted security may become volatile
 7. Unlimited risk: Short selling exposes the investor to a theoretically unlimited loss
 8. Regulatory risk: There is the risk that regulators may ban short selling for certain types of stocks



SETTLEMENT PROCEDURES

- Once a transaction has occurred, both buyer and seller receive a **confirmation** and they must “settle” the transaction. The seller must deliver the security and the buyer must deliver the money
- In Canada, stock and bond certificates are *not* in the form of paper but held electronically by a clearing corporation. At the end of the day, the clearing corporation settles all purchase and sales of stock and bonds among dealers

HOW SECURITIES ARE BOUGHT AND SOLD

- Order types are generally categorized according to the following characteristics:
 1. Duration – How long is the order valid for?
 2. Price restrictions – Have any limits been set on the price?
 3. Special instructions – Are there any special conditions attached to the order?
 4. Other – For example, are there any changes to the original order
- The difference between the bid and the ask is known as the bid-ask spread



TYPES OF ORDERS

- **Market Order** – assures immediate execution, gives the trader the authorization to buy at the offer price and sell at the bid price
- **Limit Order** – implies a price limit on the order, establishing a maximum buy price and minimum sell price
- **Day Order** – stipulates that the limit order entered will be in force for only one day, then automatically cancels. All orders are considered day orders unless otherwise specified
- **Good Through Order** – stipulates a finite number of days that the limit order is open for. It automatically cancels if *not* filled

TYPES OR ORDERS (Cont'd)

- **On-Stop Sell Order** – (also known as **stop loss order**) a sell order that is executed when the price drops to a specified level, at which point it becomes a market order. This is a protective strategy to lock in gains or limit losses when an investor is long a security
- **On-Stop Buy Order** – (also known as a **stop buy order**) that is executed when the price rises above a specified level, at which point it becomes a market order. This is the opposite of a stop-loss order and is often used by short-sellers to protect from large losses
- **Professional (Pro) order** – a Pro Order relates to an account belonging to an employee, partner, director, officer, etc. of the member firm. “Where the order of a client competes with a non-client order at the same price, the client’s order is given priority of execution over the non-client order.”



10. DERIVATIVES

DERIVATIVES

- A **derivative** is a financial contract whose value is derived from the value of some other asset. The two basic types of derivatives are **options** and **forwards**
- Features common to all derivatives:
 1. All derivatives are contractual agreements between two parties, known as counterparties
 2. The price or formula for determining the price has been set in advance
 3. All derivatives have an expiration date
- Derivatives trade either over-the-counter (OTC) or through an organized exchange. The OTC market is a lightly regulated network of brokers and dealers. The exchange is a legal corporate entity. There is one derivatives exchange in Canada, the Bourse de Montreal. It lists options on stocks, indexes and U.S. currency, as well as exchange-traded forwards
- **OTC Advantages:** private transactions, no performance bond necessary, less regulated, customization
- **Exchange Advantages:** easy termination prior to expiry, clearinghouse guarantees financial performance



**Table 10.1: Exchange-Traded and OTC
Derivatives**

Traded on an exchange	Traded through computers and/or phone lines
Standardized contract	Terms of the contract agreed to between buyer and seller
Transparent (public)	Private
Easy termination prior to contract expiry	Early termination more difficult
Clearinghouse acts as third-party guarantor	No third-party guarantor
Performance bond required	No performance bond required
Gains and losses accrue on a day-to-day basis (marking to market)	Gains and losses generally settled at the end of the contract, rather than marking to market
Heavily regulated	Much less regulated
Delivery rarely takes place	Delivery or cash settlement usually occurring
Commission visible	Fee usually built into price
Used by retail investors, corporations, institutional investors	Used by corporations and financial institutions



TYPES OF UNDERLYING ASSETS

- Commodities – such as oil, gas, precious metals, wheat
- Financials – equity and equity indexes, interest rates, currencies

The most commonly used financial derivatives include equities, interest rates and currencies

USERS OF DERIVATIVES

- There are four main users of derivatives: Individual investors, institutional investors, businesses and corporations, and derivative dealers

Investors – both individual and institutional – use derivatives for two purposes: Speculation and hedging

- Speculation – means taking on risk in order to enjoy higher returns
- Hedging – means reducing risk and sacrificing the potential for higher returns

Institutional investors use derivatives for three main reasons:

- Market entry and exit – it is more efficient and cost-effective to carry out temporary changes to the portfolio using derivatives
- Arbitrage – refers to a scenario where the same asset or commodity is traded at different prices in different markets, allows the possibility of risk-free profits
- Yield enhancement – the most common method is selling options against a long position

OPTIONS

- An option contract gives the buyer (long position) the right to buy (call contract) or sell (put contract) at a specified price for a specified period of time. The seller of an option contract is obligated to buy (put contract) or sell (call contract) at a specified price for a specified period of time
- The specified price is known as the **strike price** or **exercise price**. To compensate the seller for taking on an obligation, the buyer of the option must pay a non-refundable amount of money, the **premium**

	Buyer or holder	Writer or seller
Call	Pays premium and has the right to buy	Receives premium and has the obligation to sell
Put	Pays premium and has the right to sell	Receives premium and has the obligation to buy

OPTIONS TERMINOLOGY

- **Strike price** – or **exercise price** is the price at which the underlying asset can be purchased or sold in the future
- **Option premium** – to obtain the right to buy or sell, buyers must pay the premium to the seller a fee, which is the option premium
- **Expiration date** – exchange-traded options expire at specific and established dates, which is the typically the third Friday of each month
- **Trading unit** – describes the size or amount of the underlying asset represented by one option contract. Exchange-traded stock options have a standard trading unit of 100 shares
- **American-style and European-style** – **American-style options** can be exercised at any time, up to and including the expiration date. **European-style options** can be exercised only on the expiration date
- **Long-Term Equity Anticipation Securities** – are long-term option contracts offering the same risks and rewards as a regular option



INTRINSIC VALUE AND TIME VALUE

- An **opening transaction** in an option trade occurs when a new position is established. An opening buy results in a long position while an opening sell results in a short position. **Offsetting transactions** are the opposite of opening transactions. By offsetting, the investor closes the position, eliminating either the right or obligation originally entered into
- Options are written with a variety of strike prices. The relation between the exercise price of the option and value of the underlying value of the asset establishes its **intrinsic value**
- XYZ Security is \$25. It has \$20 calls trading at \$7, \$25 calls trading at \$2, and \$30 calls trading at \$1. We would say that the \$20 call has \$5 of intrinsic value, because it would “intrinsically” be worth \$5 to have that option and exercise it immediately. The \$20 call would be **in-the-money**. The \$25 call would have no intrinsic value and be at-the-money. The \$30 call would have no intrinsic value and be **out-of-the-money**. The \$7 value of the \$25 call would be divided between \$5 of intrinsic value and \$2 of time value
- DEF Security is \$50. It has \$45 puts trading at \$1.50, \$50 puts trading at \$2.50 and \$55 puts trading at \$6. The \$55 put would have \$5 of intrinsic value, because it would “intrinsically” be worth \$5 to have that option and exercise it immediately. The \$50 put would be at-the-money. The \$45 put would be out-of-the money. The \$6 value of the \$55 put would be divided between \$5 of intrinsic value and \$1 of time value

$$\text{OPTION PRICE} = \text{INTRINSIC VALUE} + \text{TIME VALUE}$$

If an option has zero intrinsic value, then its entire value would be attributed to time value

OPTION STRATEGIES

- Buying call options:
 1. As a speculative strategy – buying calls allows investors to use leverage to increase the return relative to the investment made
 2. To manage risk – buying calls allows investors to lock in a price, assuming that they will receive the funds later
- Writing/selling call options:
 1. Covered call writing – investors own the underlying and sell options to receive the premium. The premium plus the exercise price becomes the total receipt
 2. Naked call writing – investors do not own the underlying, but sell the option to receive the premium
- Buying put options:
 1. As a speculative strategy – a less risky alternative to short-selling
 2. Buying puts to manage risk – as insurance against stocks investors hold, locking in a minimum sell price
- Writing put options:
 1. Cash secured put writing – investors have the cash to pay for the underlying security if assigned
 2. Naked put writing – investors sell the put in the hope of receiving the premium and *not* having the security put to them

FORWARDS AND FUTURES

- Forwards are contracts between two parties that bind both buyer and seller to buy/sell a specified asset at a specified price for a specified period of time
- When a forward is traded on an exchange, it is understood as a **futures contract**
- The buyer is the long and the seller is the short
- When futures are traded on an exchange, there is the requirement to deposit and maintain adequate margin in the futures account. There is daily settlement of gains and losses; this is known as **marking-to-market**
- Futures strategies are similar to option strategies in that they can be used to hedge positions and reduce risk or they can be used for speculative purposes

RIGHTS AND WARRANTS

- **Rights** and **warrants** are used by companies to raise investment capital instead of conducting a secondary offering
- A right is a privilege granted to a shareholder to acquire additional shares directly from the issuing company, at a discount to the current market price. This allows the company to raise investment capital, yet offer a benefit to existing shareholders at the same time

EXAMPLE: “ABC Company declares a rights offering where each shareholder receives one right, and five rights plus \$10 will allow the shareholder to purchase an additional treasury share.”
(The market price of the shares is \$12)

- When the rights offering is declared, the rights are “attached” to the shares, then the shares go “ex-rights”. The formula for the value of one right during the cum rights period:
$$\frac{\text{Market price} - \text{Subscription price}}{\# \text{ of rights for one new share} + 1} = \frac{\$12 - \$10}{6} = \$0.33$$
- The formula for valuing one right during the ex-rights period:
$$\frac{\text{Market price} - \text{Subscription price}}{\# \text{ of rights for one new share}} = \frac{\$12 - \$10}{5} = \$0.40$$
- To determine the number of new shares that could be issued and total capital raised:
Number of new shares = # of shares outstanding/5
Total capital: Number of new shares x \$10

RIGHTS AND WARRANTS (cont'd)

- A warrant is a security that gives its holder the right to buy shares in a company from its issuer at a set price for a set period of time. It is similar to a call option, except options are contracts between investors and the issuing company is *not* involved in option trading
- Warrants are often used as a **sweetener** as part of a package of a new debt or preferred share issue
- Warrants, like options, are comprised of intrinsic value and time value. If the exercise price of the warrant is lower than the current market price of the security, then the warrant has intrinsic value – the remainder of its value would be understood as being time value
- Companies raise additional funds through a rights offering because:
 1. Market conditions may *not* be conducive to a secondary offering of common shares
 2. The company may want to give existing shareholders the opportunity to maintain their proportionate ownership in the company
- Warrants are generally longer-lived than rights. Warrants are issued with terms of several years while rights are issued with terms of several weeks



11. CORPORATIONS AND THEIR FINANCIAL STATEMENT

BUSINESS STRUCTURES

- **Sole proprietorship** – one person runs his/her business and is taxed on earnings at his/her individual rate. Owner is personally liable for debts
- **Partnerships** – two or more people contributing to the business, in the form of capital, expertise or both. **General partners** are involved in the day-to-day operations of the business and are personally liable for debts; **Limited partners** cannot participate in the daily business activities and their liability is limited to their original investment
- A **corporation** is a distinct legal entity separate from the people who own it. Property acquired by the corporation belongs to the corporation itself, *not* its shareholders. Shareholders have no liability for the corporation's debt. Corporations can easily raise equity and debt and therefore are more suitable for large business ventures

ADVANTAGES OF INCORPORATION

- Limited liability of shareholders – the most money you can lose is what you pay for the shares, either through the primary or secondary market
- Continuity of existence – corporation's existence only ends through an event like bankruptcy
- Transfer of ownership – easily facilitated through the auspices of the stock exchange
- Ability to finance – raising of capital easier than for sole proprietorships or partnerships
- Growth – corporate structure well suited to handle the large amounts of capital needed to grow a business
- Professional management – the ownership and managerial functions are separated



DISADVANTAGES OF INCORPORATION

- Inflexibility – corporation is subject to many rules, including the need for continuous disclosure of information
- Taxation – the possibility of double taxation arises
- Expense – additional costs include annual returns, audits, shareholders' meetings, etc.
- Capital withdrawal – statutory procedures for redemption and purchase of shares by the corporation itself are onerous

PRIVATE AND PUBLIC CORPORATIONS

- **Private corporations** limit in their charters the number of shareholders to no more than fifty, the public is prohibited from subscribing, and shareholders are restricted in their ability to transfer shares
- **Public corporations** do *not* have the restrictions that private corporations do. All companies that trade on the stock exchange are, by definition, public corporations
- A corporation is regulated by:
 1. The federal or provincial charter under which it is incorporated
 2. Its own charter
 3. Its by-laws
- Provisions in the by-laws deal with such items as shareholder meetings and how to notify shareholders, information about directors, declaration and payment of dividends, date of fiscal year end, and signing authority



CORPORATIONS (Cont'd)

- All shareholders must be given the opportunity to receive materials relating to shareholder meetings, including receiving **proxy** forms. A proxy is a power of attorney that gives a designated person the authority to vote the absentee shareholder's shares. It is mandatory to send out proxy forms before a shareholder meeting, accompanied by an **information circular** which contains details about what will be voted on at the meeting
- **Voting trusts** may be formed when a corporation is undergoing a restructuring. Shareholders deposit their shares with a **trustee**, which effectively means that the shareholders do *not* have the right to vote and control the company's direction. The purpose is to protect the interests of others who may contribute capital to the company in its time of difficulty



THE CORPORATE STRUCTURE

- **Directors:** must be of the age of majority and of sound mind. Directors normally set company policy, appoint and supervise officers, responsible for decisions to issues shares; personally liable for illegal acts of the corporation done with their knowledge and consent; personally responsible for employee wages; and must act honestly and in good faith
- **Chairman of the board:** elected by the board of directors. May be chief executive officer or combined with that of president. Chairman presides over meeting of the board
- **President:** appointed by and responsible to the board of directors
- **Vice-presidents:** appointed by and responsible to the president
- **Officers:** appointed by the board of directors

FINANCIAL STATEMENTS

- There are three basic financial statements: **Statement of Financial Position**, **Statement of Comprehensive Income**, and **Statement of Cash Flows**
- The **Statement of Financial Position** – also known as the balance sheet, is a snapshot of a company's financial position at a specific date. In annual reports, that date is the last day of the company's fiscal year. This statement shows the company's assets (what it owns), its liabilities (what it owes) and the difference between the two represents the equity the shareholders have in the company
- The **Statement of Comprehensive Income** – also known as the Income Statement or Profit and Loss Statement – shows how much revenue a company received during the year, and the expenses incurred associated with generating that revenue. The difference between the two is the company's profit or loss
- The **Statement of Cash Flows** fills the gap between the balance sheet and income statement by providing information about how the company generated and spent its cash during the year

CLASSIFICATION OF ASSETS

- Basic equation of the Statement of Financial Position:

$$\underline{\text{ASSETS} = \text{LIABILITIES} + \text{SHAREHOLDERS EQUITY}}$$

- Current Assets are cash and other assets such as Accounts Receivables (money owed from customers), Prepaid Expenses and Inventories (product to be sold in the future) where cash is expected within one year or a normal operating cycle of the business. Current assets are listed in order of liquidity from most liquid to least liquid
- Property, Plant and Equipment – also known as Capital Assets – consist of land, buildings, and equipment used in the day-to-day operation of the business. These assets are shown at historical cost, less accumulated amortization and depreciation. This is understood as the **net carrying amount (book value)**



CLASSIFICATION OF ASSETS (cont'd)

- **Capitalization** refers to the recording of an expenditure as an asset rather than an expense. Capitalization means that an asset appears on the Statement of Financial Position as opposed to being reflected as an expense for that period
- **Deferred charges** represent payments made by the company for which the benefit will extend over a period of years – similar to Prepaid Expenses, but over a longer period of time
- **Intangible assets** are assets that cannot be touched, weighed or measured. **Goodwill** is created when Company A purchases Company B for a value in excess of the fair value of Company B's assets

INVENTORY METHODS

- There are two methods for valuing inventory, **first-in-first-out (FIFO)**, and **Weighted Average**
- Imagine that in a given period, a widget costs \$1 on Day One. On Day Two it costs \$2. On Day Three, the Company sells the Widget for \$3
- FIFO methodology: The company would sell the unit it purchased first for \$1 and record profit of \$2. It would keep the unit it purchased for \$2 and record inventory of \$2
- Weighted Average: The company would average the cost of the units; therefore it would record profit of \$1.50 and inventory of \$1.50
- Bottom line: In eras of rising prices, FIFO accounting results in higher profits and higher inventories than weighted average



DEPRECIATION AND AMORTIZATION

- Companies depreciate fixed assets (such as equipment), amortize intangible assets (such as patents and trademarks) and deplete wasting assets (oil and timber)
- The logic behind this accounting treatment is that assets lose value over time. The loss in value must be reflected on both the Statement of Financial Position – where the carrying value of the asset decreases – and the Statement of Comprehensive Income – where depreciation or amortization is recorded annually
- There are two depreciation methods – straight-line and declining balance methods. The straight line method depreciates an equal amount annually; the declining balance method depreciates most in the first year and declines from there

STRAIGHT LINE DEPRECIATION

- Assume that a company purchased a machine for \$1,000,000 that will provide four years of useful life, then be worth \$100,000 in salvage value at the end of that time
- Straight line method: Annual Depreciation:

$$(\text{Purchase value} - \text{Salvage value}) / \text{Years of use}$$

$$= (\$1,000,000 - \$100,000) / 4 = \$225,000$$

\$225,000 would be the annual depreciation. After one year, the machine would have a carrying value of \$775,000. After two years its carrying value would be \$550,000. After three years, \$325,000. After year four, it would be depreciated to its salvage value of \$100,000.

	Purchase Value	Annual Depreciation	Accumulated Depreciation	Net Carrying Value
T = 0	\$1,000,000	\$0	\$0	\$1,000,000
T = 1	\$1,000,000	\$225,000	\$225,000	\$ 775,000
T = 2	\$1,000,000	\$225,000	\$450,000	\$ 550,000
T = 3	\$1,000,000	\$225,000	\$675,000	\$ 325,000
T = 4	\$1,000,000	\$225,000	\$900,000	\$ 100,000

- If the company sold the machine after, for example, Year Two for an amount other than \$550,000, it would record the difference as either a gain or loss. If the machine were sold for \$560,000, there would be a \$10,000 gain. If the machine were sold for \$525,000, there would be a \$25,000 loss

DOUBLE-DECLINING DEPRECIATION

- For the double declining balance method, the annual depreciation is determined by:

$(100\% \text{ divided by number of years of use}) \times 2 \dots$

$$= 100\%/4 \times 2 = 50\%.$$

This machine would be depreciated at a rate of 50% of its original purchase price, then the remaining carrying value would be similarly depreciated until the asset depreciated to its salvage value

	Purchase Value	Annual Depreciation	Accumulated Depreciation	Net Carrying Value
T = 0	\$1,000,000	\$0	\$0	\$1,000,000
T = 1	\$1,000,000	\$500,000	\$500,000	\$ 500,000
T = 2	\$1,000,000	\$250,000	\$750,000	\$ 250,000
T = 3	\$1,000,000	\$125,000	\$875,000	\$ 125,000
T = 4	\$1,000,000	\$ 25,000	\$900,000	\$ 100,000

GOODWILL

- In common usage, goodwill is defined as the probability that a customer will return to a business – implying a value that can be quantified. However on consolidated Financial Statements, goodwill represents the excess of the amount paid for a business over its shareholders' equity. If you see goodwill on a company's statements, you know that it has been an acquirer in the past
- Imagine the following:

	COMPANY A	COMPANY B
Cash	\$10 million	\$ 2 million
Other Assets	\$10 million	\$ 8 million
TOTAL ASSETS	\$20 million	\$10 million
Liabilities	\$ 5 million	\$ 8 million
Shareholders Equity	\$15 million	\$ 2 million
L & S/E	\$20 million	\$10 million

- Company A offers to buy-out Company B for \$4 million in Cash – and Company B's shareholders accept. The new consolidated Balance Sheet would be...

GOODWILL (cont'd)

	NEW COMPANY A/B
Cash	\$ 8 million
Other Assets	\$18 million
TOTAL ASSETS	\$26 million
Liabilities	\$13 million
Shareholders Equity	\$15 million
L & S/E	\$28 million

- This Balance Sheet no longer balances – which is why an Intangible Asset, Goodwill, is created in the amount of \$2 million, which is the difference between the cash paid and the net assets of the acquired company

	NEW COMPANY A/B
Cash	\$ 8 million
Other Assets	\$18 million
Goodwill	\$ 2 million
TOTAL ASSETS	\$28 million
Liabilities	\$13 million
Shareholders Equity	\$15 million
L & S/E	\$28 million



LIABILITIES & SHAREHOLDERS EQUITY

- Current liabilities are the mirror image of current assets – debts that must be paid within one year... the most common types are: Bank Advances, Accounts Payables, Dividends Payable, Income Taxes Payable and Bonds Due Within One Year
- Non-Controlling Interest in Subsidiary Companies appears on consolidated Balance Sheets and occurs when a company owns less than 100% of the assets and liabilities of a subsidiary. It will show 100% of the assets and liabilities and reflect the part it doesn't own as non-controlling interest
- Shareholders' Equity is divided into three different areas:
 1. **Share Capital** – amount received by the company for its shares when sold from the treasury, reflecting their par value
 2. **Retained Earnings** – portion of earnings retained by the company after paying dividends
 3. **Non-Controlling Interest** – appears when a company owns more than 50% of a subsidiary company and consolidates its financial statements



STATEMENT OF COMPREHENSIVE INCOME

- First section is divided into three parts:
 1. Revenue
 2. Cost of Sales
 3. Gross profit
- The operating section shows the income received, the expense incurred to obtain that income, and the balance which represents the profit or loss. The operating section is broken down in the following manner:

NET SALES... followed by COST OF GOODS SOLD
= GROSS PROFIT... minus OPERATING EXPENSES
= NET OPERATING PROFIT or EBIT which is Earnings before Interest and Taxes

In the Owners' Section, adjustments are made where companies own less than 100% of shares:

- A company owns 80% of the shares of a subsidiary. It would show 100% of the subsidiary's Assets, Liabilities and all of its Operations on its Income Statement, then "backs out" 20% of the Net Assets on the Balance Sheet and 20% of the Net Profit on the Income Statement. This "20%" is called **Minority Interest** – the portion it does *not* own
- **Share of profits of associates** – used where 20% to 50% of the voting shares are owned. This ownership amount is associated with significant influence without control
- **Cost Method** – used where ownership is 20% or less

STATEMENT OF CASH FLOWS

- The Statement of Cash Flows is divided into three sections: **Operating**, **Investing** and **Financing**
- **Operating** activities pertain to the normal operations of business – cash receipts from customers, paying for product, employees' wages, etc.
- **Investing** activities capture cash flows associated with the company's investment in its own operations – the purchase and sale of land, buildings and equipment necessary to drive the core operations
- **Financing** activities represent monies received from the sale of treasury shares and the issuing of bonds, retirement of debt, buying back shares and the paying of dividends
- Dividends paid to shareholders or interest paid to bondholders can be shown in either the operating or financing sections of the statement of cash flows
- Dividends or interest received by the company from its investments may be shown in either the operating or investing sections of the statement of cash flows



THE ANNUAL REPORT AND AUDITORS

- In addition to the Financial Statements, there is a great deal of information captured in the Notes to the Financial Statements
- The Notes disclose information about the company's operations, by industry and geographical area. The information for each segment should include revenue, profit and loss, capital expenditures, etc.
- Canadian corporate law requires that every limited company appoint an **auditor** to represent shareholders and report to them on the company's financial statements. The auditor must express an opinion in writing as to the fairness of those statements



CONTINUOUS PUBLIC DISCLOSURE

- “Reporting issuers” must comply with **continuous public disclosure** requirements of the acts. Any **material changes** must be reported promptly – these are changes that would be expected to have an effect on the market value of the shares
- TSX Senior Issues – comparative audited annual financial statements within 90 days of year end and comparative unaudited financial statements with 45 days of the end of each quarter
- TSX Venture Exchange Issues – comparative audited annual financial statements within 120 days of year end and comparative unaudited financial statements with 60 days of the end of each quarter



STATUTORY RIGHTS FOR INVESTORS

- These rights are for purchases on the primary market only, if the securities are issued in Canada under prospectus requirements
- **Right of Withdrawal** – within two business days after receipt of a prospectus, the purchaser can get out of the deal, no questions asked
- **Right of Rescission** – must be brought within 180 days of the date of transaction and only if the prospectus contained a misrepresentation or material omission
- **Right of Action for Damages** – if investor is financially damaged because of a misrepresentation or material omission, the investor may sue the issuer, the directors of the issuer, the investment advisor, the investment advisor's company, any expert (auditor, lawyer, geologist) whose mistake or misrepresentation damaged them financially



TAKEOVER BIDS

- An offer to shareholders to purchase the shares that will result in an ownership position of 20% or greater of the voting shares
- Takeover bids must comply with a number of requirements:
 1. Must be made to all holders.
 2. Must be accompanied by a **takeover bid circular**
 3. A **directors' circular** must be sent out within 15 days of the takeover bid, with a recommendation to accept or reject
- If takeover is for less than 100% and more shares are offered than the acquiring company wants to buy, then shares must be taken up on a pro rata (proportionate) basis



INSIDER TRADING

- **Insiders** are...
 1. Directors or senior officers
 2. People/entities with 10% or more voting shares
 3. Directors or senior officers of subsidiaries/related companies
 4. The reporting issuer itself
- Rules governing insider trading: Insiders may *not* trade based on material, nonpublic information. Insiders *must* report the extent of their direct and indirect holdings, and *must* report changes to the administrators



12. FINANCING AND LISTING SECURITIES

GOVERNMENT AND CORPORATE FINANCE

- **Financing** or **underwriting** is the process by which an issuer (governments or corporations) raise debt and/or equity. For governments this financing is often accomplished through an auction process and occasionally through a **fiscal agency**
- The Canadian Government uses the **competitive tender system** for most products. **Government securities distributors** submit bids, and highest price (lowest yield) wins. These bidders are Schedule I and Schedule II Banks, investment dealers and foreign dealers. The *most* important dealers are known as **primary dealers**
- The **non-competitive tender** system involves carving out a portion of the issue and allocating to smaller distributors at the average price for the winning, competitive bids
- New issues of provincial direct and guaranteed bonds are usually sold at a negotiated price through a fiscal agent. **Direct bonds** are issued in the government's name. **Guaranteed bonds** are issued in the name of a crown corporation but are guaranteed by the provincial government as to payment

CORPORATE FINANCING

- Canadian corporate financing occurs through a **negotiated offering**. Corporations raise capital by selling shares (equity financing) or by issuing fixed-income securities (debt financing)
- **Authorized** shares are the maximum number of shares (either common or preferred) that a corporation may issue under the terms of its charter
- **Issued** shares consist of the portfolio of authorized shares that the corporation has issued, either to the investing public, company insiders, or large institutional investors. Collectively, these are the **outstanding shares**
- Outstanding shares times current market price determines a company's **market capitalization**

THE CORPORATE FINANCING PROCESS

- When negotiations begin between a dealer and corporate issuer for a new issue of securities, a **due diligence report** is prepared by the dealer
- An important decision is what kind of security should be issued: Bonds, debentures, preferred shares or common shares
- Primary advantages for bonds – lower interest rates than debentures, more marketable. Primary disadvantages – less flexibility because of pledge of assets, makes mergers and acquisitions (and being acquired) *more* difficult
- Primary advantages for debentures – flexible, no specific pledges or liens and reduction in cost at issue. Primary disadvantages – higher interest rates required than bonds
- Primary advantages for preferred shares – dividend payments are *not* mandatory, greater flexibility in financing, limited lifespan through redemption of shares. Primary disadvantages – expensive because dividends are paid with after-tax income, non-payment of dividends can trigger penalties



CORPORATE FINANCING PROCESS (Cont'd)

- Primary advantages for common shares – no obligation to pay dividends, no repayment of capital, larger equity base can support more debt, market value of company easily established. Primary disadvantages – dilution for existing shareholders, dividends (if paid) *more* expensive, underwriting fees greater than if debt were issued



THE METHODS OF OFFERING

- In a **private placement**, one or a few large institutional investors are solicited to buy the entire issue. This method is cheaper and faster for the issuing company – no formal **prospectus** must be prepared
- In a **public offering**, there must be a prospectus prepared. A **primary offering** refers to the first time that a class of particular shares is available for sale to the public and generally takes place in the IPO market. A **secondary offering** refers to the second (or third or fourth) time that the class of shares is available to the public
- In a **best efforts** underwriting agreement, the dealer acts as agent and make its best efforts to sell the securities. The issuer faces the risk of not raising the capital
- In a **firm commitment** underwriting arrangement (also known as a **bought deal**), the underwriter acts as principal, buying a specified number of shares and assuming the risk of selling them

STEPS IN THE UNDERWRITING PROCESS

- Most provinces require that issuers file both a **preliminary prospectus** and **final prospectus**. The preliminary prospectus is designed to qualify interest in the issue. After the preliminary prospectus is filed with the applicable securities commissions, the dealer has 90 days to prepare, submit and receive approval for the final prospectus. This period of time is known as the **waiting period**. During this period of time, only limited communication with investors is permitted
- The preliminary prospectus serves two key purposes: It is a key disclosure document required under the law and helps qualify interest in the issue. It does *not* include information about price and the size of an issue. The preliminary prospectus is also known as the **red herring prospectus**
- In addition to the preliminary prospectus, many investment dealers prepare a **greensheet** – a summary fact statement for sales people, highlighting the salient features of the issue
- The **final prospectus** must provide “**full, true and plain disclosure of all material facts**” about the securities to be distributed. Once the final prospectus is approved by the regulators or **blue skyed**, then it can be distributed to the public
- A market out clause permits the underwriter to cancel an offering without penalty under certain conditions, such as changes in market conditions



SHORT FORM PROSPECTUS SYSTEM

- The **short form prospectus** is a streamlined method of accessing funds through the public markets, available to **senior reporting issuers** who are already subject to **continuous disclosure** requirements
- The logic behind the short form prospectus system is that much of the information revealed through the preliminary and final prospectus has been in the public domain for an extended period of time, given that these are senior reporting issuers

AFTER MARKET STABILIZATION

- One of the duties of a lead dealer in an underwriting issue may be to provide **after-market stabilization** of that security's offering. This involves supporting its price in the first days of trading
- There are three primary methods of after-market stabilization
 1. The lead dealer may have an **greenshoe option or over-allotment option**. This allows it to purchase additional shares in the future at a locked-in price, taking a short position at the IPO date. If the share price falls, it can buy shares and support the price. If the share price rises, it can buy in at the locked-in price. Either way, this tends to stabilize the price
 2. The “penalty bid” means the lead underwriter will penalize members of the selling group if their customers sell (or “flip”) shares in the after-market after the deal closes
 3. The dealer may post a stabilizing bid to purchase shares

OTHER DISTRIBUTION METHODS

- Junior company distributions – this is known as risk capital because these companies usually have no record of earnings and few assets
- Options of treasury shares and escrowed shares – these shares cannot be sold or transferred, unless special approval is given
- Capital Pool Company (CPC) Program – this describes a newly created company with no assets other than cash and with no established business or operations. It can buy an existing business or assets, called significant assets, through a qualifying transaction
- NEX Board – separate board of the TSX Venture Exchange that provides a trading forum for companies that have fallen below the TSX Venture Exchange's listing standards
- Crowdfunding – process of raising start-up capital by soliciting contributions from the public at large

THE LISTING PROCESS

- When the listing application is completed, the company signs a formal **Listing Agreement**. This is the contract that details the specific regulations and reporting requirements that the company must meet
- By signing a Listing Agreement, a company agrees to:
Submit annual and interim financial reports; promptly notify the exchange about dividends or other distributions; and notify the exchange of other proposed material changes in the business or affairs of the company
- There are advantages associated with listing on a major exchange: Prestige and goodwill, established and visible market value, excellent market visibility, more information available, and simplified valuation for tax purposes.
Disadvantages: additional controls on management, need to keep market participants informed, market indifference, additional disclosure, and additional costs to the company

WITHDRAWING TRADING PRIVILEGES

There are three temporary withdrawals of trading privileges that the exchanges can invoke:

- **Delayed opening** – occurs if before the market opens, there is a heavy influx of buy and/or sell orders for one particular security. It does *not* affect the general opening of the market
- **Halt in trading** – occurs in the middle of the trading day to allow significant news to be widely disseminated. A halt would occur if there were news of a pending merger or a major contract had been lost
- **Suspension of trading** – imposed if the company's financial condition does *not* meet the exchange's requirements or the company fails to comply with its commitment – for example, being late with financial statements
- **Cancelling a listing/de-listing** – this is a permanent cancellation of listing privileges. Reasons:
 1. Delisted security no longer exists because it was called for redemption or substituted for another security as a result of a merger
 2. The company is without assets or has gone bankrupt
 3. Public distribution of the security has dwindled to an unacceptably low level
 4. The company has failed to comply with the terms of its listing agreement