Hi and welcome,

This is a brief sample to provide you with an idea of what my CSC Exam 1 study notes look like.

The style is to provide key content coverage followed by working examples.

If you have written the exam before, you can use my materials to get back up to speed very quickly.

If you are a first time writer, you can use my materials to help focus your study efforts and build your knowledge base.

If you have any questions, please do not hesitate to reach out to me by email.

All the best,

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Chapter 4
Overview of Economics

Introduction

To make good investment decisions, investors must understand economic events and their impact on the financial markets. In an organized market, such as the Toronto Stock Exchange, participants in the economy interact with consumer choices, which impact prices through demand and supply forces.

On the stock exchange, millions of transactions occur each day, creating an **equilibrium price** for securities. Buyers of securities believe these will increase in value, while sellers believe that they will go down. To create these expectations, investors most likely conduct some type of economic analysis. The next sections cover the key economic variables that affect the state of the economy and, consequently, the decisions of capital market participants.

Defining Economics

Economics is a social science that aims to explain the production, distribution, and consumption of goods and services. The economy overall is the sum of how individuals, governments, and businesses allocate resources to satisfy their needs.

A **market economy** is a system in which decisions related to investment, production, and distribution of goods are based on price signals. In a market economy, price signals are created by **supply and demand**. In short, the interaction between participants decides how much we pay for goods and services, for a stock, or a bond.

Thanks to technological advances, customer demand has changed significantly in recent years. For example, Eastman Kodak used to produce and sell cameras and film, but the company went bankrupt in 2012. It failed to keep up with customer demand as clients stopped spending money on the traditional cameras, switching to mobile phones and digital cameras instead. The lack of demand for Kodak's cameras drove the prices down, thus the company was unable to survive.

Labor Market Indicators

In the labor market in Canada, two key indicators describe the current situation:

- **Participation rate**, which is the share of the working-age population in the labor force (i.e., it shows how willing people are to work)

Equation 1 - Participation Rate

$$Participation\ rate = \frac{Labor\ Force}{Working\ Age\ Population} * 100$$

- **Unemployment rate,** or the share of the working-age population who is unemployed and looking for a job. It increases when the number of people looking for work increases, when the number of employed people falls, or both at the same time.

Equation 2 - Unemployment Rate

$$Unemployment\ rate = \frac{Not\ Working\ but\ Actively\ Looking\ for\ Work}{Labor\ Force} * 100$$

Example:

A country has 30 million people of working age. Out of these 30 million, 25 million are currently working, 3 million are not working but actively looking for work. The remaining 2 million are not working and not looking for work – either because they are students, retired individuals, or discouraged workers who just stopped looking for a job.

$$Participation\ rate = \frac{25M + 3M\ (working + looking\ for\ work)}{30M\ (all\ people\ of\ working\ age)} * 100 = 93.3\%$$

This means that 93.3% of the entire population of working age is willing to work. The participation rate is important because it measures how productive a society is. A country with a participation rate of 90% is more productive than a country with only 60% participation rate.

$$Unemployment\ rate = \frac{3M}{25M + 3M} * 100 = 10.7\%$$

This means that 10.7% of the labor force is unemployed and looking for a job.

When calculating the unemployment rate, there may be some flaws:

- Doesn't include or measure the fact that some people are unemployed for years, others for very short periods of time; during recessions, people are unemployed for longer, and unemployed for shorter periods during expansions.
- Sometimes, the job opportunities may be so poor that people quit looking for a job and become discouraged workers. Since they are not considered part of the labor force, the unemployment rate falls when there are too many discouraged workers.
- Some people are **underemployed**, such as those with part-time jobs. The unemployment rate remains low, but it doesn't take into consideration that part-time jobs are less productive than full-time jobs.

Types of unemployment:

- **Cyclical unemployment** – this is related to the business cycle: when the economy contracts, workers are fired as a result of lower revenues, then unemployment decreases during economic booms.
- **Seasonal unemployment** – specific to industries that operate only during certain seasons (i.e., businesses that pick fruits and vegetables go idle during winter months, thus they lay off their staff);
- **Frictional unemployment** – normal turnover when people enter and leave jobs or are out of work for different reasons, such as changing careers, being fired, or just having just finished school.
- **Structural unemployment** – mismatch between workers and jobs, as in people may not have the required skills for jobs available, they have no jobs available where they live, or decide not to work for the given wage. This typically lasts longer than frictional unemployment because such people need time to move to another place or retrain.

It's impossible to have a zero unemployment rate. Even during economic expansions, frictional and structural unemployment cannot be eliminated. The minimal level below which the rate won't decrease is known as the **natural unemployment rate**.

The Role of Interest Rates

Interest rates have different roles for decision-makers. For instance, consider the following aspects:

- If you want to buy a new car and you save the money, the interest rate is what you gain from not borrowing the money instead, but you have to wait longer.
- If you get a car loan, the interest rate is the cost of buying the car today rather than waiting to save all the money.
- For businesses, the interest rate is one component of the cost of capital (cost of borrowing the money), which means that the rate of growth of the capital stock depends on the interest rate.

In short, **interest rate means the cost of credit.** Interest rates influence the demand and supply of credit and debt, which impact the bond and money markets.

The Bank of Canada can change interest rates through monetary policy. Thus, when the Bank decides to increase interest rates, the cost of borrowing increases. In turn, this increases the costs for businesses that must borrow money, lowering their profits. Lower profits translate into lower share prices.

Determinants of Interest Rates

1. **Demand and supply of capital:** Businesses or governments require more capital (i.e., for investments); if the supply of capital doesn't raise accordingly, the price of credit (interest rate) also raises. These higher interest rates will encourage participants to save more (since they earn a higher interest on their deposits). As people prefer to save money instead of borrowing, the lower demand for borrowing reduces interest rates.
2. **Default risk**: if the interest rate is high, people and businesses may not afford anymore to pay back their loans and may default on them. The greater the risk of default, the higher the interest rate required by lenders, and it is known as a default premium. If it is the government at the risk of defaulting on its debt, interest rates increase for everyone.
3. **Foreign interest rates and the exchange rate**: assume that a Canadian investor wants to buy U.S. securities. To do so, the investor must sell Canadian dollars and buy U.S. dollars, increasing the supply of Canadian dollars. In turn, the high supply of Canadian dollars lowers their value. To reduce this fall in value, the Bank of Canada may decide to temporarily raise short-term interest rates (even if other factors are unchanged). Higher short-term interest rates mean that investors earn more on their investments in Canada than in the U.S., thus they decide to keep the Canadian dollars.
4. **Central bank credibility** – Central banks adjust short-term interest rates to influence the economy.
5. **Inflation** – if inflation is expected to rise, lenders increase the interest rates to make up for the loss in money's purchasing power over the term of the loan. One of the central bank's responsibilities is to keep inflation stable in the long term.

How Interest Rates Affect the Economy

In general, low interest rates are associated with economic growth, while high interest rates hinder economic growth:

- When interest rates are high, business costs increase, so businesses are less likely to make investments that lead to economic growth and improved productivity.
- High interest rates motivate people to save their money rather than spend it (so they get extra income in form of interest rates on their deposits). As a result, people may prefer to save money rather than spend it on large purchases, such as houses and cars, thus lowering the GDP.
- High interest rates mean that people who took on debt must pay more to service it. For instance, mortgage payments may increase when the interest rate is high. In this case, people lower their consumption (fewer goods and services) to manage the higher payments.