ECON 1012 Discussion Section 63-65
Week 2, Ch.6 Review and Ch.8 Study Guide

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Exercise 1. Definitions of key terms in Chapter 6

Accounting profit p. 264. A firm's net income, measured as revenue minus operating expenses and taxes paid.
Economic profit p. 265. A firms revenues minus all of its implicit and explicit costs.
Balance sheet p. 265. A financial statement that sums up a firms financial position on a particular day, usually the end of a quarter or year.
Interest rate p. 257. The cost of borrowing funds, usually expressed as a percentage of the amount borrowed.
Corporate governance: p. 255. The way in which a corporation is structured and the effect that structure has on the corporations behavior.
Coupon Payment: p. 257. An interest payment on a bond.
Indirect Finance p. 256. A flow of funds from savers to borrowers through financial intermediaries such as banks. Intermediaries raise funds from savers to lend to firms (and other borrowers).
Direct Finance
p. 256. A flow of funds from savers to firms through financial markets, such as the New York Stock Exchange.
Limited Liability
p. 252. The legal provision that shields owners of a corporation from losing more than they have invested in the firm.
Present Value p. 275. The value in todays dollars of funds to be paid or received in the future.
Dividends p. 259. Payments by a corporation to its shareholders.
Stockholder's Equity p. 281. The difference between the value of a corporations assets and the value of its liabilities; also known as **net worth**.
Investment Bank A financial institution that provides a variety of services for clients. Among the services of an investment bank are underwriting, facilitating transactions, assisting in mergers and acquisitions, and brokering. In general, an investment bank's clients are institutional investors, but high net-worth individuals also use them. The name can be misleading since investment banks rarely provide retail banking services. (Farlex Finance Dictionary)
Commercial Banks Commercial banks are responsible for managing deposit accounts, such as checking and savings accounts, for both businesses and individuals. Using money held on deposit enables them to make loans available to the public and to companies.(Investopedia)

Exercise 2. Another two examples of Principal-Agent problems
p. 255. A problem caused by an agent pursuing his own interests rather than the interests of the principal who hired him.
Reference: Sumit Joshi, Moral Hazard Chapter, Unpublished Lecture Notes (2017)
Note the salient features of Principal-Agent Problem:
1. The effort level (action) of the agent cannot be observed.
2. There is a conflict between the objectives of the principal and the agent. The principal would like the agent to exercise a high level of effort because higher effort levels are associated with higher output. The agent on the other hand would like to exert a lower level of effort because effort is costly.
Examples,

Agent	Manager	Retailer	Investment Firm	Elected Officials	Polluting firm
Principal	Shareholder	Homeowner	Client	Citizens	Regulatory Agency
Task (Conflict)	Manage firm	Sell house	Manage financial portfolio	Make policy decisions	Control level of pollution

Exercise 3. Calculate the price of corporate bonds with 100 dollar face value, 5 years maturation terms (maturity, maturity terms, duration terms, term to maturity) and 20 coupon payments each years. Given market interest rate is 2%. (**List out the equations will be enough)**

$$\textbf{Present Value} = \frac{20}{1+0.02} + \frac{20}{(1+0.02)^2} + \frac{20}{(1+0.02)^3} + \frac{20}{(1+0.02)^4} + \frac{20}{(1+0.02)^5} + \frac{100}{(1+0.02)^5}$$

$$= 19.6078 + 19.2234 + 18.8464 + 18.4769 + 18.1146 + 90.5731 \approx 184.8423$$

Chapter 8 Review Points

- Explain how total production is measured.
- Discuss whether GDP is a good measure of well-being. (Shortcomings of GDP)
- Calculation of Real and Nominal GDP
- Know other measure for a nation's wealth: GNP, national income, disposable personal income.

1. Measure GDP

Definition: Gross domestic product, the market value of all final goods and services produced in a country during a period of time, typically one year.

(A Nation's) **Income** = (Firm Owner's) **Expenditure** = (Firm's) **Production** [The flow chart in text]

To measure GDP, the Bureau of Economic Analysis (BEA) in the Department of Commerce measures 4 categories of expenditures: the summation of the following 4 categories could be treated as (**nominal)** GDP (Y)
(**The market value of**) Personal Consumption Expenditures, or Consumption (C)
(**The market value of**) Gross Private Domestic Investment, or Investment (I)
(**The market value of**) Government Consumption and Gross Investment, or Government Purchases (G);
(**The market value of**) Net Exports of Goods and Services, or Net Exports (NX).

$$Y = C + I + G + NX$$

2. GDP Deflator

1. Idea: Difference between **nominal** and **real** GDP is the reference price.
2. In textbook: *"To separate these effects, the BEA calculates both nominal GDP – the value of final goods and services evaluated at current-year prices, and real GDP – the value of final goods and services evaluated at base-year prices."*.
3. Once we have nominal and real GDP, we could also calculate the GDP deflator, given different years GDP data.

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

Since, the only difference between "real" and "nomial" is the reference price level, GDP deflator could be treated as a measurement of price level.

3. Calculation Example

The table shows outputs and prices at year 2009 and 2015 in a country G. There are only 3 products, calculate out the real and nominal GDP each year, GDP deflator and inflation rate.

	2009		2017	
Product	Quantity	Price	Quantity	Price
CHC Flu Shot	80	40	100	50
Wiseguy Pizza	90	11	80	10
Textbook	15	90	20	100

Step 1. Identify the base year and the current year.
Step 2. Find out the nominal for base and current year.
Stpe 3. Find out the real GDP for baseand current year.
Step 4. Calculate the GDP deflator in 2009 and 2017.
Step 5. Change rate of the GDP deflator = Inflation Rate

4. Suggested Key Terms in Ch.8

Gross domestic product (GDP), Nominal GDP, Transfer payments, Value added, Underground economy, Inflation rate, Value added, Recession