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ECONOMICS FOR INVESTMENT DECISION MAKERS

Micro, Macro, and International Economics

Christopher D. Piros, CFA • Jerald E. Pinto, CFA

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PART I

LEARNING OUTCOMES, SUMMARY OVERVIEW, AND PRACTICE PROBLEMS

CHAPTER 1

DEMAND AND SUPPLY ANALYSIS: INTRODUCTION

LEARNING OUTCOMES

After completing this chapter, you will be able to do the following:

- Distinguish among types of markets.
- Explain the principles of demand and supply.
- Describe causes of shifts in and movements along demand and supply curves.
- Describe the process of aggregating demand and supply curves, the concept of equilibrium, and mechanisms by which markets achieve equilibrium.
- Distinguish between stable and unstable equilibria and identify instances of such equilibria.
- Calculate and interpret individual and aggregate demand and inverse demand and supply functions, and interpret individual and aggregate demand and supply curves.
- Calculate and interpret the amount of excess demand or excess supply associated with a nonequilibrium price.
- Describe the types of auctions and calculate the winning price(s) of an auction.
- Calculate and interpret consumer surplus, producer surplus, and total surplus.
- Analyze the effects of government regulation and intervention on demand and supply.
- Forecast the effect of the introduction and the removal of a market interference (e.g., a price floor or ceiling) on price and quantity.
- Calculate and interpret price, income, and cross-price elasticities of demand, and describe factors that affect each measure.

SUMMARY OVERVIEW

- The basic model of markets is the demand and supply model. The demand function represents buyers' behavior and can be depicted (in its inverse demand form) as a negatively sloped demand curve. The supply function represents sellers' behavior and can be depicted (in its inverse supply form) as a positively sloped supply curve. The interaction of buyers and sellers in a market results in equilibrium. Equilibrium exists when the highest price willingly paid by buyers is just equal to the lowest price willingly accepted by sellers.

- Goods markets are the interactions of consumers as buyers and firms as sellers of goods and services produced by firms and bought by households. Factor markets are the interactions of firms as buyers and households as sellers of land, labor, capital, and entrepreneurial risk-taking ability. Capital markets are used by firms to sell debt or equity to raise long-term capital to finance the production of goods and services.
- Demand and supply curves are drawn on the assumption that everything *except* the price of the good itself is held constant (an assumption known as ceteris paribus or "holding all other things constant"). When something other than price changes, the demand curve or the supply curve will shift relative to the other curve. This shift is referred to as a change in demand or supply, as opposed to quantity demanded or quantity supplied. A new equilibrium generally will be obtained at a different price and a different quantity than before. The market mechanism is the ability of prices to adjust to eliminate any excess demand or supply resulting from a shift in one or the other curve.
- If, at a given price, the quantity demanded exceeds the quantity supplied, there is excess demand and the price will rise. If, at a given price, the quantity supplied exceeds the quantity demanded, there is excess supply and the price will fall.
- Sometimes auctions are used to seek equilibrium prices. Common value auctions sell items that have the same value to all bidders, but bidders can only estimate that value before the auction is completed. Overly optimistic bidders overestimate the true value and end up paying a price greater than that value. This result is known as the winner's curse. Private value auctions sell items that (generally) have a unique subjective value for each bidder. Ascending price auctions use an auctioneer to call out ever-increasing prices until the last, highest bidder ultimately pays his or her bid price and buys the item. Descending price, or Dutch, auctions begin at a very high price and then reduce that price until one bidder is willing to buy at that price. Second price sealed-bid auctions are sometimes used to induce bidders to reveal their true reservation prices in private value auctions. Treasury notes and some other financial instruments are sold using a form of Dutch auction (called a single price auction) in which competitive and noncompetitive bids are arrayed in descending price (increasing yield) order. The winning bidders all pay the same price, but marginal bidders might not be able to fill their entire order at the market-clearing price.
- Markets that work freely can optimize society's welfare, as measured by consumer surplus and producer surplus. Consumer surplus is the difference between the total value to buyers and the total expenditure necessary to purchase a given amount. Producer surplus is the difference between the total revenue received by sellers from selling a given amount and the total variable cost of production of that amount. When equilibrium price is reached, total surplus is maximized.
- Sometimes, government policies interfere with the free working of markets. Examples include price ceilings, price floors, and specific taxes. Whenever the imposition of such a policy alters the free market equilibrium quantity (the quantity that maximizes total surplus), there is a redistribution of surplus between buyers and sellers; but there is also a reduction of total surplus, called deadweight loss. Other influences can result in an imbalance between demand and supply. Search costs are impediments in the ability of willing buyers and willing sellers to meet in a transaction. Brokers can add value if they reduce search costs and match buyers and sellers. In general, anything that improves information about the willingness of buyers and sellers to engage will reduce search costs and add value.
- Economists use a quantitative measure of sensitivity called elasticity. In general, elasticity is the ratio of the percentage change in the dependent variable to the percentage change in the