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Introduction

Real Markets and Financial Markets

This book deals with the regulation of securities markets, but some readers may have little understanding of these markets. This chapter offers a quick (and optional) introduction to the world of financial markets with a focus on stock markets. The first section looks at some striking differences between real and financial markets and introduces the concept of the bid-ask spread, which is important for understanding securities pricing. The second section introduces stock markets, their basic structure, their cast of characters, and their treatment by the media. Finally, the third section discusses the interdependence between the real sector of the economy and the financial sector.

A. DIFFERENCES BETWEEN FINANCIAL AND REAL MARKETS

Paradigmatic markets for real goods are farmers' markets, retail malls, grocery stores, and retail neighborhoods. Real markets focus on satisfying consumers' desires by matching goods with individuals. Financial markets are about money rather than goods. Investors or savers place their money in investments that they hope will safely store it for some duration and produce interest (in the case of loans) or dividends and price appreciation (in the case of stocks and the aggregation of stocks into *mutual funds* or *variable life insurance* and *annuities*).[1] Investors often move their money between investments and then liquidate when they need to finance major expenditures or retirement. Financial intermediaries such as banks and brokerage houses help move the money from the investors to its users, usually the business firms that borrow or issue securities, and between investments.

[1] Mutual funds aggregate the investments of many investors and hold a portfolio of securities that is professionally managed. Life insurance and annuities are investments that also have a mild insurance function. They are investments due to the lack of uncertainty about the insured event: all those whose life is insured will die. Their mild insurance function cancels the timing of that event for each insured. Life and annuity that are variable adjust the payout to the policyholders depending on the performance of stock market indices or mutual funds. Conceptually, one can envision variable life insurance as having the insurance company place a fraction of the insured's funds in those investments and, upon the insured event, having the company pay the beneficiaries from the proceeds of their sale.

Significant distinctions between financial and real markets appear in the variety of goods and markets, the centrality of seller identity, the ratio of sellers to buyers, and the way dealers set their prices: the *bid-ask spread*. Let us consider each of these in turn.

i. Variety of Goods and Markets

In markets for real goods, the variety of types of goods is so large as to be nearly infinite. Department stores, for example, offer an encyclopedic selection of goods, from furniture to clothes, fragrances, and appliances. Grocery stores offer wines, meats, flowers, stationery, plus health and pharmacy products. Furthermore, sellers are legion. Indeed, in the age of eBay and Craigslist, anyone can sell almost anything. Markets for real goods are virtually everywhere, as stores in urban neighborhoods and small rural villages demonstrate.

An unusual nonfinancial asset, real estate, is worth a digression because it has played a central role in at least two crises, the Savings and Loan (S&L) crisis of the early 1990s and the much graver 2008 crisis – and probably also the Great Depression and several others (crises are the topic of Chapter 21). Real estate is a real good because its users put it to nonfinancial use. Homeowners, for example, use it for housing, businesses for facilities, and farmers to make agricultural products. Real estate, however, is unusual among real goods because land tends not to deteriorate with time. Therefore, it has investment value,[2] and lenders trust it to an unusual degree as collateral. No lender would make a 15-year car loan, but 15-year home loans are routine. Moreover, the social importance of housing has produced significant government involvement in home financing. This involvement in the United States mostly facilitates the bundling of many mortgage loans into funds or pools. Investors or lenders can buy fractions of these funds and have much lower risk than they would if they bought or made loans to individual homeowners. This is the *securitization* of mortgage loans.[3]

In stark contrast to the virtually infinite types of real goods and the ubiquity of their markets, financial goods tend to be traded in few markets and have few categories or types. It is important to realize that this is a difference in the number of the types of goods rather than of the goods themselves. Consider the relatively small ratio of types of cars to types of real goods, which must be in the hundreds (e.g., try to count each of eBay's categories of goods). Compare that to the much larger ratio of the number of stocks of different businesses, which number several thousands, to types of financial goods, which are only a handful. The difference in those ratios is striking and influences the introduction to finance. Learning what corporate stock is, for

[2] This does not make real estate into a financial good because its real use is significant. Many durable goods have a financial component. Car buyers, for example, may take into account which cars retain more value.

[3] See Adam J. Levitin & Tara Twomey, *Mortgage Servicing*, 28 YALE J. ON REG. 1–90, 13 (2011).

example, happens once and differs from learning about a specific corporation's stock, the same way that learning what a car is differs from learning the features of a specific car. Furthermore, rarely does learning the features of a type or genus of a real good – such as a car – pose difficulties. In contrast, learning both the basic types of financial goods – what a stock is and what a bond is, for example – and the features of specific types – individual stocks or bonds – tends not to be intuitive. When learning about a field of real goods, the participants tend to already have a basic understanding of those goods. For example, someone learning about car racing likely already knows what a car is. This may not be true in finance. Newcomers may lack even a basic understanding of the artificial and recent universe of finance.[4]

Before the introduction of means for individuals to invest as members of a group, financial markets traded only two types of securities, *stocks* and *bonds* – namely, fractions of business ownership and slices of loans to businesses, governments, and municipalities. In the United States during the late nineteenth and early twentieth centuries,[5] financial intermediaries gradually introduced more complex instruments, starting with aggregations of stocks or bonds into closed-end funds, (open-ended) mutual funds, or exchange-traded funds,[6] eventually reaching *derivatives*: contractual arrangements the value of which depends on (i.e., derives from) one or more *underlying*, more basic goods such as stocks or bonds.[7] Moreover, financial markets are centralized and therefore few in number. Typically, each developed country has a single major stock market. The United States, with both the New York Stock Exchange (NYSE) and the NASDAQ Stock Market (NASDAQ), is an exception. A further round of centralization has occurred with the merger of stock exchanges into even larger groups of exchanges.

[4] The problem of the lack of knowledge in financial markets is not limited to unsophisticated investors. Buyers of real products know the use they derive from them because the buyers tend to use the products, read the books, or sit on the chairs that they buy. This has the stabilizing effect of limiting price increases and drops. By contrast, buyers of financial products tend merely to seek reselling them. Thus false beliefs about financial goods can be self-perpetuating and destabilizing, underscoring the need for information, as discussed at length in Chapters 9 to 11.

[5] Edwin J. Perkins, Wall Street to Main Street: Charles Merrill and Middle-Class Investors 224–27 (Cambridge University Press, 1999); Jerry W. Markham, A Financial History of the United States 137–40 (M.E. Sharpe, 2002). See also A Brief History of the Mutual Fund, Investopedia, available at www.investopedia.com/articles/mutualfund/05/mfhistory.asp (accessed February 15, 2017).

[6] Closed-end funds trade like stocks: they have a fixed number of outstanding shares that investors trade as a stock. Open-ended mutual funds have the flexibility to accept new capital and to redeem investors' shares, which they do at the end of each trading day. Exchange-traded funds trade throughout the day, with the issuer likely buying/redeeming and selling/issuing shares.

[7] Some derivatives are options, financial futures, and swaps; understanding them is not necessary here. Options are rights to buy or sell the underlying good. Financial futures are contracts that simulate purchases or sales of the underlying good, such as a stock, index, or interest rate, at the value it will have at a future time. Swaps are the exchange between the parties of, usually a stream of, obligations denominated in different underlying goods.

The laws regulating these markets also specialize. Banking law, insurance law, and securities law are governed by separate statutes and, at least in the United States, different regulators.[8] Because this book focuses on securities law, we can leave behind financial goods subject to banking and insurance regulation.[9] Within securities law, the financing of businesses is the central activity that ties the financial system to the real economy; therefore, the focus is on stocks and bonds, ignoring funds and derivatives.

ii. Seller Identity and Credit

In nonfinancial goods, the identity of the seller or producer often does not matter. The irrelevance of the seller's identity is so common that it is part of contract law doctrine that, for example, states that a promisee may not refuse performance by someone other than the promisor.[10] Parties often contract for goods defined in generic terms – T-shirts or tomatoes, for example (granted, of a specific quality). For many real goods, the buyer has no interest in the identity or personal attributes of the seller or the producer. The appeal of a T-shirt or a tomato lies mostly in its features rather than its maker. Obviously, exceptions exist. Provenance is important in the art market or in high-end fashion, but features that are unrelated to provenance still dominate. Most consumers would not willingly buy a product that they did not enjoy simply because of its impressive provenance. Granted, the identity of the manufacturer is also important for some durable goods, especially complex ones like cars or appliances, but often not for less complex ones. Most buyers of ping-pong tables, countertops, and other simple durable goods place little importance on provenance.

By contrast, in financial goods, the identity and creditworthiness of the issuer are vital to the product's appeal. Ownership stakes (stocks) in well-run corporations are very different from stocks of companies with dubious prospects. Loans to (bonds of) safe corporations are very different from bonds of risky or failing enterprises.

[8] Financial regulation in the United States has produced a multiplicity of regulators. Some countries have much simpler regulatory systems, with the commentary usually dividing them into single-peak systems, which have a single top financial regulator, and twin-peak systems, which have two, often one for capital adequacy and consumer protection and one for central banking. See, generally, Eric J. Pan, *Understanding Financial Regulation*, 2012 UTAH L. REV. (1897). The legislative reaction to the great recession, however, has been to move authority from independent agencies to the more political finance ministries; see generally Stavros Gadinis, *From Independence to Politics in Financial Regulation*, 101 CAL. L. REV. 327 (2013).

[9] The financial goods that banks offer are bank accounts and certificates of deposit. Life insurance companies offer variable annuity and variable life insurance policies.

[10] A contracting party can refuse performance by someone other than the counterparty in specific circumstances. 29 WILLISTON ON CONTRACTS § 74:27 (4th ed. 1990) ("Contractual duties are . . . not delegable if they involve the personal qualities or skills of the obligor, in the absence of consent by the obligee" or "unless prohibited by statute, public policy or the terms of the contract" [citations omitted]).

So central is the identity of the issuer in financial goods that the notion of buying a share of stock or a bond of an unnamed corporation is strange. Rather, because retail investors cannot monitor issuers (effectively, study the provenance of stocks), they often invest via mutual funds or other professionally managed pools.

iii. Seller and Buyer Mix

In markets for real goods, most businesses only sell items to the public rather than both buy from the public and sell to it. Few are the stores for used electronic games, used CDs, used books, and antiques. Those merchants are not merely sellers, but rather *dealers* because they both sell and buy significant amounts of their merchandise. As consumers of real goods, we interact mostly with sellers. Furthermore, the final sellers that consumers meet may conceal many more. Looking behind a good can take us to the manufacturer who assembled the item, a cascading sequence of component sellers and more manufacturers, and the producers of the raw materials. Sellers dominate real markets.

In financial markets, the most visible participants sell and buy about equally. The stock markets, bond markets, and brokerage houses (the principal intermediaries) cater equally to investors when they are buyers as when they are sellers. The trading between investors is so active as to dwarf the other fundamental role of financial markets, which is to provide capital to corporate issuers. This bifurcation of the transactions where the sellers are the issuers and those where the sellers are subsequent buyers produces the misleading terms *primary* markets, where issuers sell securities to investors, and *secondary* markets, where investors exchange securities with other investors. The misleading nature of the terms *primary* and *secondary* markets is that they suggest different locations, but this tends not to be true. The NYSE and the NASDAQ are markets for both types of transactions. The terminology would be clearer if it focused on the transactions rather than the markets. The transactions have a different function, and their regulation is very different depending on whether the transactions are primary (issuers selling to investors) or secondary (trades between investors).

iv. Bid-Ask Spreads

The term *bid-ask spread* comes from financial markets, but it applies to real markets as well. It originates from the practice of calling the price at which a dealer is willing to buy a security the "bid" price and the price at which the dealer is willing to sell the same security the "ask" price. Bid-ask spreads are important for understanding the behavior of the players in financial markets. Therefore, recognizing how small financial bid-ask spreads are compared to real ones is important.

The relatively few dealers who operate in markets for real goods exhibit a large difference between their bid and their ask. Used bookstores that ask $2 to $6 for used

paperbacks might bid only $0.25 to buy such paperbacks. Music stores that sell used CDs for about $8 rarely bid more than $2 to buy them. As a percentage of the ask price, these bid-ask spreads exceed 75%. The spreads on used cars can be several thousand dollars. They are not quite so large in percentage terms as those on books and CDs, but they can still easily exceed 20% of price.[11]

Financial bid-ask spreads are hair thin by comparison. Stocks can have bid-ask spreads of a few cents or even just one cent.[12] The giant mutual fund firm Vanguard posts the average bid-ask spread for its exchange-traded funds, which reaches as low as 1 cent and 0.02% of price.[13]

The causes of the vast difference between the bid-ask spreads in real and financial markets are many and not fully understood.[14] Primary causes include the expense of handling tangible goods, the cost of their storage, the risk that natural events may deteriorate their condition, the lower degree of trading activity, and the risk that a delay in reselling may expose the dealer to unforeseen adverse price movements. Dealers in financial goods do not have to spend anything on handling or storing their goods because nowadays they are intangible – electronic entries rather than the old paper certificates of stock ownership. The dealers do bear some risk that price may

[11] The price a used car dealer is willing to pay for a used car may be thousands of dollars lower than the price the dealer asks for the same car. For example, in April 2013, the Kelley Blue Book reported the price to sell to a dealer a 2010 Ford Mustang coupe in excellent condition as $12,584. The amount that CarMax.com asked for the cheapest one it had on sale was $15,998, which is a low estimate because its condition may not be excellent. As a percentage of the ask price, this bid-ask spread of more than $3,000 is much smaller than that of used books or CDs, but it is still more than 21%.

[12] For example, on the morning of May 8, 2013, Goldman, Pfizer, Home Depot, Merck, Ford, Citigroup, Microsoft, Google, and Apple had an average spread of 0.04%:

Symbol	GS	PFE	HD	MRK	F	C	MSFT	GOOG	AAPL
Bid	$150.13	$28.91	$75.38	$45.35	$14.20	$48.66	$32.90	$863.96	$462.85
Ask	$150.17	$28.92	$75.39	$45.36	$14.21	$48.67	$32.91	$864.97	$463.01
Spread	0.03%	0.03%	0.01%	0.02%	0.07%	0.02%	0.03%	0.12%	0.03%

A statistical study under a previous trading technology estimated the bid-ask spreads in 1998 at around 1% for the NYSE and 1.46% for the NASDAQ. See Hendrik Bessrminder, *Issues in Assessing Trade Execution Costs*, 6 J. Fin. Markets. 233, table 2 (2003) (estimating the half-spread on the NYSE as 0.486% and on the NASDAQ as 0.739%).

[13] Average Bid/Ask Spread, Vanguard, available at https://advisors.vanguard.com/VGApp/iip/site/advisor/investments/bidaskspread (accessed February 15, 2017).

[14] While the research into the components of the bid-ask spread in finance is enormous, the bid-ask spread of real goods is almost ignored. A search for bid-ask spreads in a publication's abstract in the Econlit database of ProQuest on June 7, 2013, produced hundreds of hits (895 articles and 12 books). Only one appears to address nonfinancial goods. Not surprisingly, that study discovers a component of the bid-ask spread that does not exist in financial markets, one related to the probability that eligible buyers and sellers meet. See Brian W. Buckles, *Liquidity Dynamics in Commercial Real Estate*, 14 J. Real Est. Portfolio Mgmt. 307 (October 2008).

move *against* them,[15] but two phenomena mitigate this risk. First, the fast pace of securities trading means that dealers can unwind their positions and shorten their exposure to such a risk. Second, financial markets let dealers *hedge* – neutralize – their risk by taking positions in other securities that can cancel out the risk the dealers want to avoid.[16] Traders finding themselves with too much of a stock, for example, can trade in futures or options to cancel that position out. A car dealer with too many SUVs may not have a way to mitigate the risk of a drop in demand for SUVs.[17]

The small size of bid-ask spreads in financial markets is both a cause and a consequence of the vast volume of trading that occurs in these markets.[18] The narrow bid-ask spread facilitates the trading of financial goods, and the intense trading activity enables market makers to cover their costs with a narrow spread. The physical nature of tangible goods prevents markets for real goods from accelerating to the trading intensity of financial markets. Trading one's car on a weekly basis would be a hassle, but many investors hold stocks or bonds for less than a week.[19]

In sum, markets for real goods are characterized by an enormous variety of types of goods offered at many markets, the usual irrelevance of the seller's identity, the fact that they consist mostly of sellers, and substantial bid-ask spreads. By comparison, in financial markets, the types of goods are no more than

[15] A price movement *against* a trader is one that produces loss for the trader. Thus, if a market maker has bought heavily in a security, a movement against the market maker is a drop in the price. Vice versa, if the market maker has sold, it would be a rise in price.

[16] *Hedging* means engaging in transactions that neutralize risk; to avoid confusion, note that we will soon also encounter the misleadingly named "hedge funds," which do not cancel out risk but rather take risk to provide their investors with higher returns. The failure of Lehman Brothers revealed a stark example of good hedging. When it entered bankruptcy on September 15, 2008, Lehman had open trades in interest-rate swaps corresponding to $9 trillion of underlying loans, but Lehman's exposure was hedged. Its clearinghouse was able to apply Lehman's hedges and liquidate the entire portfolio without taking any loss. The clearinghouse returned the majority of Lehman's security deposit to the bankruptcy estate. Julia Lees Allen, *Note, Derivatives Clearinghouses and Systemic Risk: A Bankruptcy and Dodd-Frank Analysis*, 64 STAN. L. REV. 1079 at 1090 (2012) (describing that the clearinghouse only had to use 35% of Lehman's margin in liquidating Lehman's $9 trillion of swaps). See also Douglas G. Baird & Edward R. Morrison, *Dodd-Frank for Bankruptcy Lawyers*, 19 AM. BANKR. INST. L. REV. 287 (2011) at 312–14 (discussing the Lehman experience liquidating within two weeks 80% of the more than 1.5 million transactions it had when entering bankruptcy).

[17] For example, careful car dealers who find their stock disproportionately populated by SUVs might be able to mitigate a downturn in SUV demand that is caused by the rise of gas prices by buying gas futures. This would not protect, however, from a downturn in SUV demand for other reasons, such as rollover scares or fashion changes.

[18] For example, the average *daily* trading volume on the NYSE between January 3, 2017 and January 31, 2017, was over $45 billion. New York Stock Exchange, *Daily NYSE Group Volume in NYSE Listed*, available at www.nyxdata.com (archived at https://perma.cc/PYR3-DENJ) (accessed February 15, 2017).

[19] Indeed, the phenomenon of day trading involves systematic buying and selling in a single day. See, e.g., Justin Kuepper, *Day Trading Strategies for Beginners*, INVESTOPEDIA, June 25, 2011, available at www.investopedia.com/articles/trading/06/daytradingretail.asp.

a handful, the markets are few, the identity of the issuer is crucial, dealers rather than sellers predominate, and bid-ask spreads are hair thin. The difference between a farmers' market and an electronics store is minuscule compared to their difference from financial markets. Let us take a closer look at the structure of the financial markets central to this book: stock markets.

B. THE STRUCTURE OF STOCK MARKETS

To gain a basic understanding of stock markets, consider three aspects: their basic operation with a focus on the example of the NYSE, the cast of characters that populate them, and finally, the type of media attention they draw.

i. Basic Function

Stock markets stand between investors as both sellers and buyers but also between corporations as issuers of stocks or bonds and investors as buyers. Technology has changed the trading mechanics dramatically, from handwritten agreements to telegraphic transmissions and finally to today's automated trading. Figure 1.1 illustrates this transition. While the NYSE is now part of a group of stock markets and has international and domestic competition that erodes its dominance, it remains the most active by trading volume[20] and the largest by capitalization.[21]

Consistent with the earlier observation that new types of financial goods are not introduced frequently, stocks only appeared and started changing hands in the seventeenth century (most of human history knew no trading of financial goods; to the extent that debt was transferrable, trading debt preceded the trading of stocks).[22] The "Buttonwood Agreement" that gave birth to the NYSE was signed more than a century later, in May 1792.[23]

The central features of the modern NYSE trading environment are the kiosks that house the "designated market makers" (previously "specialists") to whom the NYSE

[20] The latest available annual trading volume of over $11 trillion in 2004 makes the NYSE twice as active as London, almost three times as Tokyo, about seven times as Frankfurt, and about 30% more active than the NASDAQ. See *Global Comparison of Annualized Value of Trading*, NYSE FACTBOOK HISTORICAL STATISTICS, available at http://www.nyxdata.com/nysedata/asp/factbook/viewer_edition.asp?mode=table&key=2215&category=14 (archived at https://perma.cc/J92R-EWTJ; accessed February 15, 2017).

[21] The NYSE had almost twice the capitalization of the NASDAQ in 2014, $16.6 trillion to $8.5 trillion. See www.diffen.com/difference/NASDAQ_vs_NYSE (accessed February 15, 2017. The largest capitalizations, in data from the World Federation of Exchanges for December 2016 start with the NYSE at $19.5 trillion, NASDAQ at $7.8, followed by Japan at $5, Shanghai, China, at $4, London at $3.5, Euronext at $3.5, Shenzhen, China at $3.2, and Hong Kong at $3.2. Data from World Federation of Exchanges, www.world-exchanges.org.

[22] See, e.g., Andrew Beattie, *The Birth of Stock Exchanges*, INVESTOPEDIA (February 26, 2009), available at www.investopedia.com/articles/07/stock-exchange-history.asp.

[23] Jerry W. Markham, A FINANCIAL HISTORY OF THE UNITED STATES at 139 (M.E. Sharpe, 2002).

FIGURE 1.1 From trading under the buttonwood tree to the floor of the NYSE before and after electronic trading.

assigns the privilege and obligation of "making the market."[24] *To make the market* for a security effectively means to stand ready to buy or sell the security if a trader cannot find a counterparty. Each designated market maker is the only official market maker responsible for a handful of stocks on the NYSE. Other exchanges use different trading mechanisms. On the NASDAQ, for example, a security may have multiple market makers.[25] Exchanges need not organize around market makers. In exchanges without market makers, traders must find counterparties for their transactions.

The profit of the market maker comes from having the bid lower than the ask. At turbulent times when prices change fast, the market maker is exposed to the risk of buying before a drop in the price or selling before a rise. Not surprisingly, the stock market may suspend trading in response to major releases of information during trading hours until traders have had the opportunity to digest the new information.[26]

[24] The NYSE rules define designated market makers as those approved by the exchange (NYSE Rule 2(i)). NYSE Rule 104.10 adds detail to the role of the market maker, including an obligation to "maintain . . . a fair and orderly market" by "engag[ing] . . . in dealings for his or her own account when lack of price continuity, lack of depth, or disparity between supply and demand exists" that translates into requiring the market maker to post a bid if no public buy orders exist and an ask if no public sell orders exist.

[25] See, e.g., Eugene Kandel and Leslie M. Marx, *NASDAQ Market Structure and Trade Patterns*, 45 J. FIN. ECON. 61–89 *passim* (1997).

[26] See, e.g., NYSE Rule 123D (establishing the procedure for halting trading pursuant to a warning by the listed corporation about impending information), available at rules.NYSE.com (accessed February 15, 2017). Notable opinions about securities fraud that we will discuss involve a suspension of trading when the fraud comes to light. See, e.g., *Dirks v. SEC*, 463 US 646, 650 (1983) ("[The information Dirks brought to light] led the New York Stock Exchange to halt trading on March 27 [1973 in the stock of Equity Funding of America].")

Retail investors do not have direct access to stock markets. Rather, they interact with the market through financial intermediaries such as brokerage houses, mutual fund companies, or banks. Financial firms, by contrast, often have direct access to the exchange so that they can trade for their customers or on their own account.[27]

Recall also that stock markets function as both primary and secondary markets.[28] The distinction between primary and secondary financial market transactions is important from two perspectives. First, the regulation of issuances is vastly different from the regulation of subsequent trades. Second, the primary markets play an important economic function: issuances perform the capital-allocation function of the markets by moving funds from investors to businesses. Secondary trades have a merely indirect capital-allocative function.[29] Nonetheless, secondary markets are essential to make purchases in primary markets appealing by offering a venue for subsequent sales. Investments that cannot be sold are pointless.

ii. The Cast of Characters

Understanding the flurry of activity in stock markets requires knowing what roles their main participants play. While market makers stand at the center of stock market activity, the traders who swarm around them divide according to various categorizations.

From the perspective of finance scholarship, traders divide into three groups according to motivation: life-cycle or uninformed investors, rational speculators or informed traders, and fad chasers and irrational or noise traders.[30] Of these, life-cycle investors are the least active. They are the millions of passive investors who store value in direct stock ownership, mutual funds, and variable annuity or life insurance policies. Many may not even realize that they have become traders by merely participating in their workplace retirement fund, where a small fraction of every paycheck becomes a small purchase of a mutual fund. These are life-cycle investors because their trading patterns follow their life cycle. They buy during their earning years and sell when retiring or undertaking other major expenses. Rational speculators or informed traders are those who tend to be active and let proper valuation methods drive their trading. Fad chasers and irrational or noise traders are those who trade on information that is not truly relevant or try to ride waves of sentiment or

[27] See, e.g., Larry A. Bear & Rita Maldonado-Bear, *The Securities Industry and the Law*, 26 J. Banking & Finance 1867–88 *passim* (2002).

[28] See Section A.iii.

[29] However, the allocative effect of secondary securities markets can be quite important. For example, firms can use their securities as currency to acquire other firms.

[30] See, e.g., Nicholas L. Georgakopoulos, *The Statistics of Legal Infrastructures*, 8 Amer. L. & Econ. Rev. 62–78 *passim* (2006) (reviewing the literature). See, e.g., J. Bradford DeLong, *The Survival of Noise Traders in Financial Markets*, 64 J. Business 1 (1991).