Chapter 2

What Securities Markets Do—And For Whom

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What Securities Markets Do—And For Whom

Securities markets have five basic functions in a capitalistic economy:

1. they make it possible for corporations and governmental units to raise capital;
2. they help to allocate capital toward productive uses;
3. they provide an opportunity for people to increase their savings by investing in them;
4. they reveal investors' judgments about the potential earning capacity of corporations, thus giving guidance to corporate managers; and
5. they generate employment and income.

How important are these functions, and how well do securities markets, in 1990, perform them? Who benefits?

DO SECURITIES MARKETS DO A GOOD JOB OF RAISING CAPITAL?[1]

Corporations raise new capital by issuing stock (i.e., selling ownership shares) or by borrowing through bonds, notes, and related debt instruments.[2] State and local governments and the U.S. Government also issue debt securities.

Both stocks and bonds can be sold to investors directly or through underwriters. This is the primary market. It converts household and business savings into investments, to the benefit of both the savers and the corporation.[3] The secondary securities markets, the subject of this report, are for the reselling of stocks and bonds. People would be less likely to invest in securities, even with high dividends or interest, without assurance that they can sell their investments for cash when they wish to.

A decision about which stocks or bonds to buy is supposedly based on information that an investor has about the issuing fro's assets, markets and customer base, future earnings and growth potential, and management skills. Past performance is therefore important in evaluating established firms. Evaluation of new firms is, by comparison, difficult. For startup firms, public stock and bond offerings are often not an effective mechanism for raising capital, and venture capital specialists are more likely to provide it.[4] At some later point, successful growing firms often move to public sale of equities or bonds.

A market, whether physical or electronic, is a meeting place for potential buyers and sellers. A market that attracts many buyers and sellers is said to be "liquid" or to have liquidity. In a liquid market, selling or buying can be done with minimal effect on the prevailing competitively established price. The advantage of a liquid market for customers is ''immediacy, ' the ability to sell quickly when the customer needs his assets, or buy quickly when there is a chance for profit, and to clear and settle the trade quickly. Some markets attempt to assure immediacy by designating certain traders as market-makers, with an affimative obligation to buy shares at a price close to the last sale price, or to sell from inventory when there is an eager buyer. Other markets depend on the interaction of bids and offers from customers and market professionals to provide liquidity and immediacy.

Another desirable characteristic of securities markets is "efficiency." This means that changes in investors' collective judgment about the fundamental value of corporations are accurately and swiftly reflected in the prices at which stocks and bonds are bought and sold, with minimum distortion from transaction costs, regulations, or other external factors. Information technology should speed up the process of registering changes in investors' judgment, and both information technology and deregu-

[1]Parts of this chapter draw on an OTA contractor report: James I.,. Butkiewicz (university of Delaware), *The Role of the Stock Market in the U.S. Economy, May 3, 1989;* and on a workshop by the same name held at OTA on Apr. 5, 1989.

[2]The bond is a contract obligatingthe borrower to repay the debt principal at aspecified time and also tomake interest payments to the bondholder at a specified rate and time.

[3]Alternatively, savings may go into other kinds of investment (e.g., real estate), or into various kinds of bank accounts which banks then use to make loans to individuals, corporations, or governments. Corporations also use retained earnings and depreciation as sources of capital for growth.

[4]The U.S. Small Business Administration is studying the feasibility of special regional stock exchanges to handle issues of small companies. The International Stock Exchange in London set Up such a market for small or startup firms in 1987; it trades stocks of about 50 firms.

lation should tend to lower transaction costs. Some people believe, however, that as a result of technology and deregulation market prices have recently become too volatile, and that transaction costs should be deliberately raised by taxing, to discourage "in and out" trading.

New equity issues in public markets are not the major source of finding for corporate investments From 1952 through 1981, the proportion of funds raised by American non-financial corporations through stock issues ranged from an occasional high of 7 percent to a low of 0.2 percent in 1980-81. From 1982 through 1988, new stock issues made no net contribution to capital formation. As corporations bought back and withdrew stock, there was in fact a net loss of 14.7 percent. The percent of corporate funds exclusive of bank loans supplied by bonds and notes grew from 10.5 percent in 1980-81 to 19.6 percent during the rest of the 1980s. The proportion of all corporate funds supplied by both equity and debt securities averaged about 16 percent from 1952 to 1982, and has been much less since then.[6]

This has led some people to believe that financial markets "may have deteriorated over time in performing their social functions of spreading risk and efficiently guiding the allocation of capital."[7] John Maynard Keynes said, over 50 years ago, "As the organization of investment markets improves, the risk of the predominance of speculation does increase. Today, some critics perceive that more efficient markets (in part a result of information technology) have encouraged a kind of speculation that drives stock prices away from fundamental values and leads to misallocation of financial resources. Other people argue, however, that securities markets work far better than they have in the past, and without them the growth of today's multinational enterprise would not be possible.

DO STOCK MARKETS DO A GOOD JOB OF RESOURCE ALLOCATION?

In addition to facilitating capital formation, securities markets are assumed to allocate capital to its most productive uses, by allowing stocks (and other securities) to compete for the investor's money. Stock market prices theoretically reveal the relative values placed on ownership in a corporation (' 'price discovery"). Market efficiency in performing this function is essential, according to many main-stream economists. They say that a stock price is the collective best estimate by investors of the present value of future earnings, reflected in prices that are set by people bidding against each other, each using incomplete but overlapping information. The interaction of supply, demand, and price is assumed to be the best signal for allocation of resources.

Taxes and regulations affect market pricing by altering the rewards for risk taking. When that effect is deliberate and desired, tax and regulatory policies are working as intended. When the outcomes are unintentional and undesirable, taxes and regulations may cause capital to be misallocated. Efficient-market theorists tend to see most market regulations and taxes as harmful.

Changes in stock prices are also affected dramatically by mergers, acquisitions, takeovers, and leveraged buyouts that may have unpredictable affects on corporate values and corporate performance for reasons not related to market valuation.

Efficient-market theory emphasizes the importance of information in market behavior. It is therefore not considered possible to "outperform the market" over time, even by studying all available information, because, in an efficient market, all information about stock value is presumably already reflected in market prices. The only "special"

[5]In the first 6 months of 1989, 1,955 new securities issues were offered on American domestic markets, valued at $142 billion; but only 4 percent were initial public offerings of new stock. Junk bonds accounted for 11 percent, other bonds for 40 percent, convertible debt and preferred stock for 5 percent, and mortgage- and asset-backed securities (which are pools of loans packaged and resold by banks) accounted for the other 40 percent. Kevin Winch, "Growing Risk in Corporate Finance," *CRS Review*, October 1989, pp. 20-21. Data from Investment Dealers' Digest. This does not count the implicit change in net equity from earnings retention, used as a method of shielding dividends from higher income tax rates.

[6]Board of Governors of the Federal Reserve System, *Flow of Funds Accounts*. During this period the percent of corporate funding supplied by retained earnings and depreciation ranged from a low of 62 percent (1970-73) to a high of 81.3 percent (1982-88), with the rest accounted for by loans.

[7]Lawrence H. Summers (Harvard University) and Victoria P. Summers (Hale Dorr), "When Financial Markets Work Too Well: A Cautions Case for a Securities Transactions Tax," presentational the Annenberg Conference on Technology and Financial Markets, Washington, DC, Feb. 28, 1989, p. 2.

[8]John Maynard Keynes, Th. *General Theory of Employment, Interest, and Money* (New York, NY: Harcourt Brace, 1936).

information is knowledge that is available only to "insiders' (i.e., corporate officials, regulators, etc.), in which case its use is illegal. Many large investors, because they believe that one cannot outperform the market except in very brief instances, hold "indexed" portfolios that contain all of the stocks used in computing the Standard and Poor 500 index or another standard market index. (The index is the weighted average price of a basket of selected stocks that are assumed to represent the market as a whole.) The indexed portfolio, by definition, should appreciate or depreciate just as the overall market does. These investors may also use "passive" trading techniques aimed only at reflecting general market trends.

Some people dispute the claims that markets are efficient, that investor behavior is rational, and that the price investors are willing to pay represents any judgment about fundamental values.[9] Economist Joseph Stiglitz said the market is "a gambling casino for the rich,"[10] and John Maynard Keynes likened it to a beauty contest in which:

> . . . it is not a case of choosing which [faces] are redly the prettiest, nor even those which average opinion genuinely thinks the prettiest [but] . . . we devote our intelligences to anticipating what average opinion expects average opinion to be.[11]

Many empirical studies, especially since the market crash of 1987, have cast doubt on efficient market theory.[12] They ask whether corporate assets really declined in value by one-third between October 13-19, or what new information caused investors to collectively revise their previous judgment so quickly. Alternative explanations of "excessively volatile" stock prices vary from large swings in the discount rate that people use in valuing future earnings streams, to the blind following of perceived trends in general investor behavior, to mass hysteria, or the actions of those who seek to profit by anticipating changes in "market psychology. ' '[13]

Many people have concluded that price jumps caused by large block trades, by new computerized trading strategies, and by professional "speculators" make stock prices excessively volatile. This, they say, endangers financial systems, causes instability in the economy, and imposes unnecessary risks on small investors. Others blame excessive volatility on arbitraging, hedging, and manipulation (although critics sometimes confuse these behaviors in discussing volatility). These arguments are considered in chapters 3,4, and 5, which describe stock, futures, and options markets.

There is, in short, little consensus about whether investor behavior, even in the extreme circumstances that result in a market crash, is rational or irrational. If investors do behave irrationally a significant portion of the time, then prices may not reflect fundamental values, and investment decisions may be based on inappropriate prices. But even if stock markets are efficient and investors behave rationally, the allocation of investment capital is affected by more than securities prices. It is also affected by banking decisions, interest rates, the mortgage market, and the domestic money markets;

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[9]See Michael C. Jensen et al., "Some Anomalous Evidence Regarding Market Efficiency," *Journal of Financial Economics 6, 1978;* Robert J. Shiner, "Do Stock Prices Move Too Much To Be Justified by Subsequent Changes in Dividends?" *American Economic Review 71,* June 1981, pp. 421-436; Lawrence Summers, "Does the Stock Market Rationally Reflect Fundamental Values," *Journal of Finance 41,* July 1986, pp. 591-601. There are many articles by economic historians on 'bubbles,' panics, and crashes in the past, but no consensus is apparent on the extent of investor irrationality. A number of recent papers along this line were presented at a Salomon Brothers Center Conference on *Crashes and Panics in Historical Perspective, New* York University, Oct. 19, 1988.

[10]Joseph Stiglitz, "Comment on Robert Schiller,' ' *Keynes' Economic Legacy: Contemporary Economic Theories,* James L. Butkiewica et al. (eds.) (New York, NY: Praeger, 1986).

[11]John Maynard Keynes, op. cit., footnote 8.

[12]The most vocal proponents of the irrationality of markets at present are Prof. Robert Schiller of Princeton and Prof. Lawrence Summers of MIT. See op. cit., footnote 9. David M. Cutler, James M. Poterba, and Lawrence H. Summers examined news events on the 20 days over the last 50 years when the largest market moves occurred and concluded that it was not possible to relate the events convincingly to price movement. ("What Moves *Stock Prices, ''Journal of Portfolio Management, 1989.) Richard* Roll examined the futures market in frozen orange juice in the context of predictions about the weather in Florida and reached similar conclusions. ("Orange Juice and Weather,' *American Economic Review, 1984,* pp. 861-880.) Kenneth French and Richard Roll compared price movements during and between trading sessions and found no evidence that they reflected information bearing on fundamental values. ("Stock Return Variances: The Arrival of Information and the Reaction of Traders, " ***Journal of Financial Economics, 1987,*** pp. *5-26.)*

[13]A psychologist argues that panics become *almost* inevitable when bull markets continue for a long time. Participation in markets becomes very high and "there are no new believers to be recruited"; "slight tilts in trends will destroy faith that a trend will continue, " causing investors to flee from the market. Donald C. Hood, "Toward Understanding Stock Market Movements: A Marriage of Psychology and Economics, " presented in a Science and Public Policy Seminar held by the Federation of Behavioral, Psychology@ and Cognitive Sciences, Washington, DC, July 1, 1988.

and increasingly, it is affected by markets, currencies, economic conditions and policies in other countries. At best, increased efficiency of the stock market may not improve, or may only slightly improve, the allocation of corporate capital.

DO SECURITIES MARKETS BENEFIT ORDINARY AMERICANS?

A third function of securities markets is to provide opportunities for people to invest and increase their savings, and thus to encourage overall savings and investment. Public policy has traditionally focused on encouraging small investors by protecting them against market fraud and manipulation. But trading on stock exchanges is increasingly dominated by large investment funds. Only about 18 percent of trades in 1988 were made on behalf of individual investors. 14

Most stock—about 59 percent—is still owned directly by individuals and households.[15] Even more people own stock indirectly through pension funds and mutual funds. The rest is owned by banks, insurance companies, foreign owners, and broker-dealers.

It may be misleading to think of individual investors as ''small investors. While about 19 percent of American households own some stock,[16] 43 percent of stock shares and31 percent of mutual fund shares is owned by wealthy families-those with incomes higher than that of 99.5 percent of American households.[17]

The largest group of individual investors-which is, however, shrinking in numbers-are those who have a few thousand dollars invested in securities; this generally does not represent a large proportion of their household assets. Most of these investors probably seldom trade their stocks; some trade them almost as a "dabble", not as a livelihood. A much smaller class of individual investors have securities that average $75,000 to $100,000; these wealthier Americans are probably much more frequent and sophisticated traders.

Small investors have been leaving the stock market for about 20 years, a trend that accelerated in 1987. In early 1989, individual investors were net sellers of stock at the rate of an average 3.5 *million* shares per day, according to the Securities Industry Association. In the last 5 years, individual investors decreased their direct holdings by more than a third.[18] The "small investor" will increasingly be found mostly under the umbrella of large investment funds with professional investment managers, and individual investors still directly in the market are increasingly less likely to be the traditional small investors.

Pension funds now give more Americans, and less wealthy Americans, a stake in the markets.[19] Pension plans cover more than 57 million people. Before the late 1940s, pension plans were rare, and pension reserves did not show up in accounting for household assets. Even in 1950, pension reserves constituted only 2.6 percent of household assets. By 1987 this had risen to 15.1 percent of household net worth.[20] In 1955, pension plans owned only 2 percent of corporate securities, in 1988 they owned

[14]Securities Industry Association, Trends, Mar. 16, 1989. This is an estimate; other estimates vary according to how shareholder are categorized.

[15]According to the Securities Industry Association in its publication *Trends (Mar.* 16, 1989), direct individual ownership of equities fell from 82.2 percent in 1968 to 58.5 percent in 1988. Ownership of securities, both direct and through mutual funds, makes up a decreasing share of household assets; it was 10.6 percent in 1988, compared to over 18 percent in 1958 and 1969. Bonds constituted 6 percent of household assets in 1988, compared to 6.7 percent in 1958 and 6.8 percent in 1969. Edward N. Wolff, "Trends in Aggregate Household Wealth in the United States, 1900- 1983," *The Review of Income and Wealth 35(l),* March 1989:1-29.

[16]Robert B. Avery (Cornell University) and Arthur B. Kennickell (Federal Reserve Board), "Rich Rewards,' *American Demographics,* June 1989, pp. 19-22. Based on 1983 and 1986 Surveys of Consumer Finance conducted by the University of Michigan, Survey Research Center, for the Federal Reserve Board. The median value of stock owned by households was reported as $6,000, and the average value as $81,300. Stocks, on average, constitute about 9 percent of household assets, according to this report.

[17]For comparison, the top half of 1 percent of families b, income distribution own 3 percent of savings accounts, 5 percent of owner-occupied houses, 14 percent of IRA and Keoghs, 28 percent of corporate and Treasury bonds, and69 percent of trust accounts. Robert B. Avery and Gregory E Elliehausen, "Financial Characteristics of High-Income Families," *Federal Reserve Bulletin 72,* March 1986, pp. 164-175. This data is probably from 1985; since small investors have been leaving the markets at a high rate since then, the concentration of ownership in the top 0.5 percent of households is probably understated.

[18]Michael C. Jensen, ''Eclipse of the Public Corporation, *Harvard Business* Review, September-October 1989, p. 61.

[19]As first pointed out b, Peter Drucker, Th, *Unseen Revolution: How Pension Fund Socialism Came to America* (New York, NY: Harper & Row, 1976).

[20]Mark J. Warshawsky, ''Pension Plans: Funding, Assets, and Regulatory Environment, " *Federal Reserve Bulletin 74,* November 1988, p. 725.

25 percent. Pension plan investments have become a major force in the securities markets.[21]

Two-thirds of these pension plan investments, however, are held by defined-benefit plans. When the market value rises, this reduces the contribution the corporation has to make to the plan, but does not increase the wealth of the workers, whose retirement benefits are already specified. Such plans cover 72 percent of all covered workers. Only one-third of the securities owned by pension plans (approximately 9 percent of all securities) are owned by defined-contribution pension plans, in which workers directly own the assets and thus benefit directly by market gains. Defined-contribution plans also make those people directly vulnerable to market declines. The proportion of people covered by defined-contribution plans is growing rapidly and thus the number of people potentially directly affected by market losses will grow.

Policymakers and regulators must take these complexities into account. The traditional public policy focus on "the small investor' may not in the future be as realistic or useful as in the past. The interests of securities owners and of securities traders are not always the same. The interests of wealthy speculators and small investors are not always the same. The needs of individual investors and investment fund money managers may be different. Technology for trade support may not meet the needs of these groups equally. Exchange rules and government regulations may not affect them the same way. Understanding the benefits and costs to all parties is important in framing public policy.

DOES PUBLIC OWNERSHIP IMPROVE CORPORATE MANAGEMENT?

A fourth function of securities markets is to control corporate management, or provide it with guidance. First, the prices at which shares trade in the market should indicate to managers the public's judgment about the earnings prospects of the corporation and thus about the quality of their management. Second, shareholders have the rights of owners to exercise control through voting in shareholder meetings and elections. The question is, how effective are these controls now?

Monitoring management performance is difficult and time-consuming. Since each shareholder has one voice among many thousands, there is a vanishingly small amount of leverage, and little incentive for most shareholders to vote. One school of thought says that the separation of ownership and control in publicly held corporations may result in a misallocation of resources and is a serious problem.[23] Among these critics, some see a basic conflict of interest between shareholders and corporate managers. It is assumed to be in the shareowners' interest to maximize company profits and pay them out as dividends; and in the interests of corporate management to enlarge the corporation through developing new products, entering new markets, spawning new divisions, acquiring other companies, investing in research and development, etc. This may defer the paying out of profits to shareholders. Some argue that managers will seek to further the long-term growth of the corporation from a spirit of healthy entrepreneurship, or from a feeling of responsibility to the workforce and the surrounding community; others say that managers will be *motivated* chiefly by the need to justify large salaries or bonuses for themselves. In either case, shareholders are (according to this school of thought) deprived of immediate possession of their profits.

Takeovers are seen as the way to enforce these alleged rights to immediate profits. In a takeover, an individual *or* group acquires enough shares to exert control, install new management, and change corporate policy. After a takeover, ''excess" corporate resources-labor, facilities, products, divisions, or subsidiaries-can be sold and the proceeds paid out to shareholders for re-investment.

Critics of takeovers say that the fear of takeovers discourages managers from investing in long-range productivity improvements such as research, development of new products, and ventures into new markets. The threat of a takeover encourages strategies aimed at short-term profits rather than long-

21 ''The Power of the Pension Funds,'' *Business Week,* Nov. 6,1989, p.154.

22 Mark J. Warshawsky, op. cit., footnote 20, pp. 717.?

23 Adolf A. Berle and Gardiner C. Means were perhaps the first to identify this problem, in *The Modern Corporation and Private Property* (Chicago, IL: Commerce Clearing House, 1932). See also Hal R. Varian et al., "Symposium on Takeovers,'' *Journal of Economic Perspectives 2,* Winter 1988, pp. 3-82.

term growth that would strengthen American industry's competitive position in world markets. At their worst, takeovers may destroy jobs, hurt local communities, and often weaken or destroy the corporation. At least 39 States have passed laws to discourage hostile takeovers.[24]

There is disagreement about whether takeovers result in more efficient and profitable firms. There is also little agreement as to whether or when a corporate emphasis on short-term profits, if it exists, is attributable to fear of takeovers.[25] A short-term focus can also result from high real interest rates.[26] Advocates and critics of takeovers often agree, however, that securities markets may not exert strong discipline over very large corporations. This may be due to the proportionate decrease in the influence that can be exerted by even the larger shareholders, as corporations and corporate assets have increased in scale. Another reason maybe that the indexed portfolios and program trading strategies of large investment funds have blurred the relationship between stock prices and public judgments about the fundamental value of corporations. Some people advocate public policy incentives to encourage the long-term holding of large blocks of stock and the active exercise of shareownership rights in corporate governance by large institutions (e.g., pension finds' corporate sponsors), or other mechanisms for stronger shareholder control.

An internal defense against acquisition or takeover is the ''buyout, '' in which a corporation buys back much of its own stock, removing it from the public market. Most buyouts are highly leveraged, that is, they are accomplished by borrowing heavily and committing the corporation to very high interest payments. The acquired corporation will often sell assets, pare down staff and workforce, cut other costs, and pay out the proceeds as interest and as dividends to the remaining (internal) shareholders. Leveraged buyouts are usually funded by issuing "junk bonds''—i.e., debt that is not given an investment-grade rating, but carries a high interest rate. '[27]

Michael Jensen claims that "privatization of equity' is becoming the central characteristic of corporate activity today, signaling the "eclipse of the public corporation."[28] This privatization is being carried out by the switch to public and private debt instead of equity, by the concentration of shareownership in large institutional investors, and even more strikingly by the wave of hostile takeovers and leveraged buyouts. If Jensen is right that "privatization of equity" is the wave of the future, then the role of securities markets in the American economy could decline in importance even more. This is a minority viewpoint, but it is likely to be widely debated in the future.

DOES STOCK MARKET IMPROVEMENT ENCOURAGE SAVINGS AND INVESTMENT?

The behavior of the stock market is assumed to influence the level of investment and possibly the

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[24] Investor Responsibility Research Center, Washington, DC.

[25] David J. Raverschraft and F.M. Scherer studied 95 firms before and after takeovers, and found that their profitability did not significantl ("Life After Takeover," *Journal of Industrial Economics 36,* December 1987, pp. 147-156.) See also, F.M. Scherer, "Corporate Takeovers: The Efficiency Arguments," *Journal of Economic Perspectives 2,* Winter 1988, pp. 69-82. Frank R. Lictenberg and Donald Siegel studied manufacturi establishments taken over from 1972 through 1981 and found that their productivity did increase significantly. ("Productivity and Changes in of Manufacturing Plants," *Brookings Papers on Economic Activity 3,1987,* pp. 643-673.) In subsequent studies they found that material employment growth in these acquired firms was less than industry averages, resulting in cost savings; that there was no significant difference in R&D em between acquired firms and industry averages; and that growth in wages and benefits was 12 percent lower in acquired than non-acquired fir Effect of Takeovers on the Employment and Wages of Central-Office and Other Personnel," National Bureau of Economic Research Working Paper No. 2895).

[26] Real interest rates are market rates less the expected rate of inflation. If one assumes that 'expected" inflation rates approximate real inflatio then real interest rates in the 1980s have still been higher than in recent decades. At a 5 percent rate of interest, the present value of a dollar of to be realized 10 years in the future is 61.4 cents. At a 10 percent rate of interest, it is only 38.5 percent. Thus long-term investments that seem rea at periods with relatively low interest rates, may not appear justified at periods such as the present, with higher interest rates.

[27] Junk bonds are sometimes considered "quasi-equity" because unlike conventional bonds, they are "less dependent on interest rates than on a given company's earning power and . . .on its ability to meet interest payments out of cash flow." "Junk Bonds: Last Resorts," *The Economist,* Sept. *2,1989,* p. 75. Companies with large debt and interest burdens are vulnerable to small setbacks as well as to general economic recessions, and m competitive disadvantage relative to other companies. The junk bond market grew very rapidly in the 1980s, to about $200 billion, but began rapidly in 1988 and 1989. Some companies that used junk bonds for leveraged buyouts were unable to either meet interest payments or refina debt.

[28] Michael C. Jensen, ''Eclipse of the Public Corporation,'' *Harvard Business Review,* September-October 1989, PP. 61-99.

savings rate.[29] The availability of capital for industry (and thus the cost of capital) is the product of the multiple decisions of individuals to save or to spend.[30] The American rate of saving is considered low compared to that in other developed nations, and personal saving has declined in recent years.[31] Many explanations have been offered for this: people may feel less need to save for retirement because of insurance coverage and pension plans; large purchases can be financed by borrowing rather than saving; the baby boom generation until recently was in the youthful low-savings phase of their lifecycle; and two-income households engenders confidence that reduces the need to save.

It maybe that saving in the United States is neither low or declining.[32] Economists count only private savings, not the purchase of a home, pension contributions, and insurance policies that many Americans think of as their life savings. Pension plans, insurance, and homeownership represent long-term, predictable investment, and public policies that encourage their growth might yield more capital for investment, in the long run, than a cut in the capital gains tax. Some people assume that increasing the income of upper-income households will tend to increase savings more than would income redistribution downward, which would tend to increase consumption. Others argue that the wealthy need not invest most of what they have in order to generate more income than they can consume, and therefore have relatively little incentive to seek productive investments.

The relationship between income, return on investment, and savings is not empirically well-established. The extent to which the saving rate is responsive to rates of return is still doubtful.[33] Continuing debate about the taxation of securities markets transactions or of income derived from securities markets cannot be resolved on these grounds. Nearly all of the possible public policy approaches to encourage saving and investment in productive capital are highly controversial from a social or political standpoint.

HOW MUCH EMPLOYMENT IS GENERATED BY SECURITIES MARKETS?

Gross revenues for the securities industry tripled between 1980 and 1986, reaching a high of $50 billion. Revenue was flat in 1987 and 1988, and probably declined in 1989. Employment for New York securities firms reached a high of 262,000 just before the 1987 crash, and declined to 227,000 by September 1989, a drop of 13 percent. There have been further cuts since then, accelerating with the bankruptcy of the large firm of Drexel Burnham Lambert in early 1990.[34] Total employment nationwide is estimated, on the basis of Labor Department and Census figures, at 641,000.

The National Association of Securities Dealers has 6,148 member firms, with 29,235 branch offices. These firms have altogether 438,701 registered representatives. The number of support staff is unknown, but total employment can be estimated at approximately 530,000. However, there is some double-counting between this and the earlier figure of 641,000. A loose estimate of 1 million jobs related to securities markets sounds realistic.

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[29] There are various economic models of investment behavior, including the neoclassical model, James Tobin's 'q theory of investment,'' the internal cash flow model, etc. The role of securities markets is explained somewhat differently in each model. For an econometric evaluation of these models, see Richard W. Kopcke, "The Determinantts of Investment Spending," *New England Economic Review,* Federal Reserve Bank of Boston..July/August 1985, pp. 19-35.

[30] There are several theoretical explanations ofhow individuals decide when to consume and when to save. The "permanent income" model developed by Milton Friedman says that consumption decisions depend on the level of income expected over long periods of time, so that temporary fluctuations in income—e.g., loss of employment, or the fear of it—have only marginal effects on decisions to save or not save. The lifecycle model developed by Modigliani, Brumberg, and Ando says that people attempt to stabilize consumption over their lifetime, including retirement, so that they tend to be net borrowers in earlyadulthood, net savers during the later working years, and "dissavers' or net consumers during retirement. Other theories emphasize the effects of inflation-adjusted rates of return on savings and changes in government or business-sector savings rates.

[31] Annual average personal savings declined by half from 1981 to 1989. This is about one-third the average for other industrialized nations.

[32] Robert Kuttner, *The Economic Illusion: False Choices Between Prosperity and Social Justice* (Boston, MA: Houghton= 1984).

[33] See for example, Martin Felstein, "Social Security, Induced Retirement and Aggregate Capital Accumulation," *Journal of Political Economy 82,* September/October 1974, pp. 905-926; Lawrence Summers and Chris Carroll, "Why Is U.S. National Saving So Low,'' *Brookings Papers on Economic Activity, 1987:* pp. 607-635; Gregory V. Jump,"Interest Rates, Inflation Expectations, and Spurious Elements in Measured Real Income and Saving, " *American Economic Review 70,* December 1980, pp. 990-1004.

[34] Data from the Securities Industries Association, by telephone and published in Trends, December 1989.

There are 362 firms of futures commission merchants. They include (as of Jan. 31, 1990) 37,240 "Associated Persons"; 13,638 principals (who are not themselves registered to sell); and 24,184 "introducing brokers," commodity trading advisers, and commodity pool operators. There are also 7,470 futures floor brokers. This is 82,532 jobs—with support staff, total employment might be estimated as 100,000.

These estimates indicate that employment in securities and futures markets accounts for, at most, one-tenth of one percent of U.S. employment. The majority of these jobs are probably concentrated in New York and Chicago; only in those cities would they have a perceptible effect on the local economy.

THE INVESTORS

Institutional Investors

Institutional investors now are the dominant users of U.S. financial markets in terms of trading on exchanges, ownership of equity ownership, and total assets invested in equities. Their assets grew from $2.1 trillion in 1981 to $5.2 trillion in 1988.[35] (See table 2-l.) This amounts to a 14 percent compound annual growth rate for the period. The New York Stock Exchange (NYSE) says that about 10,000 institutions, representing 150 million Americans, use its services.[36]

Corporate pension funds managed more than $1 trillion in 1988; public (governmental) pension funds held more than $600 billion and were growing faster than corporate plans. The 500 largest corporate pension plans together had over $640.2 billion invested in securities in 1988. The four largest—General Motors, AT&T, General Electric, and IBM—each have assets of more than $26 billion. There are also very large public pension funds, e.g., New York City Employees Retirement Fund has over $30 billion and California's employee fired had over $50 billion invested in 1988.[37]

Table 2-1—institutional Investors

Category	Total assets ($, end 1988)	Percent of assets[a]	% average annual growth (1981-88)
Pension funds	2,240	43.0	14.3
Insurance companies	1,259	24.0	12.3
Investment companies	816	15.5	18.5
Bank trusts	775	15.0	12.7
Foundations & other	133	2.5	13.2
Total	5,223	100.0	

[a]percentage of all institutional investment holdings.

SOURCE: Columbia Institutional Investment Project, Columbia University, Center for Law and Economic Studies.

U.S. insurance companies also manage over $1 trillion in securities investments.[38] Historically, stocks were only a small part of insurance company assets, for reasons rooted both in the industry's investment philosophy and in laws regulating the industry .- State laws now Commonly allow some investment in stocks, often requiring them to be maintained in a separate account.

In the last few decades, mutual funds became popular. A mutual fund, often setup by a financial management services company to invest in securities, might have growth, income, or other objectives. It might focus on securities that are either all or mostly domestic, foreign, or international. Customers, including many small investors, buy shares of the funds, and share in the funds' profits or losses. Mutual funds' assets grew at a rate of nearly 27 percent per year from 1975 to 1987, when for a time after the market crash of 1987 the industry had net redemptions. Historical ownership patterns suggest that institutional investing has broadened the base of participation in markets. (See table 2-2.) By 1989, the total number of mutual fired accounts, including money market funds, was 36 million. Their total value by April 1990 had grown to $1 trillion ($554 billion of which was in stock, bond, and income mutual funds).[40]

[35]Carolyn Kay Brancato and Patricia. Gaughan, *The Growth of Institutional Investors in U.S. Capital Markets: 1981-1987, The* Institutional Inves Project, Columbia University School of Law, New York City, November 1988, and *The Growth of Institutional Investors, Updated Data: 1981-1988,* Jan. 12, 1990.

[36]NYSE *Annual Report,* 1989, p. 16. These data, however, appear to come from a 1985 NYSE survey of investors.

[37]"1989 Pensions Directory," *Institutional Investor Magazine,* January 1989, p. 131.

[38]Information from the American Council of Life Insurance, courtesy of Paul Reardon.

[39]In the 19th century, common stock was regarded as a speculative investment and avoided by insurance funds. Often this avoidance was written into law. For example, until 1951 life insurance companies operating in New York State were prohibited from investing in common stock.

[40]Data from the Investment Company Institute, June 1990.

Table 2-2—Volume of Stock Trading on the NYSE[a]

Year	Institute	Retail	Member firms
1969	42.4%	33.4%	24.2%
1980	47.4	25.7	26.9
1988	54.6	18.2	26.2

[a]These SIA estimates were revised in 1990 to adjust for NYSE-provided data on the contribution of program trading to the volume of trading by institutions.

SOURCE: Securities Industry Association, *Trends, Mar.* 16, 1989.

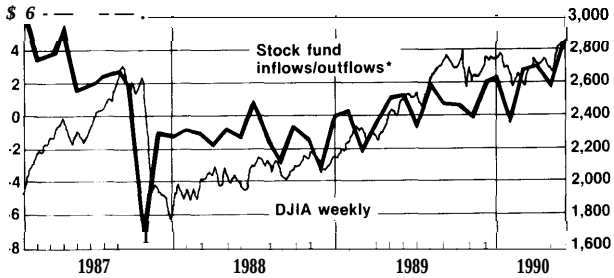
Institutional ownership of NYSE-listed stocks has increased from 13 percent in 1949 to nearly 50 percent. Institutional funds do about 55 percent of all NYSE trades; another 26 percent are done by exchange member firms for their own accounts; and only 18 percent are done for individuals.[41] (See table 2-2.) According to the Securities Industry Association, less than 50 percent of institutional trades are in blocks smaller than 900 shares. Institutions own about 39 percent of the stocks listed on NASDAQ.[42] They also dominate the market for privately placed corporate securities.

Individual Investors

Individual investors now own just over 50 percent of American equity and account for less than one-fifth of all trading. Over half the population owns some type of equity investment, although for most it is through participation in institutional investments, such as mutual, pension, and insurance funds. Direct ownership is concentrated among a relatively small proportion of investors. The United States, nevertheless, has the highest level of individual participation in the securities markets of any country in the world. Less than 25 percent of British citizens hold stock investments.[43]

In 1985, the NYSE conducted its llth survey of Americans who own stock in public corporations.[44] (The NYSE has not published more recent data and uses this data in its annual reports and Fact Books through 1989.) The number of respondents who only owned mutual funds increased from 4.5 million (10.8 percent) in 1983 to 8.0 million (17.1 percent) in 1985.

Figure 2-l—Mutual Funds Net Capital Flows



Investors yanked money out of stock mutual funds after the October 1987 market crash. But with the DJIA hitting record highs before the market drop in mid-1990, money began once again pouring in; monthly, in billions (left scale) v. the DJIA, weekly close (right scale).

*New stock fund sales less redemptions, plus the net effect of switches within the same fund family between stock funds and other mutual funds.

SOURCE: Investment Company Institute.

It is commonly said that individual investors are "leaving the market" because they have been net sellers for 5 years and their holdings are decreasing. The number of Americans owning stock actually increased at least until 1985, growing from 42 million to 47 million in the preceding 5 years.[45] However, nearly all of the increase was in ownership of shares of mutual finds. (See figure 2-l.) The number of Americans directly owning stock has almost certainly decreased since 1985, although the numbers are hard to pin down. In 1969, shares of common stock represented 36 percent of personal financial assets, but by 1979, that figure dropped to 25 percent, and to about 20 percent by 1989. Individual shareholders' median income was $36,800 in 1985, a 5.3 percent annual increase over 1983.46 The median size of their stock portfolios increased from $5,000 to $6,200 in that same period.

Income and investment patterns suggest that individual investors can be grouped into three sets. The frost includes people who have less than $5,100 directly invested in the stock market. This is about 45 percent of all individual investors. Approximately 35 percent of individual investors had portfolios of between $5,000 to $25,000. These are the traditional small investors. Approximately 20

dlh contrast, about 55 to 60 percent of the volume of trading of NASDAQ stock is attributed to individuals, according to NASD officials.

[42]Information provided by the National Association of SecuritiesDealers.

[43]North American Securities Administrators Association, Inc.

[44]New York Stock Exchange, *Shareownership,* 1985.

[45]Ibid.

[46]The U.S. median income, in comparison, increased from $20,200 to $22,400 during the same time, a 5.5 percent annual increase.

percent of individual investors had portfolios in excess of $25,000. (See table 2-3.)

The 37 million small investors, although probably better off than the "average American," clearly do not depend on securities markets profits for a major part of household income, and probably do little trading. The other 20 percent of individual investors-9 million people whose average portfolio is estimated at $78,000 to $94,000-are wealthier Americans who may trade more frequently .47

Table 2-4 shows the historical pattern of ownership of equity in the population.

Table 2-3-Size of Individual Portfolios, 1985

Percent of individual portfolios	Number of investors (millions)	Portfolio ($ value)
45	21.1	less than 5,000
35	16.5	5,000 to 25,000
20	9.4	over 25,000

SOURCE: Data from New York Stock Exchange, *Share Ownership,* 1985.

BROKERS

The Industry

Major changes have occurred in the operations and structure of the brokerage industry during the past few decades; contributing factors were the paper-work crisis of the late 1960s, the unfixing of commission rates in 1975, the departure of many retail investors from direct investments in common stock, the increasing dominance of institutional investors, and more attractive returns for brokerage firms from "risk-based" businesses. This has resulted in floundering and uncertainty for many brokerage firms. Other changes include cyclical impacts on the industry's employment and profit levels and increased concentration in the industry. The long-term effects on small investors have not all been beneficial.

The "back office" overload of the late 1960s accelerated the introduction of computers into brokerage fins. Since then, computers have increasingly permeated most of their operations, from recordkeeping to order entry, transaction confirmation, client report preparation, client account analysis, and clearing and settlement.

Competition for commission rates led to substantial rate reductions for institutional customers and kept rates on small orders from rising. Between 1970 and 1989, for example, commissions on institutional investors' transactions dropped from 26 cents to between 4 and 7 cents per share.[48] Pension funds, which in mid-1985 paid little attention to transaction costs, now look hard at ways to reduce them.[49] Based on a survey conducted by the *Institutional Investor in 1989, 99* percent of responding pension plan sponsors monitored their commission costs, 50 percent monitored soft-dollar[50] usage, 45 percent monitored market price impact, and almost half reported that they have cost-cutting programs or are planning to start them.[51]

In spite of the growth of stock trading volume, commission revenues in the brokerage industry have declined as a proportion of total revenue.[52] Institutional and retail trading volume both have fallen below record peaks in 1987.[53] The combined effect of this trend (and the rapid growth of other businesses), is that commissions from equities transactions have declined from over 60 percent of all revenues in 1965 to under 17 percent in the first half

[47] The U.S. public equity markets have a capitalization of about $2.5 trillion. Conservatively estimating that one-half of this is owned by 47 million individuals ($1.25 trillion), then the *average* stock portfolio is $27,000. Yet, 45 percent of stock portfolios are $5,000 or less. Assume that these $5,000 accounts collectively amount to between $59 billion and $106 billion of stock owned by individuals. Stock owners with portfolios of $5,000 to $25,000 account for an additional $247 to $411 billion of individual stock ownership. Therefore, the remaining 10 million (one-fifth of 47 million) investors has between $733 billion and $944 billion of the $1,250 billion of equity owned by individuals, or an average portfolio of $78,000 to $94,000.

[48] About 70 percent of pension plan sponsors responding to a survey reported that their commission costs were between 4 and 7 rents per share. "The Drive To Cut Transaction Costs," *Institutional Investor, May* 1989, pp. 125-126.

[49] Ibid. Transaction costs consist of commissions, market impact, portfolio turnover, futures trading costs, and soft-dollar usage.

[50] Soft dollars is a means of paying brokerage f,,s for their services through commission revenue, rather than through direct payments, or hard dollar fees. For example, a mutual fund may offer to pay for the research of a brokerage firm by executing trades generated by that research through the brokerage firm. The brokerage firm may agree to this arrangement if the fund manager promises to spend at least $100,000 in commissions with the broker that year.

[51] *Institutional Investor*, op. cit., footnote 48.

[52] Brokers' large transactions—more than 50 percent were from using risk and index arbitrage—receive few commis sions per share relative to smaller transactions.

[53] Trading averaged 189 million shares per day in 1987, a record year for the New York Stock Exchange, and 165 million shares in 1989. *NYSE 1990 Fact Book,* p. 80. Trading averaged 156 million shares per day by mid-June 1990, according to the NYSE.

Table 2-4-individual Equity Investment

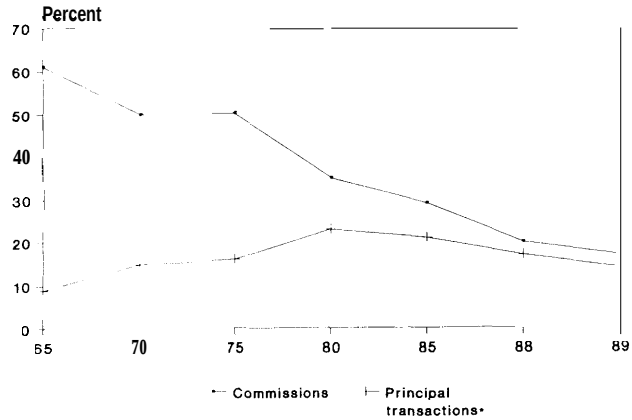
Year	Number of equity owners	Percentage of population	Owned mutual funds only	Percentage of equity owners
1956	**8,630,000**	**5.20**	935,000	10.83
1962	17,010,000	9.20	2,165,000	12.73
1970	30,850,000	15.10	3,977,000	12.89
1980	30,200,000	13.50	2,231,000	7.39
1985	47,040,000	20.10	6,219,000	13.22

SOURCE: New York Stock Exchange Shareholder Surveys.

of 1989.[54] (See figure 2-2.) The trend also has affected large, full, service brokers. At Merrill Lynch, for example, commissions were about 53 percent of total revenues in 1972, while by 1988 they had fallen to 15 percent.[15] The securities industry also has undergone considerable concentration. In 1973 the top 10 industry firms accounted for 33 percent of the industry's share of capital. By September 1989 their share had increased to 61 percent.

Even though cyclical trends, e.g., large-scale swings of employment and profits, are not uncommon in the industry,[56] capital increased fivefold from 1980 to midyear 1989 from $7 billion to $39 billion.[57] Another key long-term trend is diversification through financing principal transactions, many of which have become large revenue earners. (See figure 2-3.) These include proprietary trading, merchant banking, bridge loans, sole-managed underwriting, and participation in ownership of commercial enterprises. These are areas in which the industry is risking its own capital, in contrast with its historical tendency to provide services for clients' fees. Risk-based revenues in the securities industry accounted for 64 percent of all revenue in 1989 v. 42 percent in 1980.[58]

Figure 2-2-Share of Domestic Broker-Dealer Revenues



*Principal transactions are revenues from trading and investments.

SOURCE: Securities Industry Association, Trends, *An Analysis of Emerging Trends in the Securities Industry, vol.* XV, No. 4, May 30, 1989, p. 9, updated by SIA, July 1990.

A Tiered Client Structure

Some brokerage firms have begun to treat all but their largest institutional clients like "retail" customers. One firm found that 150 of its clients were contributing 90 percent of its revenue, while the remaining approximately 700 institutions contributed about 10 percent. Only the 150 largest institutional clients now get lower commissions, access to the firm's research, and direct access to its analysts. Another firm has similar plans; these disadvantage clients whose accounts generate less than $60,000 in commissions per year.[59] Medium-sized institutions and large retail clients, however, still receive better service than do small retail clients. If this trend

[54] Securities Industry Association, *Trends,* Dec. 29, 1989, vol. XV, No. 7, pp. 7-8.

[55] Data from Merrill Lynch's 1972 and 1988 annual reports.

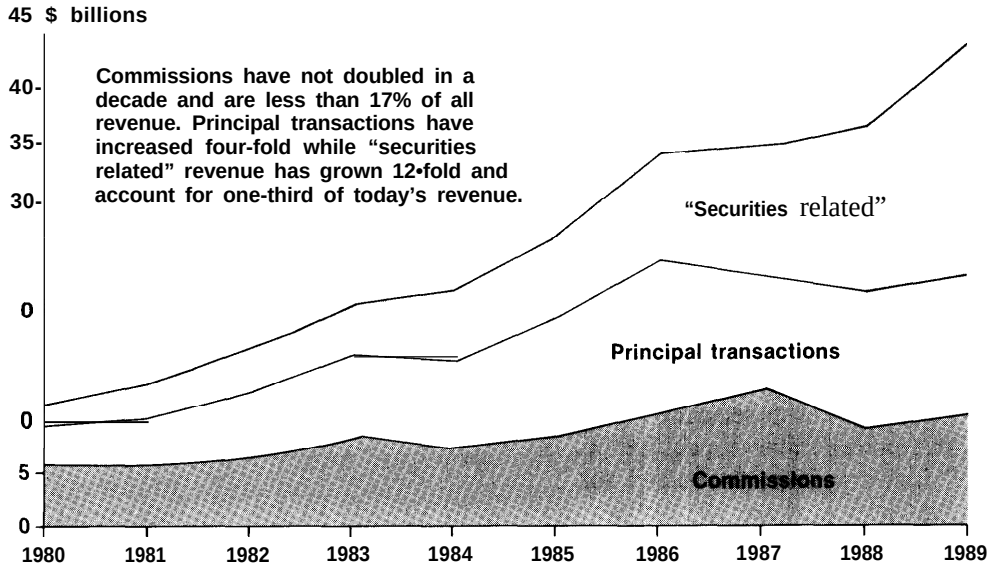
[56] For example, at least 35,000 jobs in the industry have been cut in the 2 years following the October 1987 stock market crash, although total employment grew by 62 percent from the end of 1980 to the third-quarter of 1989. Securities Industry Association, *Trends,* vol. XV, No. 7, Dee. 29, 1989, p. 3. At least another 10,000 jobs maybe cut in New York during 1990 alone. "Wall Street's Mediocre Managers Again Lurch From Binge to Bust," *Wall Street Journal,* Feb. 1, 1990, p. Cl.

[57] See SIA, *Trends,* op. cit., footnote 56, p. 3.

[58] SIA, *Trends,* Oct. 20, 1989, p. 1.

[59] "PaineWebber Puts Squeeze on Clients That Don't Trade," *Wall Street Journal,* Jan. 11, 1990, p. C 1. Shearson, Lehman, Hutton, for example, offers "preferred client" status to customers based on assets in their accounts of at least $200,000 and account activity which generates $1,000 in annual commissions. Shearson, Lehman, Hutton, *The FMA Journal,* Apr. 2, 1990.

Figure 2-3-Securities industry Main Revenue Sources



SOURCE: Securities Industry Association, *Trends, Oct. 20, 1989,* p. *3.*

becomes industry-wide, it will create a three-tiered brokerage system, with institutional investors, medium institutional and large retail customers, and small retail customers each paying different rates and receiving different services by full-service brokers. The emergence of the discount brokerage industry represents still another level of treatment. This could mean higher costs and fewer services for small investors from major brokerage firms.

Stockbrokers in the past were generally paid commissions based on sales volume. They were motivated to encourage clients to buy and sell securities and, later, an expanding array of other products. Coremissions are higher for sales of a fro's proprietary products. Stockbrokers typically had some measure of independence. For example, they might or might not recommend to clients the same stocks or other products that their employers recommended. The key factor that distinguished stockbrokers from most other sales workers was their personal relationship to clients. If a stockbroker became a trusted adviser to clients, those clients often could be lured away when the stockbroker changed employers. These relationships made possible frequent job changes to other brokerage firms. One of the effects of the introduction of brokerage fins' proprietary products-mutual funds, real estate limited partnerships, and cash management accounts-was to strengthen the relationship between the client and firm, while weakening the stockbroker-client relationship.[60]

By the mid- 1980s, computer terminals and workstations had become commonplace for most brokers. They are valuable for keeping track of customer accounts and providing rapid access to securities prices and other market news. Computerization also made it easier for employers to audit stockbrokers' performance and productivity.[61] New software made it possible for brokerage firms to standardize certain customer services. Many firms broadened the scope of their brokerage business to add personalized financial consulting, relating their clients' broader financial interests to financial securities, real estate, annuities, college and retirement planning, mutual funds, and life insurance investments, some of which were proprietary. Some of these products are particularly profitable for the firm, because they generate underwriting fees and commissions in addition to

[60]Garson, Barbara, "TheElectronic Sweatshop" (New York, NY: Simon& Schuster, 1988), Ch. 5, *The Wall Street Broker: Decline of a Salesman,* p. *128.*

[61]Ibid.

annual management fees.[62] There is a conflict of interest between selling those products that generate the highest commissions and helping clients find the investments best suited to their needs.

The terms 'registered representative' and 'stock-broker" were replaced by "Account Executive," which, in turn, was largely replaced with 'Financial Consultant" (FC). FCs increasingly are being encouraged to use their employer's specialized software packages to enter data on clients and to analyze clients' needs for products offered by the brokerage firm. This leads to standardized recommendations to clients and a closer relationship between the firm and the client; proprietary products may be difficult to transfer to another brokerage firm. There is also a trend toward replacing FCs with lower paid employees, sometimes salaried, who are less well-trained and even less independent than brokers.[63]

Many midsize investors who need professional help in managing their assets are unwilling to be dependent solely on FCs. They may manage substantial amounts of funds (typically between $100,000 and $10 million, representing perhaps a family's assets or a small business' pension fund)-yet the amount may not be sufficiently large to qualify for the management services of a large investment house that manages only bigger portfolios. Brokerage firms began to bring these clients together with outside portfolio managers, who make investment decisions for the client for a fee.[64] The brokerage firm executes transactions, arranges depository services and keeps records of transactions, and provides independent reports on the performance of the manager. For this the brokerage firm receives a separate fee. This has become one of the fastest growing parts of the investment business. Competitive commission rates have facilitated the unbundling of investment advice and brokerage.

For large investors, the long-term collective effects of these changes in the brokerage industry are probably positive. They may be less so for midsized investors. The small investor benefits from the larger range of products available, the greater competitiveness of the industry, and the availability of discount brokers.[65] In other ways, however, the small investor may become worse off because some brokerage houses may not give their interests high priority due to the difficulty of profiting from small transactions. Moreover, the competitive economic forces unleashed by the unfixing of commission rates and the unbundling of services mean that services for small investors may be becoming less subsidized by large investors.

Some FCs say[66] that their office managers no longer inquire about how well they are serving the fro's clients, but instead use computer printouts to monitor the commission revenues each FC has generated on a daily basis.

These trends indicate an ongoing restructuring in the brokerage industry with greater concentration, realignment of business focus away from retail sales, continued pressure on floor brokers for lower commissions, and different treatment of investors according to the commissions generated. For small investors the question arises: where may they get good advice and how much will it cost?

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[62]Some products, such as some closed-end funds of stocks or bonds, are sometimes offered to clients at "no commission%" which is misl the brokerage firm is one of the lead underwriters, the broker may receive between 4 and 5 percent of the amount of these sales.

[63]Garson, op. cit., footnote 60, pp. 145-154.

[64]The annual fee either is a freed ("wrap' fee) or variable percentage of the total value of the client's portfolio, e.g., 2 percent of the frost $3 1.8 percent of the next $20,000, and 1.5 percent of the amount exceeding $50,000. Fees vary among portfolio managers.

[65]The discount brokerage industry also has been undergoing concentration. Some estimates are that the number of independent discounter by as much as 25 percent since 1983 to about 100 by early 1990, and is still shrinking as the industry remains competitive. One comparison of commissions notes that full-service brokers' commissions may be about two to three times or more as much as those of the big three disc even greater tban deep-discount brokerages. One discount broker recently announced a three-tier commission structure for traders ranging fr per share to 5 cents per share, depending on their trading volume. "New Fewer Firms Are Chasing Small Investors," *The New York Times,* June 17, 1990, sec. 3, p. 10.

[66]OTA interviews,