

CHAPTER 5

THE DEMAND FOR CORPORATE STOCK IN THE POSTWAR PERIOD

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1. INTRODUCTION

The demand for corporate equity is influenced by the preferences of households for investing their wealth, by the financial market structure through which intermediation occurs, and by the investment behavior of financial institutions. Financial institutions have assumed an ever increasing role in the market for corporate stock. The causes are twofold—a gradual shift in household preferences away from direct holdings of stocks in favor of indirect holdings through mutual fund shares and pension savings, and a change in the investment strategy of institutions in favor of stocks.

Household preferences for financial savings are discussed in Section 2 below. Households may choose among a wide range of alternative means of holding financial assets, each with different attributes (expected return, variance of return, marketability, negotiability). Financial intermediation has grown increasingly complex in the postwar period; considerable specialization has arisen as particular types of institutions adapted to meet the needs of specific borrowers and lenders. Fund flows to financial intermediaries are dominated by rather strong trends. However, in the short run there are notable fluctuations in the flows of household savings to different types of financial intermediaries in response to changes in income, prices, interest rates, and stock prices. These time profiles in fund flows to financial institutions in turn influence institutions' investment decisions.

The investment strategies of financial institutions differ widely. Historically, institutional considerations have been the most important determinant of investment portfolios. For example, there are statutory restrictions on the types of investments that some institutions may make. Fiduciary trustees operate in a context established by statute, the courts, and traditions. This institutional environment has evolved very slowly, and hence investment portfolios of financial institutions in the postwar period are characterized by rather stable trends. Changing stock market prices or rates of return on other financial assets appear to exert a relatively minor influence on institutions' portfolio decisions. The most dramatic shift in the demand for corporate equities occurred only near the end of the period, since 1967, when life, fire and casualty insurance companies, state and local retirement funds, and corporate pension funds all very sharply increased their share of new funds invested in corporate stock. The investment decisions by financial institutions, particularly their decisions regarding common stock, are discussed in Sections 3 and 4.

2. FINANCIAL SAVINGS BY THE HOUSEHOLD SECTOR

a. Issues in Model Specification and Estimation

Household financial saving has shifted over the period of several decades from real assets (residential housing, farms, unincorporated businesses, etc.) to financial assets. This trend has continued in the postwar period. Continued industrialization, a longer life span, and greater reliance on group over self insurance have all been contributing causes.¹ In addition, the value of corporate stock increased much more than income as a result of the increase in price-earnings multiples during the 1950's. Thus, while saving as a percentage of income has been constant, household holdings of financial assets have grown more rapidly than income in the postwar period. As shown in Table 5-1, the ratio of household financial assets to income has risen from slightly less than 2 in 1950 to $2\frac{3}{4}$ in 1968.

There are both trends and short-run fluctuations in household choices among financial assets. The long-run changes are evident in Table 5-1. Most notable is the huge rise in the value of corporate stock holdings, from \$155 billion in 1951 to \$873 billion in 1968. This accounts for most of the increase in household holdings of marketable securities. Households have only moderately increased their net purchases of bonds and other fixed income securities. While the value of their corporate stock holdings has continued to rise, households have shifted from being a net purchaser of corporate stock to being a large net seller over this time period. The increase in household stockholdings in spite of households' net sales in recent years is attributable to increases in equity prices.

Conventional portfolio theory provides the conceptual framework for empirically analyzing the interrelationships between alternative forms of financial asset holdings and their changes. Portfolio theory stresses the level and variation in relative prices and income as the important determinants of wealth holdings and saving decisions.² Desired holdings of asset type i in time t can be related to expected returns and the variances and covariances of all asset types, i.e.,

$$(1) \quad A_{it} = f(M_1, M_2, \dots, M_k, \sigma_1^2, \sigma_2^2, \dots, \sigma_k^2, \sigma_{ij}, \dots, Y, W)$$

where M_i = expected return of asset type i , σ_i^2 = variance of return on asset type i , σ_{ij} the covariance between i and j , Y is income, and W represents wealth.

The following types of household financial assets are included in the model below:

- DD = demand deposits (millions of dollars),
- SD = savings deposits,
- LI = life insurance contracts,
- PF = pension fund reserves,
- F = fixed income securities (public and private bonds, mortgages),
- S = corporate stock, and
- MF = mutual fund holdings.

¹ Raymond Goldsmith, *The Flow of Capital Funds in the Postwar Economy*, New York, NBER, 1965.

² Harry Markowitz, *Portfolio Selection*, New York; Wiley, 1959; Donald Farrar, *The Investment Decision Under Uncertainty*, Englewood Cliffs, N.J.; Prentice-Hall, 1962; Hester & Tobin, (eds.), *Studies of Portfolio Behavior*, Cowles Foundation Monograph 20, New York, Wiley, 1967.

Annual data from the Federal Reserve System, Flow of Funds Accounts 1952-1968, are used. The distinctions between the several types of assets in the class "fixed income securities" are relatively insignificant in the context of a general model representing aggregate financial savings decisions. The one significant component of household savings and financial asset holdings not included is that of "unincorporated business investment."

In the analysis below, income and expected returns on assets, as reflected in current and lagged market yields, were employed as explanatory variables. The sample size was too small to yield significant estimates of the effects of change in the variance of returns on portfolio choices. Independent variables used in the equations included income, interest rates, and stock yields. Definitions and data sources are as follows:

- Y = personal money income (\$ billion); (Federal Reserve System, *Flow of Funds Accounts*).
- RB = rate of return on three to five year government securities (Economic Report of the President).
- RS = rate of return on equity; price appreciation plus dividends for NYSE 500 Index. (NYSE *Fact Book*, 1969).
- t = time trend (assumed values 1, 2, . . . , 17 for this sample.)

Since the short-run variations in the several popular stock market indices are highly correlated, there is little or no advantage statistically in using a different equity price index. Nor was more than one of the several available interest rates series included, while the yield curve does fluctuate in the short run, most interest rate variables are highly correlated with each other in the annual data. For example, time series data on saving deposit yields are highly correlated with bond rates. Thus, in the equations below, the bond rate variable is a proxy for all interest rates; the variable denoting the annual change in interest rates on bonds serves as a proxy in the model for changing credit market conditions generally.

Several different explicit formulations might be employed to relate stocks or flows of financial assets to the independent variables. Conventional portfolio theory has generally focused on the stocks of financial assets, in particular, on the shares of total wealth held in the form of any given type of assets ($A_i/\sum_j A_j$), or the ratio of asset holdings of two different forms of assets (A_i/A_j). Such measures of asset shares can be related to the price of asset i , its price relative to the price of alternative forms of asset holdings, or the level of wealth. For example, the ratio of corporate stock holdings to total financial wealth or to the value of other financial asset holdings varies widely as stock prices change (and to a lesser extent bond rates, whose fluctuation alters the market value of outstanding bonds). However, correlating stock holdings or the share of total wealth held in stocks to stock price changes sheds little light on household financial behavior; the correlation between prices for financial assets and household holdings of those assets largely reflect changing bond and stock yields, which alters the market value of these assets, rather than revealing any significant change in households' disposition of new funds. Household re-

actions to rather large changes in stock prices or the value of their wealth holdings, sometimes 20 percent in a year, in fact have proven to be rather modest; for example, flow of funds in or out of stocks by all households together in any year is generally less than 1 percent of total individual stock holdings or of national income.

It is therefore far more useful to concentrate on flow relationships and the decision to withdraw or invest additional funds. Conventional portfolio theory relates "desired" stocks of assets to income (and variables such as asset prices). If actual stocks are continuously adjusted to "desired" levels, implied flow equations will include changes in income as the independent variable. For example, if households define asset targets as a simple scale multiple of income, net flows by asset type will be positively related to changes in income:

$$(2) \quad A_{jt} = \beta \cdot Y_t$$

$$(3) \quad \frac{dA_{jt}}{dt} = \beta \cdot \frac{dY_t}{dt}$$

The common upward trends in income and the accumulation of financial assets are such that this type of equation statistically accounts for a significant share of the total variance in financial flows. However, while taking full advantage of the common trends, this specification poorly represents the short-run variations in flow of funds. The above formulation implies that flows of funds are zero if income does not change, and change sign when income changes sign. Aggregate data for the accumulation of most financial assets do not substantiate this formulation. Typically, net accumulation of most types of assets continue even when income falls.

The equation formulation employed below assumes that financial flows by asset type are linearly related to income, rather than to changes in income. Because of the strong upward trends in all these variables, the dependent variable was expressed in ratio form, the ratio of net purchases (or sales) of each asset type to income. The explicit form is shown in equation (4), linear in the independent variables χ_i :

$$(4) \quad \left(\frac{dA_{it}}{dt} / Y_t \right) = \alpha_i + \sum_{ij} \beta_{ij} \chi_j$$

An equation for each asset type i was estimated independently. Since the total marginal propensity to save varies over any several year period, it is inappropriate to constrain the estimates of the individual equations to a constant saving rate. However, decisions about several forms of savings are interrelated; these interrelationships between types of savings are analyzed below, in equations which relate ratios of one asset type to another (or the sum of several others) to income and interest rates.

The above formulation of the flow equations implies that the ratios of stocks of asset holdings to income may assume different values, depending on initial conditions and the estimated flow equations. This does not preclude the possibility that the ratio of the value of particular asset holdings or the value of total wealth to income may be relevant as an explanatory variable in the flow equations. Changes in interest rates or stock market prices appear in most of the flow equations; these changes are highly correlated to the value of corporate stock or

fixed income security holdings. Thus, while market prices or yields are included in the flow equations rather than wealth-income ratios, there is no statistical basis for determining whether the correlation of market prices with flows represents households' reaction to changes in rates of return or to changes in the market value of their asset holdings.

This illustrates a general problem encountered in the statistical estimation; many of the variables of interest are intercorrelated and often trend dominated. This high intercorrelation arising from trends in income, interest rates on fixed income securities, and financial wealth often makes it impossible to determine statistically the real causal factors underlying the long trends in financial flows. On the other hand, the econometric analysis does shed some light on the short-run changes in saving flows.

The model below also assumes that actual asset holdings in any time period coincide with desired levels of such holdings. The use of dynamic stock-adjustment models in which there are lags in the adjustment process is popular in econometric estimation, especially for durable goods. There are several reasons why no attempt was made to specify such lagged adjustment processes in the model below. First, the costs of entry into the capital markets are generally quite low, and "indivisibilities" would not appear to have large effects on transactions costs in the relevant ranges in adjustments of most assets. How transactions costs greatly reduce the likelihood that desired and actual asset holdings will diverge, especially as reflected in annual data. Also, for annual data aggregated for the entire household sector, there is likely to be little variation over time in the nature of adjustments of actual holdings to desired levels, and certainly little or no prospect of specifying such differences econometrically with annual time series data.

Finally, the equations assume that causation runs from income or capital market conditions, as represented by interest rates or stock prices, to household savings rather than vice versa. The implicit causal assumption in the analysis below is that monetary and fiscal policies interacting with private demands for goods and services determine income and interest rates. These in turn affect household saving flows. This is not to deny the important interdependencies between decisions regarding financial asset holdings and income or credit market conditions. However, the available evidence suggests that the lags are long. Changes in household saving decisions, in fiscal or monetary policies, or in private demand affect the level and composition of income and the credit markets only after a lag. Econometric models have made little progress to date in describing the interrelationships between the processes of financial intermediation and real economic activity.

b. Empirical Estimates of the Model

(1) *Demand Deposits.*—The concept of household preferences for money balances has been a cornerstone of macroeconomic theory and

the subject of a considerable theoretical literature.³ Several empirical formulations of such demand functions have been estimated.⁴ The controversy revolves around the elasticity of interest rates.

Annual data for the period 1952-68 were used to test the competing hypotheses. The early postwar years were excluded for two reasons—households had acquired unusually large amounts of liquid assets during World War II which affected their decisions concerning financial asset holdings, and the capital markets were substantially affected by the Federal Reserve System's policy to fix the interest rate on long-term treasury securities at a low level. This policy was abandoned with the Accord of 1952. The dependent variable in the equation is the share of income which households used to add to their demand deposits holdings.

$$(5) \quad \left(\frac{\partial DD}{\bar{Y}}\right)_t = -99.00 + .4807(t) - 43.63 \frac{RB_t}{\bar{RB}_{t-1}} + 13.60 \frac{Y_t}{\bar{Y}_{t-1}}$$

$R^2 = .4970$
 $D.W. = 2.15$

where DD_t represents demand deposits (millions of dollars), Y_t income (billions of dollars), and RB the bond rate (three-to-five-year government securities).

The explanatory variables reflect the transactions demand for money, as evidenced by the significance of the time trend and income terms, and short-run changes in interest rates. The negative coefficient of RB_t/\bar{RB}_{t-1} indicates that households economize on their holdings of demand deposits as interest rates rise in the short run. The positive coefficient of Y_t/\bar{Y}_{t-1} implies that one of the responses in the short-run to changes in income is a more than proportionate increase in demand deposits. As will be seen below, the sum of all financial savings increases more than proportionally in the short run as income rises. This is consistent with the econometric literature on consumption functions, which employ distributed lag functions on income as the explanatory variable.⁵ Efforts to express changes in income with some form of distributed lag in the equation above were not successful. The lags will, of course, be more evident in quarterly data.

³ Irving Fisher, *The Purchasing Power of Money*, New York, Macmillan, 1911; John M. Keynes, *The General Theory of Employment, Interest and Money*, London, Macmillan, 1936; W. J. Baumol, "The Transactions Demand for Cash: An Inventory Theoretic Approach," *Quarterly Journal of Economics*, November 1952, pp. 545-556; Milton Friedman, "The Quantity Theory of Money—A Restatement," in *The Optimum Quantity of Money and Other Essays*, Chicago, Aldric, 1969; James Tobin, "Liquidity Preferences as Behavior Toward Risk," *Review of Economic Studies*, February 1958, pp. 65-68; James Tobin, "The Interest Elasticity of the Transactions Demand for Cash," *Review of Economics and Statistics*, August 1956, pp. 241-247.

⁴ Allan Meltzer, "Demand for Money: The Evidence from Time Series," *Journal of Political Economy*, June 1963, pp. 219-246; Milton Friedman, "The Demand for Money: Some Theoretical and Empirical Results," *Journal of Political Economy*, August 1959, pp. 327-351; Karl Bruner and Allan Meltzer, "Predicting Velocity," *Journal of Finance*, May 1963, pp. 319-334; Gregory Chow, "On the Long-Run and Short-Run Demand for Money," *Journal of Political Economy*, April 1966, pp. 111-131.

⁵ M. Friedman, *A Theory of the Consumption Function*, Princeton, 1957; A. Ando and F. Modigliani, "The Life Cycle Hypothesis of Savings: Aggregate Implications and Tests," *American Economic Review*, March, 1953, LIII, pp. 55-84; H. S. Houthakker & L.D. Taylor, *Consumer Demand in the United States*, Harvard Univ. Press, 1966; N. Levitan, "Estimates of Distributed Lag Consumption Functions from Cross Section Data," *Review of Economics & Statistics*, XLVII, Feb., 1965, pp. 44-53; F. Modigliani & A. Ando, "The Permanent Income and the Life Cycle Hypothesis of Savings Behavior: Comparisons and Tests," in *Proceedings of the Conference on Consumption & Saving*, Vol. 2, Philadelphia, 1960; J. Simon and D. Aigner, "Cross Section and Time-Series Tests of the Permanent-Income Hypothesis," *American Economic Review*, LX, June, 1970, pp. 341-351.

(2) *Savings Deposits*.—A similar equation fitted for savings deposits includes both the level of interest rates and their short-run changes. Short-run changes in income did not prove statistically significant.

$$(6) \quad \left(\frac{\partial SD}{Y}\right)_t = 81.22 + 7.398 RB_t - 70.60 \frac{RB_t}{RB_{t-1}}$$

(3.38) (3.86) (2.89)

$R^2 = .5574$
 $D.W. = 1.67$

The negative coefficient on the interest rate change variable reflects the process of disintermediation, households switching from savings accounts to fixed income securities when interest rates rise sharply. Interest rate regulation on commercial banks, mutual savings banks, and savings and loan associations and other institutional considerations are such that interest rates on savings deposits rise less rapidly than bond rates during periods of tight credit. As a result disintermediation occurs and households switch to bonds. For example, during the period 1963 through 1965 households added an average of \$24.4 billion to their savings deposits each year and acquired an average of \$4.2 billion of public and private bonds and mortgages. During the tight money period of 1966, households acquired \$12.9 billion of these fixed income securities while increasing their savings deposits by only \$19.0 billion. In 1967, when market rates on bonds had fallen rapidly relative to savings deposits rates, the pattern was reversed; savings deposits were increased by \$32.5 billion, fixed income securities by \$3.5 billion. This pattern occurred throughout the postwar period and is the fundamental source of the countercyclical pattern in mortgage lending and hence in residential construction.

(3) *Pension Fund Holdings*.—Pension programs have grown rapidly in the postwar period. The reasons for this growth have been extensively described elsewhere.⁶ Since the Supreme Court ruled in 1948 that fringe benefits were a proper part of labor contract negotiations, coverage of pension programs has grown enormously, and both contributions and benefit payments have risen sharply. Public pension plans for state and municipal employees also grew rapidly during the 1950's, as did union and other multiemployer plans.⁷ Pension retirement plans for self-employed individuals received tax free status in 1962 with the Smathers-Keough Act, which permitted individuals to contribute sums (limited to \$2,500 annually) to a common trust to be managed on a pooled basis. Liberalization in 1968 resulted in many more such plans being initiated, 100,000 plans registered in 1968 as compared to about half that number over the previous four years.⁸

Net fund flows to pension programs are the stablest of all forms of household financial savings. The equation for pension fund flows, including a logarithmic trend and the short-run change in income, is

⁶ Daniel M. Holland, *Private Pension Funds: Projected Growth*, Occasional Paper 97, New York, NBER, 1966; Phillip Cagan, *The Effect of Pension Funds on Aggregate Savings: Evidence from a Sample Survey*, Occasional Paper 95, New York, NBER, 1965; and Roger F. Murray, *Economic Aspects of Pensions: A Summary Report*, New York, NBER, 1968.

⁷ H. Robert Bartell, Jr., and Elizabeth T. Simpson, *Pension Funds of Multiemployer Industrial Groups, Unions, and Nonprofit Organizations*, Occasional Paper 103, New York, NBER, 1968.

⁸ Arthur Weisenberger Services, *Investment Companies: Mutual Funds and Other Types*, 1969 edition, p. 90.

quite simple. Changes in interest rates or stock prices proved to be statistically insignificant.

$$(7) \quad \ln \left(\frac{\partial PF}{Y} \right)_t = 2.44 + .0271(t) + .1610 \frac{Y_t}{Y_{t-1}} \quad R^2 = .8378 \\ (27.69) \quad (8.40) \quad (1.76) \quad D.W. = 1.80$$

That short-run increases in income raise the share of income devoted to pension reserves may be attributed to several factors. Periods of prosperity extend the coverage of pension fund programs at a rate above the long-term trend by employing the marginal work force. More liberal pension agreements may be realized in times of prosperity and vice versa. Finally, there is a growing percentage of workers whose benefits are based on final compensation. This implies that short-run increases in income will lead to a higher share of income devoted to pension funds.

(4) *Life Insurance Reserves*—Life insurance companies provide a guaranteed fixed-dollar payment to their customers, with premiums based on rather conservative investment assumptions. Life insurance was the first form of nonbank financial intermediation serving a wide market. Coverage has grown extensively throughout the twentieth century, so that by 1965 83 percent of all households had at least one member insured.⁹ Currently about 15 percent of insurance company assets are held to cover the liabilities of insured pension funds. Historically, insured pension funds were the predominant form of pension savings, but insured pension plans have grown much less rapidly during the postwar period than uninsured plans.

A very small share of life insurance reserves is accounted for by variable annuity plans. Since 1963 some states have permitted life insurance companies to establish so-called "separate accounts" in which they invest pension reserves in equities. These are essentially equivalent to the common trust funds which commercial banks use to collectively manage small pension accounts. To date most variable-annuity offerings are oriented toward serving those who qualify under the Keough Act; there are few variable annuity plans that are not sheltered.

The growth of life insurance reserves net of policy loans exhibits both a trend and short-run variations. While the trend in fund flows is positive, the share of income that households devote to life insurance has steadily fallen.

$$(8) \quad \left(\frac{\partial LI}{Y} \right)_t = 5.574 - 1.526 RB_t - 9.794 \frac{RB_t}{RB_{t-1}} + 19.16 \frac{Y_t}{Y_{t-1}} - .0349 RS_t \\ (2.80) \quad (5.99) \quad (1.86) \quad (1.98) \quad (1.94) \\ R^2 = .7469 \\ D.W. = 1.96$$

The cause for the downward trend in life insurance premiums as a share of income is the growth of alternative forms of savings yielding higher returns—corporate pension plans and mutual funds. Each yields higher returns by being more heavily invested in corporate equities. In addition, pension savings are tax free. It seems likely that

⁹ *Life Insurance Fact Book*, Institute of Life Insurance, 1966, p. 7.

life insurance contracts defined by current premiums and fixed payment obligations will continue to receive a lesser share of the consumer savings dollar. Insurance companies might enhance their product by offering variable annuity plans as an inflation hedge or by reducing the premiums on straight life and term insurance, either of which requires that insurance companies become more active in the equity market. Life insurance companies appear to have chosen another alternative, that of entering the mutual fund business. In 1968 and 1969, there was a large scale merging and comingling of insurance companies and mutual fund management and equity. By the third quarter of 1969, 153 mutual funds were linked to 79 insurance companies or groups; \$8 billion of mutual fund shares was involved, 16 percent of the industry.¹⁰ The economics of mass marketing both insurance and mutual fund shares are obvious. It would appear that life insurance premiums will continue to be based on fixed income investments and that the trends in household choices for fixed obligation insurance described in equation (8) are likely to persist.

Short-term fluctuations in fund flows to life insurance have become significant since the middle 1950's. These variations are highly correlated with changes in money markets; in particular, life insurance flows are negatively correlated with short-run changes in interest rates. In each period of tight credit and rising interest rates since 1957, life insurance fund flows as a share of household income declined more than would be indicated by the long-run downward trend in the share of household savings devoted to life insurance. There are several explanations. Life insurance companies are committed to lending to policy holders at fixed rates of interest; these lending terms inevitably become very attractive when market interest rates rise sharply and credit rationing occurs. While the 1966 credit crunch was the first in which this mechanism received much public attention, the negative coefficient on the term for changes in interest rates in equation (8) suggests that it has been operative and of empirical significance for some time. An additional explanation for the significance of the change in interest rate variable is simply that rising rates of interest are attracting household savings into fixed income market securities. This is discussed further below.

Stock prices also are significant in the equation, the negative coefficient implying that rising (stock) prices attract funds from life insurance. In the subsequent equations for household purchases of stock, stock prices appear to influence stock purchases with a one-year lag. Thus, the exact relationship between life insurance and net stock purchases, particularly the timing of such switches in asset holdings, remains unclear.

(5) "*Fixed Interest*" *Long-Term Claims: Bonds and Mortgages*.—No trend is evident in the share of income devoted to fixed income securities, but there are very considerable cyclical variations. Additions to bond holdings are negatively correlated with short-run changes in income. Reductions in the growth rate of income or in its absolute amount, other things equal, induces an increase in fund flows into fixed income securities. In recession years the actual share of savings devoted

¹⁰ *Mutual Affairs*, Welsenberger Financial Service, Inc., IX, November 1969, pp. 104.

to fixed income securities falls. The equation below suggests that this negative income effect is more than offset by interest rate effects.

The response of fixed income security holdings to short-run changes in interest rates is very pronounced; households substitute bonds for savings deposits during periods of tight credit. This substitution is made largely by upper income households. Holdings of marketable securities other than stock are more concentrated among wealthy households than any other form of investment assets. In 1963, the top tenth of the income distribution held 45 percent of total wealth, and 80 percent of total investment in marketable securities other than stock.¹¹

Stock prices are also significant in the equation for bond holdings, and are positively correlated when a one year lag is allowed. As will be seen below, households react to stock prices after a lag, switching out of stocks after the stockmarket declines; the equation below suggests that some of these funds are finding their way into bonds and mortgages.

$$(9) \quad \left(\frac{\partial F}{Y}\right)_t = 96.16 + 74.51 \frac{RB_t}{RB_{t-1}} - 160.9 \frac{Y_t}{Y_{t-1}} + .2129 RS_{t-1}$$

$R^2 = .6068$
 $D.W. = 1.66$

where F = holdings of fixed income securities, and RS_{t-1} = return on stock with a one year lag.

Data for 1969 have only recently become available. Extrapolation with the above equation provides an estimate of the impact of tight credit during 1969. Based on the 22.5% increase in interest rates during 1969, equation (9) predicts households will devote 1.7% of their income to fixed income securities, compared with a mean level of about one-half of a per cent during the postwar period. The actual percentage was 2.5 per cent. The \$23.1 billion invested in bonds was nearly double the rate during the 1966 credit crunch; 1969 was clearly a year of extraordinary participation by the household sector in the bond markets.

The tradeoffs between fixed income securities, savings deposits, and life insurance reserves, all sensitive to short-run changes in interest rates, deserve brief summary.

$$(10) \quad \frac{\partial F}{\partial(F+SD)} t = -.7255 + .9268 \left(\frac{RB_t}{RB_{t-1}}\right)$$

$R^2 = .1857$
 $D.W. = 1.32$

$$(11) \quad \frac{\partial F}{\partial(F+SD+LI)} t = -.9885 - .0360(RB) + 1.276 \left(\frac{RB_t}{RB_{t-1}}\right)$$

$R^2 = .5407$
 $D.W. = 1.74$

¹¹ Dorothy S. Projector and Gertrude S. Weiss, *Survey of Financial Characteristics of Consumers*, Board of Governors of the Federal Reserve System, 1966, pp. 14-15.

$$(12) \quad \frac{\partial SD}{\partial(F+SD+LI)} t = 1.689 + .0667(RB) - 1.257 \left(\frac{RB_t}{RB_{t-1}} \right)$$

(5.71) (2.83) (4.19)

$R^2 = .5845$
 $D.W. = 1.85$

$$(13) \quad \frac{\partial LI}{\partial(LI+SD)} t = .0891 - .0476(RB) + .2859 \left(\frac{RB_t}{RB_{t-1}} \right)$$

(0.96) (6.47) (3.05)

$R^2 = .7525$
 $D.W. = 1.76$

Equations (10) and (11) reveal the shift into fixed income securities as interest rates rise in the short run. Equation (13) indicates that life insurance reserves fall less rapidly than do savings deposits when credit conditions are tightened and disintermediation occurs.

The sum of savings by fixed income holdings, savings accounts, and life insurance as a per cent of income is increasing over time, the increase in holdings of fixed income securities and savings deposits having more than offset the decline in life insurance savings. This trend is reflected in a positive coefficient on interest rates in equations (14) and (15).

$$(14) \quad \frac{\partial(F+SD)}{Y} t = -116.6 + 4.808(RB) - 158.3 \left(\frac{Y_t}{Y_{t-1}} \right)$$

(1.39) (2.70) (1.65)

$R^2 = .6060$
 $D.W. = 1.38$

$$(15) \quad \frac{\partial(F+SD+LI)}{Y} t = -95.24 + 3.681RB + 130.5 \left(\frac{Y_t}{Y_{t-1}} \right)$$

(1.29) (2.12) (1.79)

$R^2 = .5385$
 $D.W. = 1.12$

While changes in income also appear in these equations, the significant autocorrelation reduces the statistical significance of the estimated coefficients. Conspicuous by its absence in these equations is the short-run change in interest rates, which proves statistically insignificant.

This suggests that the reduced fund flows into life insurance and savings deposits associated with increasing market interest rates in the short run is essentially offset by higher flows into fixed income holdings.

(6) *Corporate Stock and Mutual Fund Shares.*—Ownership of corporate stock is not nearly as widespread throughout the income distribution as pension funds, life insurance, or savings deposits. In 1963 one person in six held stocks,¹² and the wealthiest 10 percent of the population held 62 per cent of the equity in publicly traded stock.¹³ A trend toward a more even distribution of corporate stock ownership has prevailed throughout the twentieth century. From 1952 to 1956 the median money income of stock holders actually declined from \$7,100 to \$6,200, or 15 per cent, while for the populace as a whole median income rose by about that same percentage. However since the early 1960's this trend has been altered due to the growth in mu-

¹² *Fact Book*, New York Stock Exchange, 1968, p. 40. The next survey will be conducted in 1970. There is no evidence on how the distribution of dollar amounts of stock held by income class is changing.

¹³ Projector and Weiss, *op. cit.*, p. 15.

tual funds. Mutual funds provide a relatively inexpensive means for the small investor to diversify. As a result, direct investment in corporate stock is being displaced by investment in mutual funds. Both the 1962 and 1965 *Census of Stockholders* revealed the same proportion of the population holding corporate stock directly. During this three year period median household income of shareowners increased 16 per cent, the same median household income generally.¹⁴ At the same time, mutual fund growth has been rapid and ownership increasingly widespread. Mutual funds had 9.1 million accounts by 1968 year-end versus 300,000 in 1940.

Two other characteristics of mutual fund purchasers deserves mention. In very recent years, the median family income of mutual fund holders has accelerated, rising from \$8,100 in 1963 to \$11,350 in 1966, an increase well in excess of the rise in income for the population generally. Also, the average age of those in accumulation plans rose sharply, from 42.8 to 46.4 years. This suggests that mutual funds are becoming an increasingly important means of providing retirement savings for middle and upper income households.¹⁵

Second, household acquisitions of mutual funds has shifted in favor of those with greater risk. In 1958, the share of the investment in mutual funds in funds classified as "diversified common stock funds" was 60 percent; a decade later that figure had risen to 80 percent. "alanced" funds, with 20 to 50 percent of their assets invested in fixed dollar holdings, saw their share of the mutual fund market decline from 26 to 14 percent.¹⁶ As will be seen below, mutual fund market performance approximated the return achieved by the market averages until 1965. Since 1965 the performance of the growth funds has improved substantially. y accepting higher risk, the growth funds were able to earn a significantly higher return, though accompanied by a higher variance. Whether households will continue to exhibit this preference for more risk remains to be seen.

Household annual acquisitions of corporate stock (both direct holdings and the sum of direct holdings and mutual fund shares) have turned from a marginal plus to a rather large negative amount during the postwar period. Households sold \$12 billion in stocks (other than investment company shares) in 1968 and nearly \$11 billion in 1969. One striking feature about this series is that its magnitude is very small, a tiny fraction of 1 percent of either total personal income or the total valuation on stock held. Nor does it change much when stock prices change dramatically. A sizeable portion of stock holdings is very inactive. A 1965 survey indicated that only one-half of all household stockholders acquired any stock that year, and that only one in eight made as many as five transactions. The average income of that small share who were more active in the market was very much higher than for all shareholders generally.¹⁷

There are several explanations for the downward trend in net acquisitions. One is the long-run shift in relative prices in favor of fixed income holdings. Bond rates have risen over these two decades, while

¹⁴ *Fact Book*, NYSE, p. 40.

¹⁵ *Mutual Fund Fact Book*, Investment Company Institute, 1969, p. 47.

¹⁶ *Investment Companies: Mutual Funds and Other Types*, pp. 42-44.

¹⁷ *Public Transactions Survey*, New York Stock Exchange, 1965.

returns on stock were lower in the 1960's than 1950's; for the period 1950-59 the compound rate of growth (price appreciation plus dividends) for the Standard and Poor's 500 Index of stocks was 20.3 percent, versus 10.9 percent from 1958 to 1968.¹⁸ Another explanation is the rise in pensions as an alternative means of savings. The declining share of income or the share of financial savings devoted to direct stock investment plus mutual fund shares combined is represented by equation (16), revealing a negative correlation with the bond rate.

$$(16) \quad \left(\frac{\partial S + MF}{Y}\right)_t = 16.83 - 4.165 RB \quad R^2 = .7476 \\ (7.69) \quad D.W. = 1.41$$

The bond rate is essentially a trend proxy in this equation, reflecting the long run shift in relative prices of bonds versus stocks. Neither short-run changes in interest rates, bond prices, nor a distributed lag or weighted average of current and past stock prices proved statistically significant in this equation.

Disaggregation of direct and indirect stock holdings reveals more about household investment behavior. Both strong trends and short-run variations are apparent in household acquisitions of mutual funds. The rate of return in the stock market is correlated with net mutual fund sales (sales less redemptions) after allowing for a lag. The sharp stock market declines in 1962 and 1966 resulted in much lower mutual fund sales a year later. The following equation was fitted.

$$(17) \quad \left(\frac{\partial MF}{Y}\right)_t = .00053 + .2537(t) - .0179 RS_{t-1} \quad R^2 = .8137 \\ (8.76) \quad (1.68) \quad D.W. = 1.74$$

Short-run changes in income or interest rates did not prove statistically significant. It would appear that there exists a distinct trend in mutual fund sales that was not influenced by interest rates or the prices of other securities and was interrupted only by sharp variations in stock prices.

Direct corporate stock acquisitions and sales present a different picture. In addition to a downward trend, represented by a significant coefficient on the bond rate, short-run changes in income and interest rates are also significant. Short-run increases in income coincide with a lower share of income devoted to stock purchases. The positive coefficient on changes in bond rates indicates that rate increases attract more money into stocks. This is not easily explained. As noted, fixed income securities also attract funds during periods of rising interest rates. There have been several periods when stock prices fell as interest rates moved up. However, attempts to include stock prices in the equation for net acquisition of stock, in either current or lagged terms, or by a weighted average, proved unsuccessful. The explanation for the positive correlation of net stock purchases with short-run changes in interest rate remains unclear.

$$(18) \quad \left(\frac{\partial S}{Y}\right)_t = 20.52 - 6.301 RB - 26.17 \frac{Y_t}{Y_{t-1}} + 27.90 \frac{RB_t}{RB_{t-1}} \\ (13.95) \quad (1.57) \quad (3.55) \\ R^2 = .9210 \\ D.W. = 2.14$$

¹⁸ *Fact Book*, NYSE, 1969.

Disaggregation of households' net stock purchases provides further insight. Odd-lot transactions are made largely by the small investor, primarily in the household sector. Net purchases by odd-lots on the NYSE amounts to about one-fifth of the total household sector's net flows. An equation for the ratio of odd-lot net purchases to income is

$$(19) \quad \left(\frac{\partial S_1}{Y}\right)_t = 7.555 - \frac{.8987}{(4.98)} RB_t - 10.79 \frac{Y_t}{Y_{t-1}} \\ + 7.525 \frac{RB_t}{RB_{t-1}} + \frac{.0220}{(2.30)} RS_{t-1} \\ R^2 = .7035 \\ D.W. = 1.21$$

where S_1 = net odd-lot purchases on NYSE. Stock prices enter with a one year lag, while current stock prices were not statistically significant. Odd-lot purchases thus behave much like mutual fund net purchases. Households appear to react in belated fashion to stock prices, increasing their net selling of direct holdings *and* their redemption of mutual funds *after* stock prices decline. This is testimony to the familiar cliché that "the odd-lotters are always wrong." The most recent illustration is their actions during the 1966-67 market decline and recovery. Household mutual fund redemptions *and* net sales of direct stock holdings were much higher than usual in 1967, following the sharp market drop in 1966. The stock market was staging a huge recovery in 1967. While annual data is not suited to a determination of the precise timing of this phenomena, the general outlines are clear.

The same equation for round lot net purchases (i.e., all household net purchases less those in odd-lots) is similar, but stock prices in this case do not prove statistically significant.

$$(20) \quad \left(\frac{\partial S_2}{Y}\right)_t = 54.65 - \frac{4.8971}{(2.10)} RB_t - 58.536 \frac{Y_t}{Y_{t-1}} + \frac{21.967}{(2.68)} \frac{RB_t}{RB_{t-1}} \\ R^2 = .9043 \\ D.W. = 2.34$$

The "household" sector in the flow of funds accounts is an agglomeration of several types of accounts, including personal trust and estates, colleges and universities, and nonprofit foundations. At year-end 1968 colleges and nonprofit foundations held \$25 billion in corporate stock, while personal trusts held \$95 billion. Together this was nearly one-eighth of the stock held by the "household" sector as defined in the *Flow of Funds Accounts*. Trusts and foundations are likely to behave differently than households, but unfortunately no flow of funds data are available on their actions. By making explicit assumptions about the annual price appreciation of stock holdings by each group, the flow of money into or out of corporate stocks can be estimated. Together with reported asset holdings at the beginning and end of the year, estimates of flows of new funds into stocks (or withdrawals) can be derived. That estimate will only be as reliable as the assumptions about portfolio appreciation. It was assumed that portfolio appreciation for personal trusts, colleges, and foundations

equalled the rate of price appreciation plus dividends for the Dow Jones Industrial Average (DJIA). While this assumption is a reasonable approximation over the long run, the estimates for any given year are subject to some error. The error is probably largest when stock price changes are largest. Excluding estimated "fund flows" of personal trusts, colleges, and foundations from round lot net purchases, the relationship is

$$(21) \quad \left(\frac{\partial S_3}{Y}\right)_t = -27.68 - \underset{(4.00)}{8.048} RB_t + \underset{(1.78)}{49.92} \frac{RB_t}{RB_{t-1}} + \underset{(3.50)}{.4050} RS_t$$

$R^2 = .7864$
 $D.W. = 2.59$

where S_3 = net purchases by "household" sector less odd-lots on NYSE, and less estimated net purchases by personal trusts and estates, colleges and universities, and foundations. The significance of the stock price term is by no means unambiguous since it may reflect misspecification in the net fund flows by personal trusts and estates.

Estimated net purchases by personal trusts and estates as a share of income reveal neither trend nor short-run responsiveness to income or interest rate changes. However, stock prices are negatively correlated with net flows.

$$(22) \quad \left(\frac{\partial PT}{Y}\right)_t = 2.715 - \underset{(2.41)}{.2048} RS_t \quad R^2 = .3097$$

$D.W. = 2.71$

where PT = net purchases of stocks by personal trusts and estates. The coefficient on stock prices is subject to two different interpretations: stock price declines may attract funds of personal trusts into stocks or their past holdings of stocks may fluctuate less in value than the DJIA, the assumption used to derive net flows.

(7) *Summary.*—Short-run increases in income raise the share of income devoted to financial savings, indicating that the short-run marginal propensity to consume is below its long-run level. Higher interest rates in the short run also induce households to devote a higher share of income to financial savings and to shift from life insurance and savings deposits into direct bond holdings.

Over the long run households are reducing their direct participation in the equities markets, while at the same time increasing their indirect holdings, by investing in mutual funds and uninsured pension funds. Currently, the increase in pension fund holdings and mutual fund shares is more than offsetting the decline in household sales of stock. Short-run variations in stock prices affect household investment decisions; stock market declines hasten the liquidation of the households direct holding and reduce their willingness to buy mutual bonds, in each case the reaction occurring after a time lapse.

3. THE STOCK INVESTMENT POLICIES OF THE MANY TYPES OF FINANCIAL INSTITUTIONS

An overview of the trends in the holdings and net purchases and sales of corporate stock by financial institutions in the postwar period was given in Section 5 of Chapter 3. Also in that section was a sum-

mary of the relationship of these holdings and transactions to total acquisition of financial assets by financial institutions, to total net issues of corporate stock, to total volume of trading in corporate stock on exchanges in the U.S., and on the velocity of turnover of the stock portfolio of financial institutions. The present section reviews, still very summarily, the policies followed by the main types of financial institutions and their relation to other uses of their funds using a standard table (e.g., Table 5-2), and summarizes the scarce available information on the structure of the stock portfolios of these institutions.¹⁹

a. Uninsured Pension Funds

Net fund flows into pension funds are growing rapidly, are unusually stable, and can be easily predicted on an actuarial basis given assumptions about employee contributions, rates of retirement, and benefit payments. Pension funds therefore do not face a liquidity problem arising from sudden changes in fund flows.

Originally, the investment objective of pension funds was that of achieving a return to meet a dollar target payment at some future point. Until about 1950 private pension funds were about equally divided between insured and uninsured plans. Insured pension funds were very conservatively invested, life insurance companies being severely limited in their opportunity to acquire corporate stock. In the decade following World War II, corporate treasurers gradually adopted the investment strategy of maximizing return rather than that of investing simply to meet a specified target based on particular conservative actuarial assumptions.

Accordingly, uninsured pension funds quickly sold off the government securities they accumulated during World War II and invested primarily in corporate stocks and bonds, a process that can be followed in Table 5-2. In the immediate postwar years, the interest rates on long-term government bonds (pegged at 2½ per cent) kept interest rates on private bonds at similar low levels. The higher return on common stock investments was strong inducement for bank trustees to invest an increasing share in stocks. This change was made possible by a revision in the New York State law allowing trustees to invest up to 35 percent of a fund in stocks.²⁰ The largest companies with established records were the obvious investment vehicle. A steadily rising trend in the share of fund flows invested in corporate stock has occurred throughout the postwar period.

There is no statistical correlation between this change in pension funds' portfolio composition shown in Table 5-2 and changes in rates of return on stocks or bonds. An important qualification must be made in interpreting this result. Aggregated data for all pension funds may conceal relationships that exist at the individual firm level. If fund managers have different bases for forming price or interest rate expectations or if they respond at varying speeds to change in relative rates of return, aggregated data on portfolio composition will reflect the sum of these behavioral effects. For example, the gradual

¹⁹ It is expected that these matters will be analyzed in the commissions' own report in much greater detail for the last four years on the basis of new primary data specifically collected for this purpose.

²⁰ Murray, *op. cit.*, pp. 72-80.

shift to stocks appearing in the aggregate data may reflect a series of decisions, each made at a fairly discrete point in time by each corporate treasurer (and their bank trust department advisors) that their funds should be more heavily invested in corporate stock. Many pension funds adopt a fixed percentage of fund flows as their target for corporate stock investment, which they do not change for many years. If the decision by different firms to change that target occurs at different points through the sample period (for example, in response to changes in expected rates of return on stocks versus bonds, each fund employing very different lags in forming those expectations), aggregated data on portfolio composition may be trend dominated even though relative prices on stocks and bonds are important to the decision.

While aggregation in the data may conceal the role of relative prices in decisions regarding portfolio composition, it is likely that the real effects of changing interest rates or stock yields in portfolio decisions are not great. The predominant focus in most trust agreements is on long-term growth. As will be noted in Section 4, bank trustees have tended to invest conservatively, essentially placing stock funds in medium and large companies with long-term growth potential. Turnover rates on pension funds are well below those of mutual funds

(see Table 5-3). Briefly, short-run variations in business conditions and interest rates do not appear to affect decisions regarding the share of the portfolio devoted to stocks. Since trust departments manage a huge volume of assets, with large new fund flows, it is not easy to pursue an aggressive investment policy which is responsive to short-run changes in bond and equity markets.

The future course of pension fund investment has been the subject of considerable speculation. The direction of future fund flows will reflect rates of return on alternative credit instruments. A recent suggestion that the flow of funds into corporate stock might stabilize or peak at about 60 percent, and similarly the suggestion that pension funds would increase their involvement in mortgages, is contradicted by the 1967-68 experience.²¹ Corporate stock accounted for approximately 85 percent of fund flows in 1967 and 1968 and for 75 percent in 1969.

A limited number of pension accounts have adopted a riskier market strategy since 1967. Aggregate turnover rates for pension funds are up significantly since that date. Some pension accounts have been switched from bank trust departments or self-management to private investment advisers or brokers managing special equity funds. These managers are generally offering a level of expected yield and associated risk that lies between the traditional conservative bank trust department philosophy and the high risk strategy represented by the smaller "performance" oriented mutual funds. Bank trust departments have also responded in a limited way to their treasurers interest in assuming more risk, by creating pooled equity funds within the bank that are oriented toward a higher turnover, high "performance" objective. A modest share of individual pension accounts are invested in such accounts, at the discretion of the corporate treasurer (often lim-

²¹ *Ibid.*, pp. 92-97.

ited to 10 per cent). In one instance, such a pooled equity fund constituted \$800 million of the banks total trust assets of \$12 billion.²² How much risk corporate treasurers will assume in managing their pension funds in the future is difficult to predict.

b. State and Local Retirement Funds

The characteristics of fund flows and investment objectives of state and local retirement funds are not unlike those of private pension funds. However, political factors to date have resulted in a rather conservative investment strategy—a large share of funds invested in public securities and a very small share in corporate stock (Table 5-3). Public retirement funds have generally been managed by state or municipality treasurers. Funds have been gradually shifted from U.S. government and state and local securities into corporate bonds and, more recently, into mortgages. The share invested in stocks has been quite small, less than 5 percent of new funds up until the middle 1960's. Throughout this period the performance on such portfolios has been disappointingly low.²³ A weak negative correlation exists between changes in interest rates and the share of funds devoted to corporate stock. For the period 1948-68, the share of funds devoted to stock by state and local retirement funds can be represented as follows:

$$\left(\frac{\delta S}{\delta TA}\right)_t = .1728 + .0042(t) - .1651 \frac{(RB)}{RB-1} \quad R^2 = .3955 \\ (1.52) \quad (3.34) \quad (1.48) \quad D.W. = 1.86$$

where S is stock purchases, TA is total assets, and RB is the interest rate on three to five year government bonds. Stock prices were not statistically significant in the equation.

The investment policies of public retirement programs appear to be changing rather dramatically in very recent years. Since 1967, the share of funds devoted to corporate stock has been rising rapidly; in 1967 and 1968, 15 to 20 percent of net fund flows were allocated to corporate stock versus below 5 percent in earlier years. While the process of liberalizing legal restrictions and political constraints on the investment of such funds is likely to progress in an uncertain fashion, there appears to be a potential for a further rather dramatic shift to corporate equities. In 1969, Oregon pioneered a new approach, that of allowing outside professional managers to handle a portion of equity funds with full discretion. Other states appear headed in the same direction.²⁴ It seems likely that state and local government retirement funds will devote a much larger share of their funds to corporate stocks, as corporate pension funds have already done.

c. Life Insurance Companies

Life insurance companies have historically been very conservative investors, on the presumption that their fundamental objective should be the safety of the principal. As a result over three-fourths of all life insurance assets have been invested in corporate bonds and mortgages (Tables 5-3 and 5-4). A variety of statutory and institu-

²² Robert L. Donerstein, "Bankers Trustman Furnum Has Most of the Answers," *Finance*, Vol. 88, Feb., 1970, pp. 10-15.

²³ Murray, *op. cit.*, pp. 102-110.

²⁴ "Oregon Blazes the Pension Trail," *The Institutional Investor*, February 1970, pp. 41-47.

tional considerations reduced the investment alternatives in corporate stock which were available to life insurance companies; state laws provide very strict limitations.²⁵ Most life insurance company assets are held by companies licensed in New York. Originally, New York State law prohibited investment in corporate stock. Relaxation of this restriction in 1951 allowed life insurance companies to invest up to 3 per cent of total assets in common stock; an amendment in 1957 raised the limit to 5 per cent. The law also prescribes limits on the type of company whose stock is eligible. A company must have paid a dividend in each of the previous ten years, and dividends must not have exceeded earnings in any year. Obviously, these restrictions severely limit the choice of stocks open to life insurance companies.

The extent to which statutory limitations have reduced the share of fund flows that life insurance companies devoted to equities is the subject of some dispute. Brimmer noted that in 1951 when the first significant liberalization in the New York State law occurred, life insurance companies invested 40 per cent less in stocks than in the year before.²⁶ A survey of the industry in 1959 revealed that an overwhelming majority opposed substitution of the prudent man rule in place of statutory limitations. However, more than half the industry wanted the New York State law liberalized, to allow 10 per cent of a portfolio to be invested in stocks.²⁷ In general, the investment policy of life insurance companies through 1965 was quite conservative, reflecting an ingrained tradition focusing on protecting the principal.²⁸ Annual acquisition of common and preferred stock since 1958 are shown in Tables 5-5 and 5-6.

The rules for valuation of assets constitute the second major deterrent to stock investment by life insurance companies. Most life insurance companies are mutual companies and are required by law to return profits in excess of a stated level of net policy liabilities. Determining asset values is thus critical in affecting a company's cash flow and has been the subject of dispute in the industry almost since its beginning.²⁹ Valuation of stocks is required to be at market value, though in 1957 some modification was made for preferred stocks. This in turn is the basis for determining the reserves from which dividend payments are made. "Overvaluation" of assets due to temporary price increases leads to higher dividend payments, while "undervaluation" by using temporarily depressed security prices produces huge paper losses. In actual practice, valuation rules are often changed and often suspended when large changes occur in securities prices. Fraine's study of the effect of valuation policy and practices suggested that the industry's valuation procedures may have reduced real solvency.³⁰ For present purposes, the most significant consequence is that the rules have discouraged investment in securities with above average risk,

²⁵ For a review of state laws and their effects, see *Life Insurance Companies as Financial Institutions*, Monograph for the Commission on Money and Credit, Englewood Cliffs, N.J., Prentice-Hall, 1962, pp. 75-159.

²⁶ Andrew Brimmer, *Life Insurance Companies in the Capital Markets*, E. Lansing, Michigan State University Press, 1962, pp. 340-341.

²⁷ *Ibid.*, pp. 347-357.

²⁸ Hart, "Life Insurance Companies and the Equity Capital Market," *Journal of Finance* (1965), pp. 362-367.

²⁹ For a good historical review, see *Life Insurance Companies as Financial Institutions*, pp. 166-173.

³⁰ Harold G. Fraine, *Valuation of Security Holdings of Life Insurance Companies*, Homewood, Ill., Richard D. Irwin, 1962, pp. 20-21.

in both common and preferred stock.³¹ The disincentives to invest in preferred stock have cost the industry a substantial amount since their return in the long run has been well above corporate bonds.³² The opportunity cost of largely remaining out of the equity market in common stocks is even greater.

d. Nonlife Insurance Companies

The growth of fire and casualty insurance companies has been much more sporadic than that of life insurance companies, and short-run changes in fund flows tend to be substantial. From 1946 through 1965, net fund flows fluctuated from \$600 million to \$1,800 million yearly, with little evidence of trend or business cycle effects. Since 1966 growth has been much more rapid; in both 1966 and 1967 fund inflows exceeded \$2 billion, and in 1968 they were over \$3 billion.

Instability in fund flows has induced nonlife insurance companies to invest significant amounts in government securities which serve largely as a hedge against uncertainty. The observed short-run variation in government security holdings largely reflects variation in claims (cf. Table 5-7). As with other financial institutions, government securities made up a large share of their assets after World War II. These were sold in the postwar period. Government securities have now been reduced to about one-tenth of the asset holdings of nonlife insurance companies.

Nonlife company investment portfolios exhibit several distinct trends and tradeoffs. First, a large share of funds is invested in state and local securities; unlike pension funds, nonlife companies are subject to corporate income tax and hence the tax-free status of municipal securities has proven attractive. However, their share in total funds has fallen over time while investments in corporate bonds and mortgages has risen, even though the after-tax yield on state and local government securities has been considerably higher. Relative rates of return are not statistically significant in explaining this tradeoff, nor are short-run changes in interest rates. However, during periods of declining fund flows the share of funds devoted to bonds falls, while conversely an increasing share is devoted to state and local securities. The following equations using annual data for the postwar period illustrates these tradeoffs. Net fund flows were defined exclusive of variation in government security holdings, which approximates the portion of assets that may be invested with a longer time horizon.

$$(24) \quad \frac{\partial SLG}{\partial(TA-G)t} = .9701 - .0714(RB) - .1838 \frac{\partial(TA-G)_t}{\partial(TA-G)_{t-1}}$$

(1.99) (1.87) (2.19)

$R^2 = .4008$
 $D.W. = 1.54$

$$(25) \quad \frac{\partial B}{\partial(TA-G)t} = .1120 + .0797(RB) + .1874 \frac{\partial(TA-G)_t}{\partial(TA-G)_{t-1}}$$

(2.29) (2.08) (2.22)

$R^2 = .4065$
 $D.W. = 1.82$

³¹ Lawrence D. Jones, *Investment Policies of Life Insurance Companies*, Division of Research, Graduate School of Business Administration, Harvard University, Boston, 1968, pp. 143-145.

³² Alden C. Olson, *The Impact of Valuation Requirements on the Preferred Stock Investment Policies of Life Insurance Companies*, Occasional Paper No. 13, Graduate School of Business Administration, Michigan State University, 1964.

where B =bonds, SLG =state and local government securities, and $TA-G$ =total assets less government securities.

Finally, there is no statistical explanation for the share of funds devoted to stocks. Neither fund flows, relative rate of return, or short-run changes in the capital markets appear relevant. The most noticeable occurrence is the rise in the share of funds devoted to corporate stock since 1967. This may be the result of a change in investment strategy or it may simply reflect the more than doubling of net fund flows over this two-year period.

*e. Mutual Funds*³³

Investment strategy varies among different types of mutual funds, though only those most interested in safety of principal or income hold any appreciable part of their funds outside of stocks. In the aggregate, the industry invests 85 per cent of fund flows in corporate stock. The industry's "portfolio response" to changes in interest rates or stock prices in the aggregate is to alter marginally (by a few per cent) its cash holdings.

The most significant change in investment strategy by mutual funds occurred very recently. Many funds have increased the risk they are willing to take, placing greater emphasis on short-run performance. A much larger share of assets have been invested in smaller companies and unlisted securities. Also, turnover rates have increased sharply, from their long-run norm of about 20 per cent through 1965 to levels twice that high in 1968 (Table 5-8). A recent survey indicated that the funds expect their turnover rates to remain at these high levels in 1975.³⁴ These changes are discussed below.

An adequate analysis of the portfolio structure of investment companies and changes in portfolios for the entire postwar period would have gone far beyond the scope of this study. Moreover, such a study has been made for limited periods in the 1950's (the Wharton Study), and one for recent years is now being undertaken by the Security and Exchange Commission's Institutional Investor Study. It may therefore suffice to indicate in Table 5-9 the industrial breakdown of stockholdings of open-end investment companies at a few benchmark dates between 1952 and 1968 and to compare it with a similar breakdown of all common stocks listed on the New York Stock Exchange. The comparison will indicate the industrial sectors favored or neglected by open-end investment companies. Thus, for instance, mutual funds have always held a considerably smaller proportion of their portfolio in stocks of public utilities, railroads, automobiles and chemicals than corresponds to those industries' share in NYSE listings or total stock outstanding.³⁵ On the other hand, mutual funds have invested more heavily in electronic,³⁶ drug and building material companies than corresponds to the relative supply of shares of this type.

³³ Investment Company Institute, *Management Investment Companies*, Englewood Cliffs, N.J., Prentice-Hall, 1962; University of Pennsylvania, Wharton School of Finance and Commerce, *A Study of Mutual Funds* (House Report No. 2274, 87th Congress, 2nd Session), Philadelphia, 1962; U.S. Securities & Exchange Commission, *Public Policy Implications of Investment Company Growth* (Report to the House Committee on Interstate & Foreign Commerce), Washington, D.C., 1966.

³⁴ Daniel Nordby and George DeVoe, "Secret Sales Tools for Researching Tomorrow's Institutional Buyer," *Finance*, December 1969, p. 26.

³⁵ The apparently high share of stock of financial companies in mutual fund portfolios of course reflects the fact that only relatively few companies in this sector are listed on the NYSE.

³⁶ The comparison should be made for the sum of lines 1 and 2 in Table 5-9 because of apparent differences in industrial classification of identical companies (probably including IBM) in the two sources used in the comparison.

f. *Personal Trusts and Common Trusts*

Systematic data on the investment portfolios of personal and common trusts unfortunately are unavailable. Common trust funds were initiated in the 1930's as a means by which banks could exercise fiduciary responsibility for small trusts at low costs. After the passage of the Keough Act in 1962, common trust fund assets have grown from \$3.6 billion in 1962 to \$9.5 billion in 1968.³⁷ Generally a conservative investment strategy has been followed. Turnover rates have historically been well below other institutional investors; during the 1960-64 period, one study showed that over half of the equity common trust funds surveyed had turnover ranging from 3 to 9 percent.³⁸ During this period only half of the funds outperformed the DJIA and only one-fourth exceeded the S&P 500 Index.³⁹ More recent studies for the period 1961-68 indicate that the fund performance has been comparable to the S&P 500.⁴⁰ During this period a gradual evolution occurred toward investing a higher percentage of funds in corporate stock, as is evident in Table 5-10. Compared to other institutional investors, common trust funds have kept a relatively large part of their stock portfolio in conservative preferred and utility stocks (see Table 5-11).

Much less is known about the investment decisions of personal trusts. The share of total assets held in stock has risen over the postwar period, from 48 percent in 1951 to 70 percent as shown in 1968 (see Table 5-12). As noted earlier, fund flows can only be derived from reported changes in asset holdings at year-end and, hence, investment decisions regarding new commitments cannot be accurately determined. It appears that trustees have pursued very conservative policies; one survey indicated that turnover rates during the week October 21-25, 1963, on private trusts were 2.5 percent, a level well below that of pension accounts.⁴¹

g. *Commercial Banks and Thrift Institutions*

Commercial banks and savings and loan associations are prohibited by law from holding corporate stock. Mutual savings banks are permitted to hold stock, but have to date chosen to make little commitment in this area. Even in 1968, stocks represented less than 3 percent of their assets although net stock purchases in 1967-68 accounted for 5 percent of total fund uses (Table 5-13). Stock portfolios are concentrated on preferred shares and common stocks of banks and an investment company jointly owned by a number of savings banks (Table 5-14). It seems unlikely that banks will become active participants in the equities market.

h. *Summary*

The shift of institutions into stocks over the postwar period does not lend itself to any complex econometric explanation. Rates of return on equity have been much above bond rates throughout the period. The shift to stocks appears a belated and long process of adaptation to these circumstances.

³⁷ Edwin W. Hanczaryk, *Bank Trusts: Investments and Performance*, Department of Banking and Economic Research, Office of the Comptroller of the Currency, 1970, p. 34.

³⁸ Frank L. Voorheir, "Bank Administered Pooled Equity Funds for Employee Benefit Plans," Graduate School of Business Administration, Michigan State University, 1967, p. 53.

³⁹ *Ibid.*, pp. 60-72.

⁴⁰ Edward Gill, "Equity Common Trust Funds," *Trusts & Estates*, February 1969, pp. 109-200; Hanczaryk, *op. cit.*, pp. 52-56.

⁴¹ NYSE, *Institutional Shareownership*, 1965, p. 41.

4. THE RETURN ON EQUITY AND INSTITUTIONAL INVESTMENT SINCE 1967

The sharp shift to stock by all major institutional investors in 1967 and 1968 occurred at a time when returns on equity were less attractive relative to bonds than any time throughout the postwar period. Institutions appear to have changed their expectations regarding the future return on equity investment in response to the high return earned by a segment of the mutual fund industry. "Growth funds" have increased the proportion of their asset holdings in medium-sized and smaller companies and have assumed more risk, a strategy which contrasted sharply to the traditional practice followed, e.g., by most bank trust departments. The publicity about growth funds' "performance" and their approach to investment since 1967 apparently induced some pension and other trustee accounts to assume more risk, and inflated expectations of many institutional investors.

a. The Return on Equity

Several indices which measure the return (price appreciation plus dividends) on different groups of equity investments are shown in Table 5-15. Dividend yields have been falling relative to capital gains throughout the postwar period. Rising tax rates, the provision for lower capital gains taxation, and the advantages to corporations of internal financing seem to be the principal reasons for this change.

The explanations for the trends in stock prices and much of their short-run fluctuation lie in rather fundamental economic factors, which affect the expectations of all actual and potential corporate stockholders. The value of stock prices in turn responds to these changes in expectations. Price-earnings ratios are the best single measure of investors' expectations concerning the further return on equity investments. A doubling of price-earnings ratios occurred from the end of World War II to their peak in 1961 (see Table 5-16). The upward revision in these ratios during the 1950's suggests the increasing belief of investors that equity investments were undervalued relative to bonds in that decade. This increase in multiples accounted for over half of the growth in stock prices during this period, which increased at an annual rate of about 20%. Since 1961, multiples have fluctuated in the 13-20 range. The 10 percent annual rate of increase in stock prices from 1960 through 1968 essentially mirrors the growth in after-tax corporate profits.

In addition to these changing trends, the composition of returns among companies has changed. While the indices of stock prices are highly correlated, the more broadly based averages, the Standard & Poor's 500 Index or the New York Stock Exchange Index of all stocks on the Exchange, have a higher long term growth rate than the Dow-Jones Industrial Average (DJIA), which is made up of thirty of the larger, more established companies. From 1950 through 1959 the compound rate of growth was 19.5 percent for the DJIA, versus 20.3 percent for the Standard and Poor 500 index. From 1959 through 1968, the rates of increase were 9.2 percent and 10.9 percent respectively. From 1967 through 1969 the differences between these two indices became even more pronounced, about 4 percent annually. The indices of American Stock Exchange stocks and of industrial stocks traded over

the counter (Table 5-15), which are based primarily on the shares of smaller, younger companies, also illustrate this growing differential between large and small companies. From 1965 through 1968 the American Stock Exchange Index rose 120 percent, and over the counter stocks rose 83 percent, against 24 percent for the S&P index.

The basis for this ever-increasing gap between the DJIA and the broader-based averages reflects a long run shift in the pattern of economic growth. A systematic examination of growth by corporations in the United States economy would go well beyond the scope of this study. However, a brief review of the experience of the *Fortune* 500 indicates that the smaller companies are growing the fastest. (The *Fortune* 500 is the 500 largest manufacturing firms, comprising 63.7% of all manufacturing sales in 1969. Statistics for the "Second 500" largest firms, first compiled by *Fortune* for 1969, revealed that this group accounted for 6.5% of sales). The fifty largest manufacturing firms in the *Fortune* 500 have sustained a slower growth rate since the beginning of the economic expansion in 1961,⁴² through periods of both rapid and slower growth. In 1969, sales by the 50 largest firms rose 6.5 percent over the previous year, while the sales growth of the entire 500 was 9.7 percent. Sales growth for the "Second 500" firms was 11.7%. In earnings, the top 50 registered a decline of 4 percent in 1969 compared to a rise for the 500 of 2 percent and a rise of 8.6% for the "Second 500."⁴³

Much the same pattern appears in earnings per share and stock price appreciation; for the decade 1956-66, the average growth rate in earnings per share for the 50 largest firms was 7.0 percent, while for the bottom 50 of the *Fortune* 500 the average was 8.2 percent.⁴⁴ (If Westinghouse is excluded, the mean for the top 50 drops to 6.5 percent. Westinghouse rose 51.3 percent from an extraordinarily depressed level. This was the highest rate of growth of any company in the 500; furthermore, only three other firms had growth rates exceeding 30 percent.) In the more recent five year period, 1964 to 1968, 22 of the 100 firms with the highest stock price appreciation over this period had a market capitalization of \$1 billion at the end of 1968; of the 100 at the opposite end of the scale, 31 were firms with a capitalization of \$1 billion. For the entire decade 1960-69, the largest 50 firms achieved an average growth rate in earnings per share of 5.94%; for the entire 500 the growth rate was 7.01%, and for the smallest 50 firms of the "Second 500" it was 10.21%.⁴⁵ In short, the highest growth in sales, earnings, and opportunities for equity investment has generally been outside the largest companies.

b. Bank Trust Department Equity Management

As noted earlier, there are two major money management groups in the financial community, bank trust departments and the mutual fund organizations. In recent years the differences in management strategy of these two groups have become pronounced, as have the results. Examination of these differences is important in analyzing the current flow of institutional funds to the equity market and in predicting likely trends in the future.

⁴² *Fortune 500 Directory*, 1967, p. 1.

⁴³ *Fortune*, May 1970, pp. 182-183; *Fortune*, June 1970, pp. 982-99.

⁴⁴ *Ibid.*, May 1969, pp. 63-72.

⁴⁵ *Fortune 500 Directory*, May 1970, pp. 182-183; *Fortune*, June 1970, pp. 98-116.

A trust agreement is an arrangement by which the trustee assumes fiduciary responsibility for managing assets for the benefit of another.⁴⁶ The agreement typically defines that responsibility, the degree of discretion of the trustee and the rules for distributing benefits of the trust. The definition of fiduciary discretion has many dimensions; often it limits the extent of corporate stock and other types of investments; it may impose limits on the share of funds that may be invested in a single company; and it may lay out guidelines, indicating which companies are eligible. Also, state laws and state courts interpret the nature and limits of trustee discretion differently. In some cases the trustee is limited to selecting from a "legal list" of eligible investments maintained by many states. Within the agreed upon limits of fiduciary responsibility trustees typically are limited by the "prudent man" rule.⁴⁷

Trust agreements and investment policies vary for different kinds of accounts. For example, the uncertainty associated with the liquidation date of many personal trusts forces the trustee to be more attentive to liquidity and short-run changes in portfolio values. Tax considerations also matter; for example, corporate pension funds are tax free and hence are not invested in state and local government securities. However, despite these differences the percentage of assets invested in stocks by these three groups in 1968 was nearly identical: 64.1 percent by employee benefit accounts, 63.8 percent by personal trusts and estates, and 59.6 percent equity management for employee pension accounts.⁴⁸

Historically the investment strategy for investing in stock on behalf of pension funds has been conservative, with most funds invested in large companies and with turnover rates on such holdings well below those of mutual funds. The first comprehensive survey of pension fund holdings was conducted in 1955 by the New York State Banking Department. The survey revealed that the stock portion of pension funds trusted by New York banks were mainly concentrated in the largest stocks. As of December 31, 1954, almost 61 percent of pension fund investments were in stocks of companies whose capitalization had a market value in excess of \$500 million and 14 percent in stocks of companies with valuations under \$200 million; the comparable figures for all outstanding common stock were 52.6 percent and 25 percent respectively.⁴⁹ The 1956 Fulbright Committee investigation of thirty large pension funds revealed the same concentration of stock investments in a few large, well-established companies. From 1953 to 1955, almost 25 percent of the equity investment of corporate pension funds was in 25 leading companies. In contrast, such companies attracted only 15 percent of mutual fund investment during that period.⁵⁰

Trust departments gradually diversified their equity investment during the 1950's. The survey of the portfolios of ten large bank

⁴⁶ Cf. Austin W. Scott, *The Law of Trusts*, 3rd ed., Boston, Little Brown & Co., 1967. For application to pension funds, see *Pension Plan Guide*, Commerce Clearing House, Inc., Chicago, 1964.

⁴⁷ Harvard College versus Amory (1835).

⁴⁸ Hanczaryk, *op. cit.*, p. 21.

⁴⁹ George A. Mooney, *Pension and Other Employee Welfare Plans: A Survey of Funds Held by State and National Banks in New York State*, New York, 1955; and Norman C. Miller, "Concentration in Institutional Common Stocks Portfolios," *Journal of Finance*, XVI, March 1961, pp. 40-41.

⁵⁰ U.S. Senate, Committee on Banking and Currency, *Institutional Investors and the Stock Market, 1953-1955*, Washington, 1956.

trust departments for 1958-1959 bore this out: only 16.5 percent of purchases were in the abovementioned group of 25 companies.⁵¹ This process of diversification has continued into the 1960's. However, turnover rates have remained relatively stable, about 12 percent, in the decade through 1965, less than half the level of mutual funds.

The aggregate return on trustee pension funds can be inferred from various sources. A questionnaire survey of the largest 200 firms among the *Fortune* 500 revealed that the common stock portfolios of these pension funds appreciated at a compound rate of 7.2 percent from January 1, 1957, to December 31, 1962.⁵² During that same period the average annual increase (price appreciation plus dividends) of the DJIA was 9.1 percent; for the S&P 500 indices, 10.9 percent. Dietz found similar results in his examination of the return on six large pension funds for 1953-62. The average annual appreciation for the funds was 12.0 percent over the period versus 13.1 percent for the DJIA and 13.6 percent for Standard and Poor's Index of 425 Industrials. There were no subperiods during which the performance of the funds differed appreciably from the averages. He also found no evidence that these pension funds attempted to shift the share of funds devoted to equities in response to market conditions.⁵³

The results are little different for more recent years. A recent survey of some 894 profit-sharing pension trusts records of asset appreciation during the period 1959-66 reveals much the same result.⁵⁴ The asset size of these funds ranged from under \$50,000 to over \$25 million; taken together they had assets valued at \$4.1 billion at year-end 1961, equal to 12 percent of all uninsured pension fund accounts. About one-half of these funds made their own investment decisions, while the other half relied on a trustee. Most of the trust agreements did not restrict the trustee to the "legal list." Generally bank and trust companies were the trustees, hence this sample should reflect the experience of a wide group of bank trustees.

For the 46 largest of these profit-sharing trusts, i.e., all those with assets in excess of \$10 million, the average overall return for the period 1959-63 was 8.4 percent.⁵⁵ At the end of 1961 these profit-sharing trusts held 64 percent of their funds in common stock. Assuming a return on the nonequity portion of their investments in the range of 3 to 4 percent, these funds were earning 10.9 to 11.5 percent on their equity investments. This return is slightly above the return on the DJIA, which rose 7.3 percent in price over this period and yielded slightly over 3 percent in dividends. Within this group of 46 profit-sharing trusts, there is a distinct correlation between rate of return and share of funds held in equities.⁵⁶ As one might suppose, in the 1966 market decline the portfolios of these funds declined more than the aggregate of all pension funds, 7.9 per cent versus 5.7 per cent, though much less than the market averages.⁵⁷

⁵¹ Roger F. Murray, "Economic Aspects of Pensions: A Summary Report," New York, NBER, 1968, pp. 81-82.

⁵² F. William Graham II and Richard D. Bower, "Corporate Responsibility in Pension Fund Management," Graduate School of Business Administration, Harvard University, unpublished monograph, Exhibits 13 and 14.

⁵³ Peter O. Dietz, *Pension Funds: Measuring Investment Performance*, New York, Graduate School of Business Administration, Columbia University, and the Free Press of Glencoe, 1966, pp. 80-83.

⁵⁴ Bert L. Metzger, "Investment Practices, Performance, and Management of Profit Sharing Trust Funds," Profit Sharing Research Foundation, Evanston, Illinois, 1969.

⁵⁵ *Ibid.*, p. 360.

⁵⁶ *Ibid.*, pp. 372-375.

⁵⁷ *Ibid.*, pp. 427-428.

Finally, the return on all uninsured pension funds for the period 1959-66 has been estimated to be 5.8 percent.⁵⁸ With roughly 50 percent of the portfolio in nonequity investments yielding from 3 to 4 percent, the implied return on the equity portion of the investment is 7.5 to 8.5 percent. During that period the rate of return on an unmanaged portfolio made up of the DJIA stocks exceeded 10 percent.

In short, it appears that historically the average appreciation of equity investments of the bank trust departments is not significantly different from that realized by the more conservative stocks of companies with large capitalizations, as represented e.g., in DJIA. What appears to have occurred as a result of the diversification in trust department investments in the late 1950's and early 1960's is that average performance now is better approximated by the more comprehensive stock price indices. As noted above, concentrating stock investments in the stocks of the companies with the largest capitalization is likely to result in lower rates of return. This difference in growth rates has widened since 1966, as evidenced by the increasing gap between the DJIA and the more comprehensive stock market indices.

c. The Investment Record of Mutual Funds

The investment record of the mutual fund industry has been scrutinized several times.⁵⁹ In every case asset appreciation of the mutual funds was essentially the same as that of the relevant securities price averages.⁶⁰ In the Wharton School examination of the period 1953-58, it was concluded that the mutual funds had not outperformed the DJIA. The same conclusion could be reached in 1964. However, since 1965 the performance of the "growth funds" has been distinctly better than that of all the popular averages. This is evident in Table 5-17. As a result, the cumulative appreciation of an investment in the growth funds over the ten-year period 1960-1969 was well above that realized by the averages, about 145% versus 60% for the DJIA. The mutual funds stressing safety of principal or yield (growth and income or income funds) have also appreciated at a rate somewhat above the DJIA.

The higher rate of assets appreciation by the growth funds is the result of adopting a higher-risk strategy, diversifying to smaller companies and small-capitalization stocks. This strategy, of course, leaves the growth funds more susceptible to downside risk as well. These funds sustained sizable losses during the 1969-70 stock market decline, as shown in Table 5-17. During 1969 the growth funds depreciated 15.8 percent, comparable to the decline in the DJIA but slightly more than that in the broader averages, e.g., the NYSE index. In 1970 the performance of the growth funds relative to the market worsened; during the first six months of 1970, they had fallen 31.0 percent, while the NYSE index declined about 23 percent. However, for the two and one-half year period January 1, 1968, to June 30, 1970, the growth funds, decline was just comparable to that of the NYSE index; given their much superior performance relative to the market from 1965 to 1967, their cumulative appreciation since 1965

⁵⁸ *Ibid.*, p. 359.

⁵⁹ U.S. Securities and Exchange Commission, *Investment Trusts and Investment Companies*, 1939: Wharton School of Finance and Commerce, *A Study of Mutual Funds*, House Report No. 2274, 87th Cong., 2nd sess. (1962); SEC, *Public Policy Implications of Investment Company Growth*, House Report No. 2337, 89th Cong., 2nd sess. (1966).

⁶⁰ This was first noted in the SEC study of the period 1927-37 (*Investment Trusts and Investment Companies*, Part II, Chapter VI and Appendix J.)

still greatly exceeds that of the market. The mutual funds' gains relative to the market when stock prices were rising more than offset their disproportionate losses in the market decline.

These comparisons were made as of June 30, 1970, the last date for which data are available. Because of the higher-risk strategy assumed by the growth funds, the low point of a "market cycle" provides the worst possible basis for comparing their performance to the averages. It seems unlikely that further stock market declines will be of sufficient size to invalidate the conclusion that the growth funds can significantly "outperform" the averages, though at the same time they raise the variance on returns.

Nor is this conclusion necessarily invalidated by the speculative market environment of 1967, which contributed to the very high rates of return of the smaller growth funds. The equities markets did provide unusually large rewards to speculative investment in small issues during 1967 and 1968. While the NYSE index increased by 23.1 percent in 1967 and 9.7 percent in 1968, the increases on the American Exchange were 76.5 percent and 33.2 percent, and those for the National Quotation Bureau's Over-the-counter Index were 54.0 and 20.8 percent. Also, the performance figures of many funds were inflated by the acquisition of "letter stock," unlisted stock (which the company would list at a subsequent registration or offering) purchased from a company at below the market price and valued by the fund each quarter at the current market price. Acquisition of letter stock was a source of large gains by the purchasing fund if the market price of the company's stock continued up and there was a market for its sale after public listing.

On the other hand, it is always hazardous to make too much of "extenuating circumstances" in the stock market. The opportunity for speculative investment in 1967 was by no means unprecedented. The downside risk associated with speculative investment, e.g., in "letter stock," may well be fully reflected in the losses sustained by the growth funds in 1969-70. In essence, the higher gains by the growth funds over the entire period since 1965 reflect their realization that market opportunities were shifting away from the most highly capitalized companies. It is their wider diversification and their greater flexibility enabling them to more rapidly adjust their portfolios that has produced the very sharp contrast in rates of appreciation on equity investments compared to the bank trust departments.

These and subsequent comparisons of mean returns do not include specific measures of the risk element. It is clear that the growth funds have raised the variability of returns together with raising their expected value. Both the expected return and its variability need to be included in measuring portfolio performance.⁶¹ The proper measure of risk remains the subject of some controversy;⁶² most analysts employ either the standard deviation or the mean absolute deviation. Abstracting from an explicit risk measure in this discussion is not critical since there is a high correlation between portfolios' expected

⁶¹ Jack Treynor, "How to Rate Management of Investment Funds," *Harvard Business Review*, XXXIII, Jan.-Feb., 1965, pp. 63-79; William F. Sharpe, "Market Fund Performance," *Journal of Business*, XXXIX, Supplement, June, 1966, pp. 119-130; Ira Horowitz, "The Reward to Variability Rates and Mutual Fund Performance," *Journal of Business*, XXXIX, Oct. 1966, pp. 485-488.

⁶² Fama, "Risk and the Evaluation of Pension Fund Portfolio Performance," Bank Administration Institute, Park Ridge, Ill., 1969.

returns and portfolio performance measures which include both expected return and risk. That expected returns dominate most measures of overall portfolio performance arises because much stock price variability is associated with general market risk which is not mitigated by company selection or diversification.⁶³

One other important dimension to mutual fund performance since 1967 is the interrelationship between fund performance and fund size.⁶⁴ Neither the Wharton School study of the period 1953-58, the SEC study for 1956-65, or Friend's recent study of the 1964-68 period revealed any correlation of mutual fund performance with size, after stratifying funds by their different objectives.⁶⁵ However, year to year comparisons of the growth funds since 1967 reveal that "size" has been significantly correlated with performance, the highest rates of appreciation being achieved by the smaller funds.

Table 5-18 presents yearly performance of all growth funds, classified by size of assets in each year since 1964.⁶⁶ In 1965 the two funds with assets in excess of \$1 billion had a significantly lower average gain than the rest, and in 1966 funds with less than \$100 million sustained below-average losses. Beginning in 1967, the size effects are rather pronounced. Average fund appreciation declined markedly with fund size, except for the Dreyfus Fund, the largest of all with assets of over \$2 billion. None of the ten funds with over \$500 million in assets achieved an increase equal to the *mean* level of gains by all 37 funds with less than \$300 million of assets at the year's end. In 1968, the same inverse correlation of average performance and fund size appears, again with the exception of the Dreyfus Fund *and* excluding one other entry, the Enterprise Fund, from the size class \$500 million-\$1 billion.⁶⁷ In the 1969-70 market decline, the smaller funds sustained the largest losses.⁶⁸

There are several reasons for these relationships between assets appreciation and fund size.⁶⁹ First, important economies can be real-

⁶³ John Lintner, "Security Prices, Risk, and Maximal Gains from Diversification," *Journal of Finance*, XX, Dec. 1965, pp. 611-612; B. F. King, "Market and Industry Factors in Stock Market Behavior," *Journal of Business*, XXXIX, Supplement, June, 1966, pp. 139-140; Jack E. Gaumnitz, "Appraising Performance of Investment Portfolios," *Journal of Finance*, XXV, June, 1970, pp. 555-556.

⁶⁴ For the period 1930-55 the correlation between size and performance was significant in only two of the years, and in those two the larger companies performed better than the smaller ones (*ibid.*, p. 474).

⁶⁵ Wharton Report, pp. 210-230; SEC Report, pp. 255-273; Irwin Friend, Marshall Blume, and Jean Crockett, *Mutual Funds and Other Institutional Investors*, The Twentieth Century Fund, New York, 1970, pp. 60, 156.

⁶⁶ The same analysis was conducted of funds classified as having the objective of "long-term growth and income." These funds represent a step toward a more conservative investment policy. The role of size in this class of funds would not be expected on *a priori* grounds to be so important since the objective of a more stable return lends itself to investment in high-capitalization stocks and implies a lower premium for high turnover rates. There were no size effects.

⁶⁷ The Enterprise Fund's performance of +44.3 per cent in 1968 is four times the average of funds of its size (whose performances range from +0.4 to +14.3 per cent). The mean value of this ten-fund group is raised from 7.1 to 11.5 per cent when Enterprise is included. Enterprise's performance has been exceptional; it grew from under \$10 million in 1964, and has each year consistently outperformed its competitors of similar size. (In 1969, it fell 26.4 per cent; by contrast, other funds in its asset class fell 10.9 per cent).

⁶⁸ In the first 6 months of 1970, growth funds with assets from \$25-100 million declined 30.57%, versus -26.76% for those with assets over \$500 million (Arthur Lipper Service, "Mutual Fund Performance Analysis," June 30, 1970).

⁶⁹ Several reasons may explain why Friend's recent study did not reveal these size effects. First, his sample was confined to 44 firms, those in existence in 1964; this excludes many new smaller firms who tended to assume more risk. Second, data for the entire 1964-68 period may conceal the size effects which only appear since 1967. This tends to overstate the growth of larger funds; many funds classified as large in 1967 were much smaller when they achieved their highest growth. The typical experience in the mutual fund industry during this period was for smaller funds with the highest rates of asset appreciation to attract rather large fund inflows.

ized by managing larger amounts. There are obvious administrative and management economies in employing specialized personnel to perform the rather diverse tasks of marketing, trading, research, and portfolio management. Also many cost items akin to overhead can be spread as fund size increases; e.g., visits to companies being considered as potential investments are an important part of the institutional investors' research which those managing small funds are generally unable to afford. These economies have been well-documented. One study of mutual funds revealed that those funds with assets over \$400 million achieved per unit cost 50 per cent lower than funds with assets below \$5 million.⁷⁰

There are other potential gains. For example, larger companies have greater leverage in buying research or other market information from brokerage houses because they generate large commissions. The absence of sufficient taper in commission rates for large transactions provides an obvious opportunity for those making large block trades to receive this sort of nonprice transfer in exchange for their commission business. As in any regulated market where prices and costs diverge, the competitive response is that of service or product competition and various nonprice transfers.

On the other hand, large funds have little or no size advantage in dealing in low-capitalization stocks. The "size of the market" in any stock will limit the amount of money any given investor can place in a stock without reducing his own liquidity or the flexibility to sell his position. The capitalization of the company and how closely the stock is held help determine the size of the market in a stock. A large fund may have to diversify its portfolio very widely when investing in small companies. Large funds apparently enjoy no scale economies in investing small amounts in many issues.

The potential economies and market advantage for large funds have not been realized in practice, as has become evident from this review of their investment record. Invariably those with large amounts to manage (both mutual funds and bank trust departments) have conceded some degree of market flexibility by reason of their size. One common tendency is to deal in the larger companies, which reduces average expected returns. The largest accumulations of funds have also tended to be less active in the market. The much lower turnover of trust accounts relative to the mutual funds was noted earlier. Among mutual funds, there is an inverse correlation of turnover rates with fund size.⁷¹ This is not to suggest high turnover as an end in itself, but rather to indicate that the larger fund accumulations are pursuing a different market strategy.

d. Summary and Concluding Observations

The contrast between investment practices and results of the bank trust departments and those of the smaller, capital-appreciation oriented mutual funds is striking. The trust departments are essentially investing with limited risk and achieving results reflecting the rate of equity price appreciation of the more established companies. The investment return in the largest companies has steadily fallen below equity returns in the corporate sector generally, a difference which has increased markedly since 1966.

⁷⁰ SEC Report, p. 253.

⁷¹ Wharton Report, pp. 210-228; SEC Report, pp. 254-55.

In sharp contrast, some of the mutual funds have assumed more risk, and achieved records of price appreciation, even discounting "special circumstances," which are well above the broadly based averages. Moreover, these above-average rates of asset appreciation are *not* being achieved by the largest funds, e.g., those with assets in excess of \$1 billion, which perform essentially as the broader based market averages, or at best very marginally above that level.⁷² Large fund size need not *preclude* asset appreciation above the "averages," though this has been the result to date. Given this experience among the mutual funds, it is hardly surprising that the huge agglomerations of funds managed by the bank trust departments, in some cases as much as \$10 billion in a single bank, perform essentially as "the market."

The long-term implications for institutional investment of these very different investment strategies, a contrast which has been clearly drawn only since 1967, remain to be seen. Risk preferences of institutional investors vary widely, and appear to be changing fairly rapidly over time. In addition, prices in the capital markets have changed dramatically in recent years. Price inflation has produced long-term bond rates of 9%, a rate which compares favorably to returns in the stock market in recent years, certainly during 1969-70. Moreover, the losses sustained by the performance funds during the recent stock market decline will surely be a reminder of the expected yield-risk trade off, and has undoubtedly temporarily undermined the appeal of a riskier market strategy.

However, reductions in the rate of inflation and resumption of economic growth are likely to once again reward equity holders, raising returns on equity above that of bonds. And unlike households, institutional investors' preferences for stocks and their portfolio choices have not been much influenced by previous stock market declines. This suggests that the long run shift of financial institutions in favor of equity investments is likely to continue.

How much risk institutional investors will assume in their equity investments is more difficult to predict. A return on equity comparable to the broad market averages will surely continue to be quite acceptable to many corporate treasurers and other endowment and private trust accounts. For those pension funds and trusts which are still heavily invested in bonds, the gains from future shifts from corporate bonds to equity are themselves likely to increase performance significantly. Nevertheless, if professional money managers are able to show they can again achieve rates of equity appreciation better than "the market," as they did in the 1965-70 period, this will very likely entice the owners of some pension fund and trust accounts. Private investment advisers and brokers managing special equity funds now offer a range of options to institutional accounts, allowing them to choose a level of expected yield and associated risk premium from a continuum ranging between the two extremes of a very conservative or a high-risk strategy, dealing in the stocks of the smallest companies. The most attractive strategy for significant amounts of pension and private trust money may well lie somewhere between these two end points.

⁷² These observations are based on "expectations" in the statistical sense; individual large funds may perform better.

Table 5-1

Asset Holdings and Net Fund Flows of Households^a, 1951-1968

	A. Absolute Figures (\$ bill.)				B. Distribution (percent)			
	1951 (1)	1960 (2)	1964 (3)	1968 (4)	1951 (5)	1960 (6)	1964 (7)	1968 (8)
	<u>I. Financial Asset Holdings</u>							
1. Currency and demand dep.	58.3	65.0	80.6	109.7	12.1	6.8	6.1	5.9
2. Savings accounts	71.6	165.3	252.9	357.4	14.9	17.3	19.0	19.0
3. Life insurance reserves	57.8	85.2	101.1	120.0	12.0	8.9	7.6	6.4
4. Pension fund reserves	27.5	90.7	137.3	202.9	5.7	9.5	10.3	10.8
5. Bonds	82.1	110.5	120.2	149.8	17.1	11.6	9.0	8.0
6. Corporate Stock	155.4	394.2	587.4	873.2	32.3	41.2	44.1	46.5
7. Other financial assets ^b	28.4	46.2	52.0	63.5	5.9	4.8	3.9	3.4
8. Total financial assets	481.0	957.1	1331.4	1876.4	100.0	100.0	100.0	100.0
	<u>II. Net Fund Flows^c</u>							
1. Currency and demand dep.		10.4	16.0	28.6		4.2	10.1	12.9
2. Savings accounts		97.9	87.7	105.7		39.6	55.7	47.6
3. Life insur. reserves		29.0	15.5	18.7		11.7	9.8	8.4
4. Pension fund reserves		61.1	38.5	55.9		24.7	24.4	25.2
5. Bonds		28.0	8.7	30.6		11.3	5.5	13.8
6. Corporate Stock		11.1	4.5	15.5		4.5	2.9	7.0
7. Other financial assets ^b		19.3	5.7	11.5		7.8	3.6	5.2
8. Total financial assets		247.4	157.5	221.9		100.0	100.0	100.0

^a Including personal trust funds and nonprofit institutions.

^b Excluding net investment in corporate business.

^c Period ending with year indicated at top of column.

Source: Federal Reserve Board Flow-of-Funds Accounts 1945-1968

RWG/cc

June 11, 1970

Table 5-2

Structure of Assets and Transactions of
Private Uninsured Pension Funds, 1951-69

(percent)

	1951	1955	1960	1965	1969
	(1)	(2)	(3)	(4)	(5)
I. <u>Distribution of financial assets</u>					
1. Cash	3.8	2.2	1.3	1.2	1.7
2. U.S. govt. sec.	26.9	15.8	7.1	4.6	3.2
3. State & local govt. sec.	-	-	-	-	-
4. Mortgages	1.3	1.6	3.4	4.5	4.1
5. Loans	-	-	-	-	-
6. Corporate bonds	45.1	43.2	41.2	31.3	27.5
7. Corporate stocks	17.8	33.3	43.3	54.7	59.0
8. Miscellaneous assets	5.1	3.8	3.7	3.3	4.5
Total assets					
9. Percent	100.0	100.0	100.0	100.0	100.0
10. Billions of dollars	7.8	18.3	38.1	72.6	96.6
II. <u>Distribution of net acquisition of financial assets^{a/}</u>					
1. Cash		2.4	0.6	1.3	2.4
2. U.S. govt. sec.		10.8	-1.9	3.5	-1.2
3. State & local govt. sec.		-	-	-	-
4. Mortgages		1.2	5.6	8.7	2.7
5. Loans		-	-	-	-
6. Corporate bonds		53.0	48.4	30.3	15.7
7. Corporate stocks		28.9	43.5	51.9	73.7
8. Miscellaneous assets		3.6	3.8	4.3	6.7
Total net acquisitions					
9. Percent		100.0	100.0	100.0	100.0
10. Billions of dollars		8.3	16.1	23.1	25.5

Source: Flow-of-funds Accounts 1945-1968, Board of Governors of the Federal Reserve System, and ibid., First Quarter 1970.

^{a/}Period ending with year indicated at top of column; derived from annual figures; hence, occasional small differences compared to final differences between benchmark years.

Table 5-3

Structure of Assets and Transactions of State
and Local Government Retirement Funds, 1951-69

(percent)

	1951	1955	1960	1965	1969
	(1)	(2)	(3)	(4)	(5)
I. Distribution of financial assets					
1. Cash	1.8	1.9	1.0	0.9	0.9
2. U.S. govt sec.	51.8	43.9	30.3	23.6	15.5
3. State & local govt. sec.	30.4	25.2	22.6	7.9	4.3
4. Mortgages	1.8	2.8	7.7	11.2	11.4
5. Loans	-	-	-	-	-
6. Corporate bonds	12.5	23.4	34.4	49.4	54.3
7. Corporate stocks	-	0.9	2.1	4.8	11.4
8. Miscellaneous assets	1.8	1.9	2.1	2.1	2.2
Total assets					
9. Percent	100.0	100.0	100.0	100.0	100.0
10. Billions of dollars	5.6	10.7	19.5	33.0	51.0
II. Distribution of net acquisition of financial assets ^{a/}					
1. Cash					1.1
2. U.S. govt sec.		36.7	13.6	14.7	0.6
3. State & local govt. sec.		20.4	19.3	-13.2	-2.2
4. Mortgages		4.1	13.6	16.9	11.7
5. Loans		-	-	-	-
6. Corporate bonds		36.7	48.9	69.9	62.8
7. Corporate stocks		-	4.5	9.6	23.9
8. Miscellaneous assets		2.0		2.2	2.2
Total net acquisitions					
9. Percent		100.0	100.0	100.0	100.0
10. Billions of dollars		4.9	8.8	13.6	18.0

Source: Same as Table 5-2.

^{a/} Period ending with year indicated at top of column; derived from annual figures; hence, occasional small differences compared to final differences between benchmark years.

Table 5-4

Structure of Assets and Transactions
of Life Insurance Companies, 1951-69

(percent)

	1951	1955	1960	1965	1969
	(1)	(2)	(3)	(4)	(5)
I. <u>Distribution of financial assets</u>					
1. Cash	1.6	1.5	1.1	0.9	0.8
2. U.S. govt. sec.	16.5	9.8	5.6	3.3	2.1
3. State & local govt. sec.	1.8	2.3	3.1	2.3	1.7
4. Mortgages	28.9	33.6	41.6	39.7	37.9
5. Loans	3.9	3.9	4.3	5.9	7.8
6. Corporate bonds	41.2	42.1	36.1	39.0	38.5
7. Corporate stocks	3.3	4.1	4.7	5.2	6.9
8. Miscellaneous assets	2.7	2.8	3.4	3.7	4.2
Total assets					
9. Percent	100.0	100.0	100.0	100.0	100.0
10. Billions of dollars	66.7	87.9	115.8	154.0	190.0
II. <u>Distribution of net acquisition of financial assets</u>^{a/}					
1. Cash		1.0	-	0.5	-
2. U.S. govt. sec.		-12.1	-8.1	-3.8	-3.6
3. State & local govt. sec.		4.8	5.5	-0.3	-0.8
4. Mortgages		48.2	45.2	50.0	33.8
5. Loans		3.9	8.1	7.1	19.0
6. Corporate bonds		46.9	41.2	35.2	33.2
7. Corporate stocks		3.4	2.6	6.3	12.3
8. Miscellaneous assets		3.4	5.5	4.9	6.1
Total net acquisitions					
9. Percent		100.0	100.0	100.0	100.0
10. Billions of dollars		20.7	27.2	36.6	35.8

Source: Same as Table 5-2.

^{a/} Period ending with year indicated at top of column; derived from annual figures, hence, occasional small differences compared to final differences between benchmark years.

Table 5-5

Acquisition of Corporate Stock by Life Insurance Companies,
1958-68

(billions of dollars)

	Total	Preferred		Common	
		Total	Public Utility ^{a/}	Total	Public Utility ^{a/}
	(1)	(2)	(3)	(4)	(5)
1958	0.37	0.09	0.07	0.28	0.06
1959	0.51	0.15	0.10	0.36	0.06
1960	0.66	0.25	0.21	0.41	0.07
1961	0.92	0.31	0.21	0.61	0.10
1962	0.77	0.22	0.12	0.55	0.07
1963	0.79	0.26	0.16	0.53	0.08
1964	1.07	0.32	0.23	0.75	0.09
1965	1.46	0.48	0.31	0.98	0.13
1966	1.32	0.22	0.12	1.10	0.14
1967	2.07	0.38	0.21	1.69	0.20
1968	3.32	0.39	0.18	1.93	0.24

Source: Life Insurance Fact Book, Institute of Life Insurance, 1969, p. 81.

^{a/}Includes very small amounts of railroad stock (for 1958-68, \$35 million preferred and \$82 million common).

Table 5-6

Industrial Structure of Stockholdings
of Life Insurance Companies, 1951-68

(percent of all stocks)

	Preferred Stock				Common Stock			
	Total (1)	R.R. (2)	Pub. Util. (3)	Other (4)	Total (5)	R.R. (6)	Pub. Util. (7)	Other (8)
1951	63.1	4.1	23.7	35.3	36.1	1.4	8.9	26.7
1952	60.6	4.3	24.3	32.0	39.4	1.6	10.1	27.8
1953	59.5	4.0	26.0	29.6	40.5	1.3	10.8	28.5
1954	53.0	3.0	26.4	23.6	47.0	2.0	11.8	33.2
1955	48.0	2.2	26.0	19.8	52.0	1.9	12.4	37.7
1956	44.3	1.8	24.8	17.7	55.7	1.6	12.8	41.4
1957	44.9	1.8	25.9	17.2	55.1	1.1	13.7	40.3
1958	38.0	1.5	22.7	13.8	62.0	1.4	15.0	45.6
1959	35.2	1.3	22.0	11.9	64.8	1.0	13.4	49.2
1960	36.1	1.2	23.6	11.4	63.9	0.8	16.4	46.8
1961	32.5	0.9	21.7	9.9	67.5	0.7	16.8	50.1
1962	34.6	1.0	23.0	10.7	65.4	0.7	16.6	48.1
1963	32.5	0.9	21.9	9.7	67.6	0.6	16.1	50.9
1964	31.7	0.9	21.7	9.1	68.3	0.6	16.4	51.2
1965	31.4	0.9	21.9	8.6	68.6	0.7	14.8	53.2
1966	32.0	0.7	23.0	8.3	68.0	0.6	13.8	53.6
1967	28.2	0.6	20.2	7.2	71.8	0.5	11.6	59.7
1968	24.5	0.4	17.6	5.6	75.6	0.5	10.4	64.7

Table 5-7

Structure of Assets and Transactions
of Non-Life Insurance Companies, 1951-69.

(percent)

	1951	1955	1960	1965	1969
	(1)	(2)	(3)	(4)	(5)
I. <u>Distribution of financial assets</u>					
1. Cash	8.7	6.2	4.6	3.3	2.8
2. U.S. govt. sec.	39.9	28.9	19.9	15.2	8.4
3. State & local govt. sec.	10.1	19.9	28.8	28.5	32.3
4. Mortgages	0.7	0.9	0.4	0.3	0.4
5. Corporate bonds	5.8	5.7	6.0	7.6	13.3
6. Corporate stocks	28.3	32.7	33.5	38.6	35.1
7. Miscellaneous assets	6.5	5.7	6.8	6.7	7.6
Total assets					
8. Percent	100.0	100.0	100.0	100.0	100.0
9. Billions of dollars	13.8	21.1	28.1	39.6	49.8
II. <u>Distribution of net acquisition of financial assets^{a/}</u>					
1. Cash		2.0	-	-	0.9
2. U.S. govt. sec.		12.2	-7.0	4.6	-17.8
3. State & local govt. sec.		55.1	68.4	50.8	43.9
4. Mortgages		-	-	-	-
5. Corporate bonds		6.1	8.8	18.5	33.6
6. Corporate stocks		16.3	15.8	13.8	29.0
7. Miscellaneous assets		8.6	14.3	12.3	10.3
Total net acquisitions					
8. Percent		100.0	100.0	100.0	100.0
9. Billions of dollars		4.9	5.7	6.5	10.7

Source: Same as Table 5-2.

^{a/} Period ending with year indicated at top of column; derived from annual figures; hence, occasional small differences compared to final differences between benchmark years.

T a b l e 5-8

Structure of Assets and Transactions of
Open-End Investment Companies, 1951-69

(percent)

	1951 (1)	1955 (2)	1960 (3)	1965 (4)	1969 (5)
I. <u>Distribution of financial assets</u>					
1. Cash ^{a/}	2.9	21.5	2.4	1.8	6.0
2. U.S. govt. sec.	2.9	3.8	3.5	3.0	1.2
3. Corporate bonds	8.8	6.3	7.1	7.8	7.0
4. Corporate stock	85.4	87.4	87.0	87.4	85.8
Total assets					
5. Percent	100.0	100.0	100.0	100.0	100.0
6. Billion of dollars	3.4	7.9	17.0	27.1	52.6
II. <u>Distribution of net acquisition of financial assets</u>^{b/}					
1. Cash ^{a/}		4.8	3.7	10.2	31.2
2. U.S. govt. sec.		9.5	5.6	2.0	-2.8
3. Corporate bonds		9.5	13.0	18.4	12.8
4. Corporate stocks		76.2	77.7	69.4	53.8
Total net acquisitions					
5. Percent		100.0	100.0	100.0	100.0
6. Billions of dollars.		2.1	5.4	4.9	10.9

Source: Same as Table 5-2.

^{a/}Includes open market paper.^{b/}Period ending with year indicated at top of column.

TABLE 5-9

Industrial Structure of Common Stock Portfolios
of Open-End Investment Companies
and of Common Stock Listed on NYSE,
1952-68

	Holdings of Open-End Investment Cos.					Listings on New York Stock Exchange			
	Dec. 1952 ^{b/}	Sept. 1958 ^{b/}	Dec. 1958	Dec. 1965	Dec. 1968	Dec. 1952	Dec. 1958	Dec. 1965	Dec. 1968
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	^{a/}								
	I. Selected Industries with Substantially Rising Shares								
1. Office equipment	1.2	2.6	3.3	5.0	9.4	1.0	2.8	1.3	1.8
2. Electrical equipment	3.4	2.5	3.5 ^{c/}	6.1 ^{c/}	7.9 ^{c/}	3.2	4.0	9.4	12.1
3. Drugs	1.8	3.6	4.7 ^{d/}	4.1 ^{d/}	5.6 ^{d/}	na	na	na	4.5
4. Building materials	2.0	2.2	3.7	1.3	4.0	1.2	1.6	1.0	1.4
5. Foods & beverages	2.6	1.8	1.6	2.5	3.5	3.8	3.1	4.0	4.5
	II. Selected Industries Without Trends ^{a/}								
1. Finance	9.0	9.2	10.5	10.5	8.4	2.6 ^{e/}	2.3 ^{e/}	2.4 ^{e/}	4.0 ^{e/}
2. Retail trade	4.1	2.4	2.2	2.5	4.0	4.7	4.1	4.6	4.7
3. Mining	3.0	3.2	4.5 ^{f/}	3.8 ^{f/}	3.1 ^{f/}	3.1	3.0	2.2	2.9
	III. Selected Industries with Substantially Declining Shares ^{a/}								
1. Utilities	17.0	12.7	13.6	10.5	6.3	16.1	17.3	18.5	14.3
2. Oil	14.8	14.1	15.8	10.0	12.8	18.6	16.7	13.7	14.6
3. Chemicals	8.7	7.3	7.0	6.5	7.0	14.2	14.5	15.0	9.3
4. Automobiles	3.3	2.9	2.3	4.6	2.2	8.1	7.0	7.9	5.5
5. Railroads	6.3	4.2	3.9	3.6	3.2	4.8	3.0	2.1	3.4
6. Rubber & tires	2.4	2.4	3.1	1.2	1.3	1.0	1.4	0.9	1.0
7. Steel	2.7	6.0	6.8	2.3	1.2	3.3	5.0	2.3	1.7

Sources: Cols. 1 and 2: A Study of Mutual Funds, 1962, p.71; cols. 3-5: Mutual Fund Fact Book, 1969, p. 22; cols. 6-9: Department of Research & Statistics, NYSE.

^{a/} Based on holdings of open-end investment companies

^{b/} As a percentage of domestic stocks only; foreign stocks accounted for 2.4 percent in 1952 and 6.3 percent in 1958

^{c/} Includes electronics

^{d/} Includes cosmetics

^{e/} Includes real estate

^{f/} Includes metals

Table 5-12

Structure of Assets and Transactions of Personal Trust Funds
Administered by Banks and Trust Companies,^{a/}

1951-68

(percent)

	1951	1955	1960	1965	1968
	(1)	(2)	(3)	(4)	(5)
<u>I. Distribution of financial assets</u>					
1. Cash	2.2	2.4	1.0	1.0	1.0
2. U.S. govt. sec.	23.8	12.2	5.9	7.2	5.7
3. State & local govt. sec.	12.2	12.9	14.2	9.7	9.7
4. Mortgages	2.7	2.1	1.4	1.2	1.5
5. Corporate bonds	4.4	5.5	5.2	5.7	6.3
6. Corporate stock preferred	4.2	3.5	2.2	1.7	1.9
7. Corporate stock common	44.5	56.8	65.3	67.5	67.5
8. Other assets	6.6	4.6	4.8	6.6	6.4
Total assets					
9. Percent	100.0	100.0	100.0	100.0	100.0
10. Billions of dollars	39.1	55.0	71.9	115.0	138.4
<u>II. Distribution of net acquisition of financial assets^{b/}</u>					
1. Cash		3.5	0.0	1.7	3.3
2. U.S. govt. sec.		-3.4	-16.3	12.7	-13.4
3. State & local govt. sec.		10.3	2.1	29.1	29.6
4. Mortgages		6.5	4.0	3.7	3.3
5. Corporate bonds		59.3	74.0	29.0	27.2
6. Corporate stock preferred		24.5	-0.2	0.1	2.0
7. Corporate stock common		4.9	36.4	22.8	46.0
8. Other assets		-5.6	-0.0	0.8	1.8
Total net acquisitions					
9. Percent		100.0	100.0	100.0	100.0
10. Billions of dollars					

Source: Appendix I.

^{a/}Includes common trust funds; separate figures for these are shown in Table 5-11.

^{b/}Period ending with year indicated at top of column.

T a b l e 5-10

Structure of Assets and Transactions of Common Trust Funds,
1952-68

(percent)

	1952 (1)	1955 (2)	1960 (3)	1965 (4)	1968 (5)
<u>I. Distribution of financial assets</u>					
1. Cash	-	0.6	0.8	1.0	1.3
2. U.S. govt. sec.	30.2	17.2	7.9	9.2	5.2
3. State & local govt. sec.	} 75.6	1.7	1.6	14.9	16.3
4. Mortgages		1.1	1.6	2.4	2.4
5. Corporate & for. bonds		19.2	28.8	25.0	23.9
6. Corporate stock preferred	12.5	11.5	7.6	2.9	2.6
7. Corporate stock common	40.1	48.7	51.7	44.2	47.7
8. Other assets	1.6	-	-	0.2	0.6
Total assets					
9. Percent	100.0	100.0	100.0	100.0	100.0
10. Billions of dollars	1.10	1.87	2.81	7.53	9.55
<u>II. Distribution of net acquisitions of financial assets^{a/}</u>					
1. Cash	} -314.3		-8.1	2.8	3.3
2. U.S. govt. sec.			-37.2	28.9	-3.0
3. State & local govt. sec.			47.6	6.5	17.6
4. Mortgages	} 566.6		-1.5	2.5	5.8
5. Corporate & for. bonds			10.7	15.2	22.1
6. Corporate stock preferred		39.9	-5.0	2.8	5.4
7. Corporate stock common		-188.8	80.3	11.2	39.2
8. Other assets		-3.5	13.3	30.1	9.6
Total net acquisitions					
9. Percent		100.0	100.0	100.0	100.0
10. Billions of dollars					

Source: 1952: R.W. Goldsmith, Financial Intermediaries in the American Economy since 1900, Princeton University Press for National Bureau, 1958; 1955-68: Appendix I.

^{a/}Period ending with year indicated at top of column.

T a b l e 5-11
Industrial Structure of Stockholdings
of Common Trust Funds, 1952-68

(percent)

	Per- cent stock	Common Stock			
		Total	Bank & Finance	Utilities	Other
	(1)	(2)	(3)	(4)	(5)
1952	24.1	75.9	n.a.	n.a.	n.a.
1953	22.9	77.1	n.a.	n.a.	n.a.
1954	20.2	79.8	9.2	16.8	53.7
1955	19.1	80.9	8.3	16.8	55.8
1956	17.5	82.5	7.6	16.9	58.0
1957	17.9	82.1	7.8	18.2	56.1
1958	14.6	85.4	8.4	19.0	58.0
1959	12.3	87.2	8.4	18.5	60.4
1960	12.8	87.2	8.6	21.3	57.3
1961	10.4	89.6	10.6	21.9	57.1
1962	12.0	88.0	10.0	22.8	55.1
1963	9.0	91.0	9.2	21.4	60.4
1964	7.3	92.7	8.3	20.9	63.5
1965	6.2	93.8	7.6	18.9	67.3
1966	5.4	94.6	8.1	19.2	67.3
1967	4.7	95.3	7.1	15.0	73.1
1968	5.2	4.8	3.0	14.3	72.6

Source: 1951-1953: Raymond W. Goldsmith, Robert E. Lipsey, and Morris Mendelsohn, Studies in the National Balance Sheet of the United States New York, NBER, 1963, II, 123; 1954-1962: Federal Reserve Bulletin, various issues; 1963-1968: E. Hanzaryk, National Banking Review, 1965, p. 365; 1967, p. 442.

Table 5-13

Structure of Assets and Transactions
of Mutual Savings Banks, 1951-69

(percent)

	1951	1955	1960	1965	1969
	(1)	(2)	(3)	(4)	(5)
I. Distribution of financial assets					
1. Cash	3.8	2.9	2.0	1.7	1.2
2. U.S. govt. sec.	42.1	27.5	16.5	10.7	6.3
3. State & local govt. sec.	0.4	1.9	1.7	0.5	0.3
4. Mortgages	42.1	55.9	66.7	76.9	75.3
5. Loans	0.9	0.6	1.0	1.4	2.6
6. Corporate bonds	9.4	8.3	9.4	5.0	9.3
7. Corporate stocks	0.9	2.2	2.0	2.4	3.1
8. Miscellaneous assets	0.4	0.6	0.7	1.4	2.0
Total assets					
9. Percent	100.0	100.0	100.0	100.0	100.0
10. Billions of dollars	23.5	31.3	40.5	58.1	74.4
II. Distribution of net acquisition of financial assets^{a/}					
1. Cash		1.2	-2.1	0.6	-0.6
2. U.S. govt. sec.		-26.7	-19.8	-3.4	-10.1
3. State and local govt. sec.		6.8	-	-2.3	-0.6
4. Mortgages		107.0	100.0	100.6	71.1
5. Loans		-	1.0	2.3	6.3
6. Corporate bonds		5.8	14.6	4.5	25.8
7. Corporate stocks		4.7	3.1	3.4	5.0
8. Miscellaneous assets		1.2	3.1	3.4	3.1
Total net acquisitions					
9. Percent		100.0	100.0	100.0	100.0
10. Billions of dollars		8.6	9.6	17.7	15.9

Source: Same as Table 5-2.

^{a/} Period ending with year indicated at top of column; derived from annual figures; hence, occasional small differences compared to final differences between benchmark years.

T a b l e 5-14

Industrial Structure of Stockholdings
of Mutual Savings Banks, 1953-68,

(percent)

	Preferred Stock:			Common Stock				
	Total	Convert.	Straight	Total	Banks	Insur- ance	Investment Cos.	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1953	n.a.	n.a.	n.a.	n.a.	65.9 ^a	n.a.	n.a.	34.1 ^{a,b}
1954	n.a.	n.a.	n.a.	n.a.	56.2 ^a	n.a.	n.a.	43.8 ^{a,b}
1955	26.3	1.5	24.8	73.5	49.9	3.9	3.5	16.2
1956	23.7	1.6	27.0	71.4	47.5	4.1	3.8	16.0
1957	29.0	1.3	27.8	71.1	44.7	3.8	5.2	17.3
1958	30.8	1.4	29.4	69.1	41.3	3.8	5.5	18.5
1959	32.4	1.0	31.5	67.6	40.1	3.6	6.8	17.1
1960	32.7	0.7	32.1	67.2	39.4	3.7	8.1	16.0
1961	30.0	0.5	29.5	69.9	36.7	3.7	8.8	20.8
1962	30.6	0.8	29.8	69.4	33.3	3.9	9.8	22.5
1963	30.9	0.9	29.9	69.1	31.5	3.5	10.2	23.9
1964	29.8	0.8	29.0	70.3	32.0	3.5	9.8	24.9
1965	29.3	1.60	27.7	67.4	30.7	3.5	10.3	22.9
1966	31.2	n.a.	n.a.	68.8	29.9	3.2	10.3	25.3
1967	32.0	n.a.	n.a.	68.1	26.9	2.5	11.6	27.2
1968	30.1	2.00	28.1	69.9	25.0	1.2	13.1	30.5

Sources: 1953-1960: Unpublished data of the National Association of Mutual Savings Banks; 1961-68: Savings Bank Journal, various issues.

^a/Includes both common and preferred.

^b/Includes all stock not held by commercial banks.

Table 5-15

Price Appreciation Plus Dividend Yield:
Selected Stock Market Indices,
 1952-69

	DJIA	S&P 500	NYSE, Composite	AMEX	Over the Counter ^{a/}
1952	21.3	23.4			
1953	14.2	17.7			
1954	11.8	-1.2			
1955	50.2	51.2			
1956	7.0	6.4			
1957	-8.5	-10.5			
1958	38.6	42.4			
1959	20.0	11.8			
1960	-6.2	0.3			
1961	22.4	26.6			
1962	-7.6	-5.4			
1963	20.6	22.5			
1964	18.7	16.3			
1965	14.2	12.3	9.5	39.5	30.1
1966	-15.6	-10.0	-12.6	-6.6	-1.5
1967	18.9	23.7	23.1	76.5	54.0
1968	7.4	11.1	9.7	33.2	20.8
1969	-15.2	-11.4	-12.5	-19.7	

Source: New York Stock Exchange, Fact Book.

^{a/} 35 Industrials (National Quotation Bureau).

T a b l e 5-16
Stock-Bond Yield Differentials, 1952-68

(dollars in millions)

	Common Stock Return		Bond		Yield Gap			Implicit Corporate Price Deflator for GNP (1958 ^a 100)	Corporate Profits After Taxes
	Dividend Yield ^b	Capital Gains ^b	Total Yield	Rate ^c	Current (1)-(4)	Total (3)-(4)	Price- Level- Index ^b		
	(1)	(2)	(3)	(4)					
1952	5.80 ^a	9.4 ^a	17.8 ^c	2.96 ^f	2.84 ^b	14.8 ^b	9.3 ^a	87.5	\$17.0
1953	5.80	-4.4	-1.2	3.20	2.60	-4.4	10.5	88.3	15.5
1954	4.95	4.0	57.2	2.90	2.05	48.3	9.7	89.6	16.0
1955	4.08	26.8	31.0	3.06	1.02	27.9	11.3	90.9	22.2
1956	4.09	2.6	6.4	3.36	.73	3.0	14.1	94.0	22.1
1957	4.35	-11.3	-10.5	3.89	.46	-14.4	12.9	97.5	20.9
1958	3.97	34.0	42.4	3.72	.18	38.6	16.6	100.0	17.5
1959	3.23	7.3	11.8	4.38	-1.15	7.4	17.1	101.6	22.5
1960	3.47	-0.5	0.3	4.41	-.94	-4.3	17.1	103.3	20.6
1961	2.98	20.9	26.6	4.35	-1.37	22.2	21.1	104.6	20.5
1962	3.37	-9.4	-5.4	4.33	-.96	-9.7	16.7	105.8	23.8
1963	3.17	17.5	22.5	4.26	-1.09	18.2	17.6	107.2	26.3
1964	3.01	12.9	16.3	4.40	-1.39	11.9	18.1	108.8	31.5
1965	3.00	8.3	12.3	4.49	-1.49	7.8	17.1	110.9	38.2
1966	3.40	-10.4	-10.0	5.13	-1.73	-15.1	14.9	113.9	41.1
1967	3.20	14.8	23.7	5.51	-2.31	18.2	17.5	117.6	38.1
1968	3.07	9.6	11.1	6.18	-3.11	4.9	17.2	122.3	40.0
1969	3.24	-13.6	-9.8	7.03	-3.79	-16.8		128.1	40.3

Source: Economic Report of the President, 1970.

^a/ 500 stocks, Standard & Poor's Index.

^b/ Year-end to year-end percentage in Standard & Poor's Stock Index.

^c/ Moody, AAA corporate bonds.

Table 5-17

Average Annual Return of Mutual Funds:
Capital Gains Reinvested, Dividends in Cash
(Percentage Change)

Year	Growth Funds					Balanced Funds	Income Funds
	Large: (1969 year end assets over \$300m)	Small: Maximum Capital Gain	Small: Long Term Growth	Growth & Current Income	Growth & Current Income, With Relative Stability		
<u>Annual Change^(a)</u>							
1960	+ 6.4	4.8	1.9	1.4	2.7	5.1	0.8
1961	27.2	28.8	26.1	24.7	23.6	19.5	19.0
1962	-18.1	-19.4	-15.3	-12.0	- 8.1	- 5.4	- 3.6
1963	22.5	20.3	17.4	18.0	17.1	13.2	16.0
1964	15.0	11.6	12.5	15.1	14.3	12.2	14.4
1965	32.4	35.3	21.5	16.9	14.5	10.4	14.0
1966	- 1.6	- 2.4	- 4.1	- 6.7	- 6.5	- 5.5	- 6.5
1967	39.1	58.3	31.7	25.3	24.2	19.7	23.9
1968	10.1	21.1	14.1	15.0	17.4	14.4	21.3
1969	-10.4	-16.3	-10.7	-11.4	-12.6	-11.3	-15.9
<u>Percentage Cumulative Change</u>							
1960-64 ^b	+48.0	37.0	48.0	49.0	54.0	47.0	50.0
1965-69 ^a	78.3	91.4	53.4	37.0	35.7	25.7	33.0
1960-69 ^a	148.0	144.3	112.4	97.0	99.4	80.0	90.9

Cumulative Change, DJIA: 1960-64, +46.6%; 1965-69, +9.2%; 1960-69, +60.1%.

Source: (a) Wiesenberger, Investment Companies: Mutual Funds and Other Types, 1970 Edition, Wiesenberger Financial Services, New York, pp. 124-131.

(b) Ibid., 1966 Edition, pp. 118-123.

TABLE 5-18

Performance of Growth Funds, by Asset Size: Average Percentage Gain, 1964-69

(number of firms in parentheses)

Year	Mean Level of Funds with Assets Over \$300 Mill. on Dec. 31, 1968	Asset Size at Year's End						
		\$10 Mill. But Under \$50 Mill.	\$50 Mill. But Under \$100 Mill.	\$100 Mill. But Under \$300 Mill.	\$300 Mill. But Under \$500 Mill.	\$500 Mill. But Under \$1 Bill.	\$1 Bill. But Under \$2 Bill.	\$2 Bill or More
1964	14.3%	13.9% (1)	18.4% (10)	13.4% (4)	13.3% (3)	14.5%	None	None
1965	34.6	38.2 (9)	39.8 (6)	34.1 (7)	31.2 (6)	34.9 (3)	22.2 (2)	None
1966	-1.1	-1.1 (12)	-0.1 (7)	-3.3 (6)	-2.9 (6)	-2.0 (4)	-2.2 (2)	None
1967	43.6	62.1 (9)	66.9 (13)	66.7 (7)	42.2 (8)	33.4 (6)	25.7 (3)	26.5 (1)
1968	8.3	19.1 (9)	18.1 (10)	20.5 (14)	7.3 (7)	7.1 ^{a/} (10)	4.7 (4)	11.6 (1)
1969	N.A.	-18.7 (9)	-24.0 (11)	-18.3 (14)	-22.1 (7)	-10.9 (10)	-11.0 (4)	-13.9 (1)
Cumulative return, 1967-69 ^{b/}		57.0	49.8	66.1	18.9	27.3	17.1	21.5

^{a/} Average excludes Enterprise Fund. See text footnote 67.^{b/} By asset size as of December 31, 1967.

APPENDICES

INSTITUTIONAL INVESTORS AND CORPORATE STOCK— A BACKGROUND STUDY*

(Raymond W. Goldsmith, study director)

(Appendices I—VII)

APPENDIX I

BASIC STATISTICAL DATA

(By Helen Stone Tice and Virginia Duff)

A. INTRODUCTION

The data used in this portion of the report were taken from the flow of funds accounts wherever possible.¹ In three areas, however, we found it necessary to supplement the flow of funds estimates. First, the published accounts contain no data on the value of tangible assets; we incorporated such estimates as were available from the Office of Business Economics and developed our own series for housing and for public sector tangibles. The data are given in Tables IA-1 through IA-7.

Second, there are several financial institutions which are not shown explicitly in the flow of funds accounts; instead they are included in other sectors, particularly in the household sector. In the interest both of measuring more accurately the financial position of true households and of being able to study the behavior of these institutions which are rather important in the securities market, we created time series for them. These estimates are shown in Tables IA-8 through IA-18.

Third, the focus of the Institutional Investors Study on the market for corporate securities made us re-examine the flow of funds estimates of the amounts outstanding of and transactions in such securities. In the case of corporate shares, the market value outstanding series in the flow of funds was replaced by that developed in Appendix VI modified for investment company shares, although the net issue series was retained. In the case of corporate bonds, both the stock and the flow series were replaced by series which, although still based on par values, at least have the virtue of allowing households to hold

*Supplementary Volume II, Institutional Investors Study, Securities and Exchange Commission.

¹Board of Governors of the Federal Reserve System, *Flow of Funds Accounts, 1945-1968*, Washington, D.C., March 1970.

nonnegative amounts of such securities, a characteristic not shared by their predecessors. These data are given in Tables IA-19 through IA-22.

Finally, these new estimates are combined with the flow of funds estimates of financial assets and liabilities to produce the sector balance sheets shown in Tables IB-1 through IB-9.

B. ESTIMATES OF TANGIBLE ASSETS

1. *Land*.—The land estimates used in this Appendix are those given in Milgram's Appendix II with a few exceptions. The land of financial corporations was estimated by multiplying the IRS estimates of the book value of land of all financial institutions by the market-to-book ratio developed in Appendix II for "finance, insurance, and real estate." No adjustment was made for unincorporated financial institutions. These tend to be brokerage houses; and the land holdings of the finance, insurance, and real estate aggregate for partnerships and proprietorships are accounted for primarily by the holdings of real estate firms.

The estimated value of farm land used here differs from that reported in Appendix II. Although both estimates were made by subtracting the value of buildings from the USDA's estimate of the value of farm real estate, Appendix II used the USDA's estimates of structures, while we used the estimates described below.

Transactions were measured by first differences in the holdings, since the net purchase data of Appendix II were rather spotty.

2. *Reproducible Tangible Assets*.—All the estimates of depreciable assets reported here were made using the perpetual inventory method. This method involves the computation of a weighted sum of a time series of gross investments in the asset in question; the weights are determined by the particular life and depreciation assumptions employed in the calculation. The difference between the gross investment of a given year and the change in the stock during that year is by definition the depreciation which has occurred. To derive the replacement cost estimates used in this report, the calculation is first made in terms of constant dollars, and then the stock and depreciation estimates are reflated to current year prices.

The gross investment series used for the estimates of the private stock of depreciable assets are in all cases those used in the gross investment component of the income and product accounts produced by the Office of Business Economics at the Department of Commerce. In the case of public sector estimates, the construction data and equipment series were taken from the income and product accounts wherever possible; data are regularly published, although the two Government sectors are not credited with capital formation in the OBE's accounts.

a. Private Nonresidential Structures and Equipment

Stocks of plant and equipment for the private sector were obtained from the OBE's Capital Stock Study; the variant used was straight-line depreciation at Bulletin F lives.² This concept was selected both

² For the most recent publication describing the OBE estimates see Robert C. Wasson, John C. Musgrave, and Claudia Harkins, "Alternative Estimates of Fixed Business Capital in the United States," *Survey of Current Business*, April 1970, pp. 18-36.

for comparability with the earlier NBER estimates and because there is some presumption that in their own internal decision making, at least, firms use a much less rapid write-off of their plant and equipment than they demand for tax purposes. A theoretically preferable present value measure of the stock of capital was not available. To calculate such a measure would have necessitated the specification of a discount rate parameter in addition to the life estimate; furthermore, the OBE estimates embodied much more refined adjustments for the retirement distribution and for asset categories than could have been readily duplicated in calculations using the present value method.

The flow of funds estimates of corporate and noncorporate investment in plant and equipment are obtained from the OBE. Such estimates were also used by Allan Young in his study of depreciation and corporate profits which yielded stock estimates by legal form as a by-product.³ Although the data used in the Young study have not been kept up to date by the OBE, we did attempt to incorporate the statistical revisions necessary to make the components consistent with revised total stock and investment series. These series embodied both ordinary statistical revisions and the adjustments in the estimates of assets transferred between the public and private sectors necessitated by a shift from sales price to original cost valuation.⁴

Ordinary statistical revisions were assumed to keep relative shares the same as they had been in the Young study. The valuation adjustment for assets transferred between public and private ownership was assumed to be 95 percent corporate for manufacturing equipment and structures, 90 percent for manufacturing equipment, and 100 percent corporate for nonmanufacturing structures.

Institutional structures were defined to be OBE's "institutional structures" plus one-third of the estimated stock of (or investment in) "social and recreational structures." Institutional investment in equipment was estimated residually by subtracting the construction estimates from the flow of funds series on "nonprofit plant and equipment" expenditures; it was assumed to account for a share in the stock of "nonfarm noncorporate manufacturing equipment" (as well as in the depreciation on that stock) equal to its share in the comparable gross investment estimates.

Estimates for farm nonresidential structures and equipment were taken directly from the OBE. Nonfarm noncorporate plant and equipment were the residuals after subtracting corporate farm and institutional plant and equipment from the total privately owned incorporating the valuation adjustment on assets transferred from public to private ownership.

The subdivision of corporate investment into its financial corporate and nonfinancial corporate subsectors was largely a judgmental procedure. We assumed that in 1948 the investment of financial corporations was split equally between structures and equipment, and that the share allocated to structures steadily increased during the subsequent years, accounting for 55 per cent of the total in 1952 and 72 per cent of the total by 1968. (This assumption was based largely on the observed rapid growth in investment in structures by life insurance

³ The allocation between corporate and noncorporate is based on the study reported by Allan Young in "Alternative Estimates of Corporate Depreciation and Profits: Parts I and II," *Survey of Current Business*, April 1968, pp. 17-28, and May 1968, pp. 16-28.

⁴ See Wasson, Musgrave and Harkins, *op. cit.*, for a discussion of these valuation methods.

companies.) The annual percentages were then applied to the flow of funds estimates of financial corporate investment in plant and equipment, to obtain the structures and equipment components separately. Nonfinancial corporate investment in structures and equipment are the residuals. These were then depreciated at rates of 2 per cent for structures and 8.3 per cent for equipment, assuming a 50 year life for structures and 12 for equipment.

b. Private Residential Structures

The basic investment series are again taken from the national income and product accounts as given in the flow of funds accounts. Since OBE estimates of the stock of housing were not available at the time at which this report was written, the investment series were depreciated exponentially in order to estimate the net stocks and associated depreciation series.

For 1-4 family nonfarm housing a depreciation rate of 2.2 per cent was used; for multi-family housing a rate of 2.7 per cent, and for farm housing a depreciation rate of 1 per cent was applied. Initial stocks for the end of 1949 were selected from the estimates developed in earlier work by one of the authors.⁵ The criterion used in selecting the initial stock and the depreciation rate were first, the consistency with the results of the 1950 Census of Housing, and second, whether or not its computational assumptions in combination with the gross investment series described above yielded housing stocks consistent with the 1960 Census of Housing.⁶

The stock of multi-family dwellings by sector was based on the flow of funds allocation of such investment between corporate and non-corporate purchasers. The 1949 stock was allocated between the two sectors in the same proportion as in an earlier NBER study.⁷

c. Public Sector Structures

(1) Introduction

In order to arrive at a total stock figure for public structures by means of a perpetual inventory computation, we need an expenditure estimate and a price index for each year as far back as necessary, given the service life assumption. Our two major categories are Federal construction and State and local construction. Each of these is divided into several subcategories, which are:

FEDERAL	STATE AND LOCAL
Residential	Residential
Nonresidential	Nonresidential
Highway	Highway
Conservation and development	Conservation and development
Military	Public service enterprises
Other	Sewer and water
	Other

⁵ H. S. Tice, "Depreciation, Obsolescence and the Measurement of the Aggregate Capital Stock of the United States," *Review of Income and Wealth*, June 1967, pp. 119-154.

⁶ The application of this test is made more complicated by the fact that the Census estimates measure the value of "real estate," and there exists little evidence on how these estimates should be divided between land and structures. Unfortunately we have no independent estimates of the value of residential land. In Appendix II the land underlying multi-family dwellings is included in the IRS-based estimates of the land holdings of business firms; the value of the land underlying 1-4 family structures was derived as a fraction of the value of those structures.

⁷ R. W. Goldsmith and R. E. Lipsey, *Studies in the National Balance Sheet*, Princeton: Princeton University Press for the NBER, 1963, Vol. I, p. 260.

The State and local government expenditures include Federally aided expenditures. All calculations assume declining balance depreciation. The average service life assumptions are: 50 years for Federal civilian and State and local residential structures; 50 years for non-residential buildings; 30 years for highways; 80 years for conservation and development; 50 years for other Federal nonresidential structures; 67 years for sewer and water systems; 50 years for public service enterprises; and 50 years for other State and local nonresidential structures.

(2) *Estimates for 1946-1968*

Figures for both Federal and State and local government expenditures on structures during this time period were taken from unpublished Commerce Department data. There were only two departures from the OBE worksheets. Federal nonresidential expenditures in our system were a combination of their "nonresidential" and "industrial" expenditures. Also, the average of the price indices of these two categories gave the price index used in our calculations for the over-all category, nonresidential.

For State and local governments, between 1963 and 1968, the separation of "other," "sewer and water systems," and "public service enterprises" disappears. In order to compute the stocks, we had to have separate expenditure figures for these years. These were obtained by totaling the three categories for each year over the previous five-year period, and computing the per cent share of each in the total. The percentages remained reasonably consistent (within 5 percentage points over this time period), so we extrapolated forward, using the mean per cent of the 1958-1963 total for each category, i.e.,

	Percent
Sewer and Water Systems.....	9.2
Public Service Enterprises.....	67.2
Other.....	23.6

(3) *Estimates for 1915-1946*

All figures for expenditures were taken from *Construction Volume and Costs, 1915-1956* (page 10), a statistical supplement to *Construction Review*, by the Departments of Commerce and Labor.

The price indices for this period were derived in two different ways for different time periods—1915-1928 and 1929-1946. In the later period, indices were taken from a supplement to the *Survey of Current Business*, "The National Income and Product Accounts of the U.S., 1929-1965, Statistical Tables," Department of Commerce, pages 164-165. Indices in this period are the same for both Federal and State and local expenditures.

The indices for the period from 1915 to 1929 are derived from the above indices with 1929 as the base year. In Goldsmith's *A Study of Saving in the United States*, Vol. I, Table R-20, pages 608-609, there are several categories of indices with base year 1929=100. The categories are not as specific as our expenditure data call for, but since they are all that is available, we used the category which was the closest approximation to those needed. We took the 1929 figures from the OBE, and extrapolated backward based on Goldsmith's indices in the following way:

Federal	Goldsmith Table R-20		State and Local	Goldsmith Table R-20h	
	Col.	(1)		Col.	(1)
Residential.....	(4) X	592	Residential.....	(4) X	592
Nonresidential.....	(3) X	343	Nonresidential.....	(3) X	343
Highway.....	(6) X	475	Highway.....	(6) X	475
Conservation and development.....	(3) X	402	Conservation and development.....	(3) X	402
Military.....	(7) X	380	Sewer and water.....	(8) X	403
Other.....	(8) X	342	Public service.....	(8) X	403
Total.....	(8) X	413	Other.....	(8) X	342
			Total.....	(8) X	413

¹ The numbers in this column are the price indices for each category in 1929 with base year equal to 1958. The formula we used is: $X_{1958} = \text{Goldsmith Index}_{1929} \times \text{Index for 1929}_{1958}$.

The price indices for 1915 to 1946 are virtually the same for both Federal and State and local.

(4) Estimates for 1893-1915

(a) *Federal*.—Figures for these early years were taken from the Census Bureau publication, *Historical Statistics of the United States—1789-1945*, Table H :27-32, page 169. The only available categories that correspond to the categories we used for later years were:

	Column
Total Federal.....	27
Nonresidential.....	30
Conservation & Development.....	29
Military.....	28

The figures which overlap with our data (i.e., 1915 to 1919) show that the categories are not exactly the same, but are close enough to be plausible.

The price indices for these early years were derived from the Goldsmith indices in the same way as the later figures, described above.

(b) *State and local*.—For State and local expenditures on structures, the only available data were for total expenditures. This "total" number was computed from Goldsmith's *A Study of Saving in the United States*, as the sum of columns (2) and (6), Table G-6, page 1,053, and (3), Table G-15, page 1,067.

(5) Federally Aided State and Local Construction Expenditures, 1915-1966

From 1915 to 1956, the expenditure figures come from *Construction Volume and Costs, 1915-1956*, a statistical supplement to *Construction Review*, by the Departments of Commerce and Labor.

For the years 1957 to 1966, expenditure figures are not available by category. There is only a total Federal aid figure for each year. We allocated this total among the components on the basis of the 1956 figures that were available from *Construction Review* (see above), using the following proportions:

Public Service Enterprises	=.014
Highways	=.860
Nonresidential	=.124
Sewer & Water Systems	=.002

The same price indices were used for the Federal aid category as were used for State and local government expenditures.

d. Public Sector Equipment

Equipment stock figures were derived in the way described above for structures. The perpetual inventory method for computing net stocks and depreciation was applied to the investment series. Exponential or declining balance depreciation and a 12 year average life are assumed for all categories.

(1) Federal Government

The Federal equipment sector is broken down into "civilian" and "military." Military investment series, for the early years from 1929-1946, come from Goldsmith's *National Wealth of the United States*, Table B-166, column (4), page 394. Data for the later years, 1947-1968, come from unpublished data from the OBE. The early civilian series, from 1929-1946, comes from Goldsmith's *A Study of Saving in the United States*, Vol. I, Table F-16, column (8), page 1,009. The sum of civilian and military investment figures gives the total of Federal Government equipment.

(2) State and Local Government

State and local expenditures for early years, from 1929-1946, come from *A Study of Saving in the United States*, Vol. I, Tables G-6, column (5), page 1,053, and G-15, column (3), page 1,067. Expenditure estimates for 1947-1968 are unpublished Commerce Department data.

The total of all equipment, Federal and State and local, is available as a control total for equipment. This "total" figure can be found in OBE's publication, *The National Income and Product Accounts of the United States, 1929-1965*, and in the *Survey of Current Business*, July issues, Table 1.4, line 5.

e. Private Consumer Durables

The gross investment series in both current and constant prices are taken from the OBE's Tables 2.5 and 2.6 "Personal Consumption Expenditures by Type of Product," published regularly in the *Survey of Current Business* and in its supplements. Since the flow of funds considers this to be capital expenditure rather than consumption, depreciation charges must be imputed to the household sector; stock estimates are a by-product of this calculation, although they are not published.

The flow of funds estimates differ both in life assumption and in accounting convention from the earlier Goldsmith estimates. The flow of funds uses double declining balance depreciation while Goldsmith used straight-line depreciation; he assumed much longer lives than does the flow of funds. The comparisons are summarized in Table I-1. The flow of funds estimates were used (1) since they were readily available, (2) since they have been incorporated into the set of social accounts used elsewhere in the Appendix, and (3) since the rates seem somewhat more typical of our present throw-away economy than do Goldsmiths. Estimates in preparation at OBE were not available, even in preliminary form, in time for inclusion here.

Table I-1

CONSUMER DURABLES

	Service Life Assumptions Goldsmith (In years)	Flow of funds	F/F deprec- iation (in %)
Jewelry and watches	15	10	.20
Furniture, including mattresses & bed- springs	15	10	.20
Kitchen & other household appliances	12	8	.25
China, glassware, tableware & utensils	10	8	.25
Other durable house furnishings	10	8	.25
Ophthalmic products & orthopedic appliances	4	4	.50
New cars & net purchases of used cars	15*	8	.25
Tires, tubes, accessories & parts	5	3.3	.60
Books and maps	6	4.76	.42
Whell goods, durable toys, sports equipment, boats & pleasure aircraft	10	8	.25
Radio & television receivers, records & musical instruments instruments	10	8	.25

* Nonlinear depreciation over this life.

Sources: (1) R. W. Goldsmith, The National Wealth of the United States in the Postwar Period, Princeton: Princeton University Press for the NBER, 1962, Table B-31, p. 252.

(2), (3) Unpublished worksheets of .

f. Inventories

(1) Private Nonfarm Inventories

Private nonfarm inventories are from the national income and product accounts. The levels are book values; the flows are the inventory change component of GNP and thus are adjusted for inventory valuation changes. The nonfinancial corporate and noncorporate business components are presumed to account for the total; no attempt was made to estimate inventory holdings for nonprofit institutions, households, and financial corporations.

(2) Farm Inventories

Like the estimates of nonfarm private inventory investment, the change in farm inventories was also obtained from the OBE. Year-end holdings come from the *Balance Sheet of Agriculture*, various issues; this series is the sum of "livestock" and "crops stored on and off farms" less "CCC loans" and "CCC backed loans" from the flow of funds accounts.

(3) Federal Government Inventories

Federal inventory year-end levels are taken, for recent years, from Treasury Department data. The Treasury *Bulletin* contains a quarterly balance sheet for "corporations and certain other business-type activities." The table ending December 31, which usually appears at the end of the April *Bulletin*, was used for each year. From 1956-1968, we took the total inventories for all corporations and subtracted from them inventories of the Defense Department, assets of the Panama Canal Corporation being considered civilian. We then added to this figure Commodity Credit Corporation gross "loans receivable—U.S. dollar loans" and the flow of funds figure for CCC backed loans. This procedure gives total Federal inventory levels for each year.

From 1952-1955, this computation is made difficult by the fact that the Treasury Department had a different balance sheet and different categories during these years. Prior to 1956, defense assets are not included in the table, and the "total inventory" figure is far lower than the comparable total in the later years. Even with defense inventories eliminated from the total in 1956, the 1955 "total" is half of the 1956 "total." The difference is attributable in part to the fact that GSA and Defense Department inventories are left out in the early years. Since we did not want to include defense inventories, the addition of GSA inventories was all that remained. The largest component of GSA inventories was the category "strategic stockpiles." Goldsmith's estimates of "strategic stockpiles" seem to correspond with GSA strategic stockpiles from the Treasury Bulletin for the years after 1955, and were therefore, deemed adequate. To the sum of "total inventories" and GSA "strategic stockpiles," we then added both sets of CCC loans to give the total Federal inventory figure for 1951-1955.

Annual flows are measured by changes in this stock so defined.

(4) State and Local Government Inventories

No estimates were made of the inventories of State and local governments. Goldsmith's earlier work was based on fragmentary evidence which is even more out of date by now.

⁸ R. W. Goldsmith, *The National Wealth of the United States in the Postwar Period*, New York, 1962, Table B-175 (6), p. 405.

C. NEW SECTORS

1. *Investment Companies*

Although the flow of funds accounts include those open-end investment companies which are members of the Investment Company Institute, other investment companies are treated only implicitly, if at all. Their retained earnings are included in the gross saving of the flow of funds investment company sector since the national income and product accounts do not make a distinction between open-end and closed-end companies.

The estimates presented in this study distinguish between all open-end companies and all other registered investment companies. The general procedure employed was first to develop balance sheets for the various types of companies, using the SEC series on total assets as the basis for universe asset holdings and distributing this total among the various asset categories on the basis of sample data. With the exception of common stock, flows were taken to be the difference in balance sheet values of the various assets. For stock, in cases where direct flow estimates were not available, an attempt was made to separate unrealized capital gains from net purchases by means of the Standard and Poor 500 stock price index. The flows thus derived were used as a first approximation; some of them were later modified to reconcile aggregate information from SEC and National Income Accounts.

a. Open-end Companies.—The Investment Company Institute data form the basis of this sector. In the flow of funds accounts, these ICI members are the only companies included. However, data from the SEC on June 30 assets of active registered open-end companies are somewhat larger than the ICI total. Goldsmith's estimates for those years for which the SEC series is not available indicate the same state of affairs.⁹ Therefore, estimates for non-ICI open-end companies were made as follows. For years in which the SEC totals were available, the June 30 ICI assets were subtracted and the non-ICI residual was moved to a December 31 basis using the assumption that the June-to-June increase in assets for non-ICI members took place over time in the same pattern as did that of ICI members. For earlier years, Goldsmith's estimates of the end of year total were used to derive the non-ICI total. It was further assumed that these non-ICI mutual funds had the same portfolio composition as did the ICI members, and that their net purchases of stock bore the same relationship to the change in their holdings of stock as did the purchases of ICI members.¹⁰

The balance sheet for all open-end companies appears in Table IA-8; their stock purchases are given in Table IA-22.

b. Other Investment Companies.—Separate estimates were made for closed-end companies, face-amount companies, and for unit trusts.

Estimates of total assets for closed-end companies were derived by linking the Goldsmith series¹¹ on total assets to the SEC total asset series whose June 30 observations had been put on an end-of-year

⁹ R. W. Goldsmith and R. Lipsey, *Studies in the National Balance Sheet*, Vol. II, New York, NBER, 1963, pages 168-169.

¹⁰ In the case of portfolio composition and change, the flow of funds breakdowns of the ICI data were used.

¹¹ Goldsmith and Lipsey, *op. cit.*, pp. 170-171.

basis by interpolation. From this total were subtracted the assets of Christiana Securities and, for the two years in which they existed, the assets of dual-purpose funds.¹² This residual estimate of the assets of closed-end companies other than Christiana and the dual-purpose funds was distributed among the various classes of assets on the basis of portfolio composition data obtained from a sample of 30 companies¹³; to these estimates were added the assets of Christiana and of the dual-purpose funds. With the exception of stock, net purchases of all assets were taken to be equal to the observed change in the balance sheet over the period; in the case of stock, this change was adjusted to allow for appreciation as measured by the Standard & Poor 500 stock price index. Stock transactions for Christiana were taken directly from company statistics.

Face-amount companies are dominated by Investors Diversified Services and Investors Syndicate of America. Therefore, the estimates for this group consist of Moody's reports on these two companies blown up slightly to allow for the remaining five per cent of the assets held by other companies. The flows were derived in the usual way.

In order to estimate the assets of unit trusts, a total asset figure was derived from the SEC June 30 observations. Since the *SEC Annual Report* contains estimates of the fraction of these assets which represent shares in other investment companies, these assets were consolidated out of this sector. The remaining assets were assumed to be either tax-exempt bonds or common stock; a brief survey of the various unit trusts represented in Moody's *Bank and Finance Manual* indicate that these companies exist for the accumulation of mutual fund shares, for the accumulation of specific stock, and for the purchase of tax-exempt securities. Estimates of the net issues of and security purchases by tax-exempt bond funds were obtained from the SEC; assets which were neither municipals nor investment company shares were assumed to represent common stock. Net purchases of the latter were estimated as described above for closed-end companies.

Liabilities and share values and issues were estimated in several ways. Open-end companies have only short-term liabilities, and in the ICI data, these are netted against cash; the value of mutual fund shares is thus equal to the net asset value of the fund. Closed-end company shares typically trade at a discount (or premium) relative to net asset value. Unit trusts distribute portions of the trust corpus as well as paying out the earnings; the redemption value of units can also vary with the market value of the securities. Prices of shares in IDS and ISA also seem to be less than assets per share. This suggests that in deriving an estimate of the market value of the shares of investment companies other than mutual funds, some write down of their assets should be made.

The debt of nonopen-end companies was taken from Moody's reports on IDS, ISA, and "Closed End Companies with Senior Capital." Total share issues are the SEC's series on net issues of investment company shares; the breakdown by type of company was supplied by the SEC.

¹² These companies were first formed in 1967.

¹³ The data for the sample and for dual-purpose funds were taken from Moody's *Bank and Finance Manual* and from Arthur Welsenberger's *Investment Companies*, various issues. Information about Christiana came from Moody's.

The balance sheet for the aggregate of these three investment company sectors is given in Table IA-9; stock purchases for this aggregate appear in Table IA-22.

2. *Bank-Administered Personal Trusts and Estates*

a. Introduction.—The estimates discussed here refer to the amount and composition of the assets held in personal trusts or in estates under bank management. Banks manage other types of accounts, and in fact, these other accounts constitute the more important portion of their business. Data exist on the activities of trust departments as a whole, however, for only a small portion of the period under discussion. The assets of those employee benefit accounts which are bank-managed are presumably covered in the statistics on noninsured pension funds, and the bank has somewhat less freedom in decision-making for agency than for trust accounts.¹⁴

For the period for which data on activities of the entire department existed, some rough estimates were made of the holdings of employee benefit trusts and of agency accounts. These estimates were used as checks on the reasonableness of the estimates of personal trusts and estates. No attempt was made to derive a time series covering the entire portfolio under bank management.

In Section b which follows we discuss the sources of information available at the time the estimates were made. Section c contains a description of the estimating procedure used in the two periods into which the nature of the source material available divides the estimates. In this Section data are presented on common trust funds, the only component of personal trusts and estates for which a continuous time series is available for a long period of time.

b. The Nature of the Data.—With the exception of the early Federal Reserve surveys of common trust funds, the only observations available are of holdings at a point in time; there are no turnover data other than those for common trust funds from 1954 through 1962. Even the balance sheet data which do exist cannot be put together in a satisfactory way to construct a time series; for they cover a different set of institutions, they cover a different set of accounts within these institutions, and the date of the observations varies from year to year. The available material is as follows:

(1) American Bankers Association's Surveys of Personal Trusts.¹⁵ These contain the value of assets on June 30 for the years 1958, 1959, 1960, and 1963. They cover only personal trusts, whereas estates are commingled with the personal trusts in subsequent bodies of data. Furthermore, the sample used in these surveys has been questioned by some researchers.

(2) Comptroller of the Currency's Reports of the Trust Assets of National Banks. These surveys, which include all types of accounts, cover the period 1963 through 1968, although portfolio detail by type of account is available for only the last three years of the period. Some estimates of the assets managed by state-chartered banks were made,

¹⁴ On the basis of the IRS tabulations of the 1962 Fiduciary Income Tax Returns, banks account for only about one-half of the personal trust and estate business. See United States Treasury Department, Internal Revenue Service, *Statistics of Income—1962, Fiduciary, Gift, and Estate Tax Returns*, Washington, 1965; and *ibid.*, 1965, Washington, 1967.

¹⁵ American Bankers Association, Trust Division, *National Survey of Personal Trust Accounts*, New York, 1959, 1960, 1961, 1965 (mimeo).

but they are highly aggregative and impressionistic. These estimates apply to the end-of-calendar years; some effort was made to adjust the data for valuation date discrepancies.¹⁶

(3) The Patman Report, "Commercial Banks and their Trust Departments." This report provides for the first time estimates of the assets managed by the entire trust department for all banks as of the end of 1967. The questionnaire, however, contained too little detail by asset group, by account category, and by a cross classification in these two dimensions to be useful for anything more than a broad check on the estimates derived by other means.¹⁷

(4) Trust Assets of Insured Commercial Banks. This survey, conducted by the three bank regulatory agencies, gives universe estimates for all banks as of the end of 1968 cross classified by asset and by type of account. The portfolio breakdown, while not very detailed, is much less aggregated than that provided by the Patman report.¹⁸

(5) The Goldsmith estimates reported in Volume II of *Studies in the National Balance Sheet*, Princeton, 1963, consist of a merger of the ABA surveys available at the time and of the earlier estimates of R. W. Goldsmith and Eli Shapiro, "An Estimate of Bank Administered Personal Trust Funds," *Journal of Finance*, March 1959. These figures again may be presumed to cover only personal trusts, with no allowance for either estates, agency accounts, or employee benefit accounts.

(6) Common Trust Funds have been surveyed both by the Federal Reserve and by the Comptroller of the Currency. Although they account for only a small portion of the assets held in personal trusts and estates, there exist time series of balance sheets and of transactions data for these funds from 1954-1968. Some performance data are also available.¹⁹

(7) Fiduciary Income Tax Returns. These triennially tabulated returns gave some information on property income by type, on expenses, and the like. There is also information on the fraction of fiduciary income accounted for by estates as opposed to trust accounts, and for 1962 it is possible to ascertain the fraction of fiduciary income accruing on the property managed by banks.

c. Estimating Procedure: Balance Sheets.—From the discussion thus far, it is clear that we have two periods with entirely different data sets and capabilities. From 1963 on we have a fair amount of information about the assets managed by national banks; we even have

¹⁶ The results of these surveys were published in a series of articles in the *National Banking Review* and in a recent paper by Hanczaryk. For further information the reader should consult Stanley Silverberg, "Bank Trust Investments: Their Size and Significance," *The National Banking Review*, June 1964; "Growth and Performance of Common Trust Funds in 1964," *The National Banking Review*, June 1965; "Bank Trust Investments in 1964," *The National Banking Review*, June 1965; and "Bank Trust Investments in 1965," *The National Banking Review*, June 1966. There are some additional papers by Edwin W. Hanczaryk, "Growth and Performance of Common Trust Funds in 1966," *The National Banking Review*, June 1967; and *Bank Trusts: Investments and Performance*, Department of Banking and Economic Research, Office of the Comptroller of the Currency, Washington, 1970 (mimeo). Mr. Hanczaryk was kind enough to provide me with a copy of the last manuscript before its publication.

¹⁷ U.S. Congress, House Committee on Banking and Currency, *Commercial Banks and Their Trust Activities: Emerging Influence on the American Economy*, 90th Congress, 2nd Session, July 1968, Washington, D.C.

¹⁸ Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, *Trust Assets of Insured Commercial Banks—1968*, Washington, October 1969.

¹⁹ The estimates appear in the Silverberg and Hanczaryk articles cited previously for 1963-1968. Estimates for earlier years are found in articles with the general title, "Survey of Common Trust Funds," which appeared in the *Federal Reserve Bulletin* of June 1957, May 1958, May 1959, May 1960, May 1961, May 1962, and June 1963.

some ideas about the variations in portfolio composition as a function of account type. Given the universe estimates for 1968 and to a limited extent for 1967, it is possible to derive estimates of the portfolios of all bank trust departments by type of account for these years.

Since the longest real time series of annual observations is the series on national banks which has resulted from the surveys of the Comptroller of the Currency, the procedure adopted was first to fill in the missing cells on asset types by type of account for the years 1963-1965. These figures were then expanded to a total for all banks on the basis of the relationships between State and national banks from the 1968 survey, the Patman study, and some of Silverberg's early estimates.

(1) *National Banks, 1963-1968*

Available data from 1966-1968 frequently take the form of portfolio percentages; late and otherwise incomplete responses frequently led to the reporting of total assets in dollars and a percentage distribution of the portfolio which was observed. Since these portfolio coefficients are somewhat easier to interpret than are dollar amounts of assets, these coefficients were estimated directly. The only time series of portfolio coefficients for the entire period is that for all trust accounts, covering both personal and employee benefit accounts. The total value of assets for all types of accounts is also known for the entire period. The task is then to estimate a set of account coefficients such that when they are summed over all types of accounts, the results will not conflict with the portfolio composition given for the entire department.

One might first assume that these coefficients are the same for all accounts and thus use the department portfolio as the model for both personal trusts and estates and for employee benefit accounts. The evidence available for 1966-1968, however, indicates that this assumption is not likely to be true. One might also assume that the coefficients for a particular type of account are constant or move in some simple or regular way over time. Again evidence suggests that this is not a very reliable assumption, and these ratios seem far from predictable on the basis of the brief bit of history we have at our disposal. Finally, we can look for some consistency in an accounts' share in the department's holding of a particular asset. These ratios did in fact prove stable, and this extrapolation was used to produce initial estimates of these account-specific coefficients.

This method in effect assumes that over-all investment policy is set for the department, and the managers of specific classes of accounts attempt to maintain some relative share of total departmental holdings of the asset in question. Any further adjustment in these portfolio coefficients were made in order to meet the accounting constraints in ways which were most consistent with external evidence and with notions of reasonable portfolio policy dictated by the subsequent development of the accounts involved. In particular, employee benefit trusts were adjusted on the basis of some relationships observed between employee benefit trusts and existing data on private noninsured pension funds which are largely managed by banks. These considerations constrained the estimates for personal trusts and estates sufficiently to permit final estimates for national bank portfolio coefficients shown in Table IA-10.

(2) All Bank Estimates, 1963-1968

The only detailed portfolio estimates by type of account which exist are those for 1968. The Patman data for 1967 are too aggregated to be of much use in the particular task of estimating the portfolio composition of personal trusts and estates. The early Silverberg estimates relied a bit too heavily on inferences from the portfolios of private noninsured pension funds. Data on portfolio composition by account type are not available even for national banks in those years. We have decided, by default, to accept the time series from these sources on the total assets under management by type of account for all insured banks; but, with the exception of 1968, the earlier estimates of the portfolio composition of these totals were used as checks on our results rather than as given. Final estimates were obtained by stepping up the national bank portfolio coefficients by factors derived as the 1968 ratios of all bank to national bank coefficients. These factors were weighted so as to allow for differences over time in the relative shares of personal trusts and estates in total trust assets for the two sets of banks. The coefficients which result are shown in Table IA-11.

(3) Estimates Before 1963

Before 1963 nothing is known explicitly about the employee benefit accounts managed by banks. Existing personal trust estimates refer only to that category of account; thus, the series before and after 1963 are not really comparable, since it is impossible to separate out estates completely from the latter numbers. There is also the problem of converting June 30 data to a year-end basis. Evidence in recent years suggests that most accounts are reviewed during the last quarter of the year; therefore, giving the option of reporting assets at market as of the last review date before June 30 would tend to produce estimates of the market value of holdings as of the end of the preceding year.

The ABA data also show "units of participation in common trust funds" as a separate asset category, while the questionnaires of the later period ask that the assets held by the common trust fund be distributed among the appropriate categories. Since the valuation date for the common trust fund is somewhat more likely to have occurred on June 30 than is the valuation date for the other accounts in the personal trust category, we first netted out common trust funds from the ABA reports. Subsequently, the time series of end-of-year observations on common trust funds covering the bulk of this early period is added to the end-of-year estimates of the other personal trust accounts.

The estimates for the period before 1963 were based in large measure on the previous work of Goldsmith. His series on personal trusts other than common trust funds was used through 1957; his procedures were then used in interpolating between the ABA surveys, most of which were not available to Goldsmith at the time his estimates were prepared. In this procedure, one assumes that the ABA's reported values of assets other than corporate stock are an adequate measure of the value of these assets on December 31 of the previous year. Holdings of corporate stock were estimated by assuming that net purchases occurred at a uniform rate over the period in question, and that the pattern of the change in holdings not so accounted for followed the time path of the Standard and Poor 500 stock price index.

Efforts to apply this method of allowing for price movements in other assets proved less successful; the results for common trust funds did not recapitulate known net acquisitions for these funds. The difficulties of using the existing bond price indices; the lack of detail on the characteristics of the bond portfolios of these funds which made it difficult to select among the price indices; and the poor results with the common trust funds made it seem unwise to attempt to account for any but the most obvious effects of security price movements, i.e., those involved with common stock. The results of these manipulations are shown in Table IA-12, panel A.

In order to make this series comparable with the estimates for later years, three further steps were necessary. First, the series had to be adjusted upward to include estates as well as trusts; this was accomplished by stepping up trust assets by a factor derived from IRS statistics of fiduciary income. This factor is the reciprocal of the share of income from trusts in total income paid by fiduciaries, adjusted for differences in bank fiduciaries' shares of the income from trusts and from estates. Allowance was made for differences in portfolio composition between trusts and trusts and estates on the basis of the relationships prevailing in 1968, the year for which such data by type of account existed. The results of this process are shown in Table IA-12, panel B.

The second step involved adding in the series on common trust funds taken from the Federal Reserve Board's surveys for all but the first two years; these are from Goldsmith's estimates. This series and the results of the addition are shown in Table IA-12, panels C and D. Finally, the large "other assets" category was allocated among time deposits, real estate, and miscellaneous on the basis of the average contribution of these three components to this sum in the years for which the breakdown was available.

The final time series, covering the entire period 1951-1968, is given in Table IA-14. The flows were taken to be equal to the first differences in this balance sheet for all assets except corporate stock. The problems of measuring net purchases of stock will be discussed for all the new sectors together in a later section of the Appendix.

3. Selected Nonprofit Institutions

This sector is constructed out of several disparate elements. The estimates of income, fixed investment, and consumption expenditures of nonprofit institutions are those appearing in the OBE's national income and product accounts. Appendix III's estimates of the income, outlay, and balance sheets of foundations, colleges, and universities provided estimates of the financial assets of these institutions; these were supplemented by the estimates of the financial assets of labor unions in Appendix IV in order to yield the estimates of financial assets for the entire sector. Flow of funds accounts estimates of the debt of nonprofit institutions were used on the liabilities side. Finally, the estimate in Appendix II was used for institutional land.

Thus, the estimates grouped under the label "selected nonprofit institutions" do not provide a reliable picture of the role of nonprofit institutions in the economy, nor of the size of their assets. Presumably, the estimates of tangible assets, of income, and of consumption cover all nonprofit institutions. The estimates of financial assets cover only

three institutional groups, however; religious organizations and hospitals are obviously major exclusions. To assume that this collection of estimates constitutes a valid approximation of a nonprofit sector is to assert that the holdings of the excluded institutions would make relatively little contribution to the total financial assets of all nonprofit institutions.

It is therefore preferable to consider the aggregates listed under "selected nonprofit institutions" as an attempt to collect known elements of assets, liabilities, and transactions which belong neither to households proper nor to any other sector in the present scheme of things, and which do pertain to nonprofit institutions.

The financial assets in the balance sheet were taken from the work of Nelson and of Troy as reported in Appendices III and IV of this report. In the case of foundations, estimates began only in 1953; for colleges and universities, estimates were available only for 1953-1966. Since the transactions estimates were based on first differences in the balance sheets, a time series covering the years 1951-1968 was necessary; and we extrapolated Nelson's estimates after consultation with him on the appropriate methodology. Troy's time series on total assets and total liabilities were used; the portfolio composition was taken to be the same as that reported for the more limited aggregates; the 1962 breakdown was used for earlier years.

We have already suggested that the estimates of the transactions in financial assets were derived from the change in balance sheet holdings. This is true for all assets with the exception of corporate stock; here an adjustment was made to allow for price movements, details of which are given below in Section D2. No such adjustment was made for the assets of labor unions, since the reported holdings are valued at cost rather than at market.

4. *Assets of Federal Life Insurance Companies, 1951-1968*

The assets of fraternal life insurance companies in Table IA-15 are derived from accompanying Tables IA-16 and IA-17. Table IA-17 shows the percentages allocated to each asset in a given year by the 10 largest fraternal life insurance companies.²⁰ Total assets for all fraternal life insurance companies, shown in column 2 of Table IA-16, come from the *Life Insurance Fact Book*. Table IA-16 also shows the percentage which the assets of the 10 largest companies comprise of total assets of all companies (column 3). In Table IA-15, the percentages from Table IA-17 are applied to the total assets of all fraternal insurance companies (Table IA-16, column 2) to arrive at the comprehensive breakdown of assets for all companies for the entire period.

The sector accounts for fraternal insurance presented in Appendix I are based on these data. The composition of the bond account was estimated for 1951 and 1952 in order to derive both flows and balance sheets for 1952. Throughout the period covered, the "unallocated bonds" were assumed to be an addition to "corporate and foreign bonds" held by the sector. Other assets were placed in the "unallocated" category. By analogy with the flow of funds treatment of private pension funds, their liability for policy reserves was taken to be equal to the value of their assets.

²⁰ The figures for these 10 largest companies come from survey reports and from *Best's Life Insurance Report*.

With the exception of corporate stock, the flows are taken to be equal to the change in the holdings as shown on the balance sheet. For stocks, an attempt was made to allow for the appreciation shown by the Dow-Jones Industrial Index in defining net purchases.

5. *Mortgage Bankers*

These institutions are included in the finance company sector of the flow of funds accounts; thus nothing else in the system is changed by their inclusion or exclusion from explicit consideration. Such stockholdings as they may have are negligible. The data which are given in Table IA-18, therefore, appear here only for the sake of completeness.

From 1951-1954, the estimates are those appearing in Saul B. Klamman, *The Postwar Rise of Mortgage Companies*, New York, NBER, 1959. The estimates for 1955-1968 are those of the Mortgage Bankers Association; they appear in various issues of *Mortgage Banking*.

D. CORPORATE SECURITIES

1. *Value of Corporate Bonds Outstanding*

The present flow of funds series consists of Hickman's estimate of the part value of corporate bonds outstanding²¹ increased each year by the SEC's estimates of net change in corporate debt securities outstanding.²² Meiselman and Shapiro derived similar series for several industrial groups of corporations, as well as for the aggregate of non-financial corporations.²³ The latter differs from the flow of funds series by amounts which vary from year to year. Since the Meiselman and Shapiro series ends in 1958 and its divergence from the flow of funds series seems to be the result of statistical revisions for the most part, the flow of funds estimates must be used by default.

Unfortunately, the inclusion of the new institutional sectors for purposes of this study adds reported institutional bond holdings for some years in excess of the residually estimated flow of funds "household" bond holdings. Clearly the bond holdings of these new sectors may be overstated. It is also the case, however, that the SEC net change series has not been checked against a benchmark, since none was available; and questions have been raised about the completeness of the net change series for many years.

We, therefore, attempted to provide such a benchmark for 1966 and then to adjust the annual flows in such a way as to account for the change in the par value of corporate bonds between the Hickman study and 1966. The new series is given in Table IA-19.

The resulting series is a par value series, as is the flow of funds series which it replaces. It consists of the published series on the outstanding debt of railroads and utilities, the flow of funds estimates of the outstanding debt of financial institutions, and an estimate of industrial bonds and notes consistent with the totals derived from summing individual company data for all relevant companies in Moody's *1967 Industrial Manual*. Each of these components is described below.

²¹ W. Braddock Hickman, *The Volume of Corporate Bond Financing Since 1900*, Princeton, 1953, p. 251.

²² SEC, *Net Change in Corporate Securities Outstanding*, Washington, D.C., 1966, and *Statistical Bulletin*, various issues.

²³ David Meiselman and Eli Shapiro, *The Measurement of Corporate Sources and Uses of Funds*, Technical Paper 18, New York, NBER, 1964.

a. Regulated Industries

Data on long-term debt outstanding were taken from statistical reports of regulatory agencies and trade associations.

(1) Railroads: Data are those of the Interstate Commerce Commission, Statistics of Class I railroads, as reported in Moody's *Transportation Manual* 1969, pp. a49 and a50. The sum of "funded debt unmatured," "equipment obligations," and "long-term debt in default" was adjusted upward to allow for switching and terminal companies and other differences between Hickman's estimates and the ICC series.

(2) Electric Utilities: Data were taken from the Federal Power Commission's *Statistics of Privately Owned Electric Utilities in the United States*, various years. The series used was "bonds less bonds reacquired" for class A and B electric utilities.

(3) Gas Utilities: Data were found in the American Gas Association's *Historical Statistics of the Gas Industry*, 1963, and *Gas Facts*, various issues. The series used covers bonds and debentures of all investor-owned firms in the gas utility and pipeline industries.

(4) Telephone & Telegraph: Data were obtained from the Federal Communications Commission's *Statistics of Communications Common Carriers*, various years. Telephone bonds consist of "mortgage bonds," "debentures," and "other funded debt" of annually reporting Bell companies, annually reporting non-Bell companies, and "selected large telephone carriers not subject to the reporting requirements of the commission." Telegraph bonds cover funded debt of both domestic and overseas carriers.

b. Industrial Bonds and Notes

A 1966 benchmark was obtained by summing the long-term debt exclusive of mortgages (bonds and notes including private placements) for all domestic corporations listed in the 1967 edition of Moody's *Industrial Manual*, with some adjustment for the fact that end-of-year data were not available for some companies. In addition, a similar estimate was derived for nonrail transport, since such companies have issued bonds and their debt was reportedly included in Hickman's benchmark for utilities in 1943. From this total was subtracted Hickman's estimate for "industrial bonds" for 1947, augmented by the difference between Hickman's "utility" estimate and the sum of the utilities estimates described above. The SEC series on net change in industrial and nonrail transport debt outstanding was then stepped up by a factor defined as the ratio of the benchmark difference to the sum of cumulated net change from 1948 through 1966; and a series on outstandings was derived using this revised investment series by the same method used in the flow of funds estimate. No revision was made in the net change series for 1967 and 1968.

c. Finance

This series is taken directly from the flow of funds. It consists of the bonds of banks and finance companies.

2. Corporate Stock

The value of outstanding domestic stock other than investment company shares shown in Table IA-20 is the series given in Appendix VI of this Report with minor modifications occasioned by the substitution of a more refined estimate of investment company shares elsewhere in

the system. The estimates of foreign stock held by U.S. residents come from the balance of payments statistics and are incorporated into the flow of funds accounts.

The domestic total was redivided into the stock of nonfinancial and all financial corporations on the basis of the data on the industrial composition of outstanding stock appearing in Appendix VI. The estimate of financial stock outstanding was interpolated and extrapolated by the finance component of the NYSE stock price index. Net issues are the sum of investment company net issues and the bank issues from the flow of funds. The estimates for nonfinancial corporations were then derived residually.

The net issue series all come from the SEC series "net change in corporate stock outstanding," and these are shown in Table IA-22. The net purchases were taken from the flow of funds accounts, with the exception of households, nonprofit institutions, and the newly created financial institutions.

For all but households, the estimates of Table IA-22 were derived from the holdings data of Table IA-21 and the indicated price index, using the relationship

$$A_t = (A_{t-1} \frac{P_A}{P_{t-1}} + N_t) \frac{P_t}{P_A}$$

where A_t = holdings at the end of year t
 P_t = price index at the end of year t
 P_A = mid-year price during year t , and
 N_t = net purchase during year t .

The resulting series are quite noisy; however, the attempt to use a confidential SEC series on net purchases by all investment companies produced an even more peculiar series for nonmutual funds when the open-end purchases were netted out.

E. SECTOR BALANCE SHEETS

These balance sheets are the result of supplementing the flow of funds accounts with the data discussed in Sections B through D of this Appendix. The aggregate corporate stock and bond series were replaced by those covered in Section D. The estimates of tangibles from Section B were added to these modified flow of funds estimates of financial assets and liabilities in order to produce the full balance sheets of Tables IB-1 through IB-9.

The remaining differences between these estimates and the flow of funds accounts come from two sources. One is the difference in sectoring which results from the exclusion of some nonhouseholds from the household sector given here. The other is the differences in asset categories which result from a higher degree of aggregation.

The entries for the NBER finance sector exceed the corresponding flow of funds aggregates by an amount equal to the sum of the holdings of personal trusts and estates, fraternal insurance companies, and those investment companies not members of the Investment Company Institute. The holdings of the NBER's household sector are less

than the corresponding household holdings in the flow of funds accounts by the amount of the holdings of these newly created financial institutions; in addition, the portfolios of nonprofit institutions have been subtracted from the flow of funds household account as well. Additional assets in the form of claims on life insurance and personal trusts were given to the remaining household sector by analogy with the treatment of life insurance and pension fund claims in the flow of funds accounts. Finally, since household holdings of corporate bonds and stock are derived residually, the holdings reported in Table IB-2 also reflect the difference between the series on corporate securities outstanding in the two systems.

The asset categories differ from the flow of funds categories in several additional respects. Monetary reserves is the sum of flow of funds categories gold, foreign exchange, and Treasury currency. Currency and demand deposits, time deposits, and short-term U.S. Government securities are equivalent in the two systems. Other short-term claims consist of bank loans n.e.c., other loans, consumer credit, security credit, trade credit, taxes payable, and interbank items.

The bonds entry in the present accounts covers all U.S. Government and agency issues not included in the short-term claims, State and local government securities, and corporate and foreign bonds, the latter modified as described above. Mortgages covers all mortgages in the flow of funds system; claims on life insurance, pension and personal trusts consists of the flow of funds items life insurance reserves and pension fund reserves plus the total assets of fraternal insurance and of bank administered personal trusts.

The estimate of corporate shares is the total discussed above in Section D2. Equity in unincorporated business is equal to the sum of the net worth of farm and nonfarm noncorporate business. Miscellaneous assets and liabilities are taken directly from the flow of funds accounts; thus the category includes direct investment, other identifiable claims, and various floats and unallocated items.

The totals shown here are those for all domestic sectors. In addition to the discrepancy for any instrument between total assets and total liabilities introduced by removing the rest of the world sector from the flow of funds accounts, there are some discrepancies in the system as well. Bank and holder records differ on currency and demand deposits; the trade credit and miscellaneous accounts both show discrepancies in the flow of funds. These have been preserved in the balance sheet tables appearing below.

Table IA-1

REPLACEMENT COST VALUE OF CONSUMER DURABLES AND
 LAND ESTIMATES NOT APPEARING IN APPENDIX II
 (\$ millions)

	Consumer durables	Land		Nonfinancial corporate
		Farms	Financial institutions	
1952	90,253	67,254	564	21,190
1953	95,603	65,227	659	25,395
1954	99,050	67,562	969	26,564
1955	107,890	70,616	1,044	32,173
1956	117,298	76,084	1,268	37,115
1957	126,533	80,582	1,632	42,123
1958	129,143	87,856	1,710	46,810
1959	136,447	92,540	1,863	53,054
1960	140,845	92,880	2,250	55,883
1961	143,292	98,684	2,681	61,313
1962	150,257	103,940	3,188	66,448
1963	158,569	111,313	3,787	72,332
1964	169,771	119,168	4,412	78,252
1965	183,205	129,002	5,087	83,591
1966	196,879	136,483	6,287	90,190
1967	211,475	144,758	6,727	96,536
1968	233,817	152,599	7,171	102,878

Source: see text.

Table IA-2(a)

REPLACEMENT COST STOCK OF RESIDENTIAL STRUCTURES
(\$ millions)

	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
All sector total	289,514	301,341	317,300	346,681	373,932	391,757	412,021	439,165
Total public	7,562	8,193	8,586	8,852	9,111	9,506	10,345	11,343
Federal Government	3,530	3,694	3,789	3,715	3,657	3,737	4,075	4,580
State & local government	4,032	4,499	4,797	5,137	5,454	5,769	6,270	6,763
Total private	281,952	293,148	308,714	337,821	364,821	382,251	401,676	427,822
Households	237,260	247,402	261,634	288,085	312,253	327,707	344,411	366,483
Farm	18,433	19,076	19,581	20,614	21,833	22,500	23,179	24,100
Nonfarm noncorporate	14,807	14,964	15,348	16,184	17,001	17,649	18,655	20,217
Corporate nonfinancial	11,449	11,702	12,147	12,941	13,727	14,413	15,447	17,019

Source: see text.

Table IA-2(b)

REPLACEMENT COST STOCK OF RESIDENTIAL STRUCTURES
(\$ millions)

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
All sector total	457,723	476,723	502,157	532,296	561,620	590,704	627,501	673,240	715,569
Total public	11,943	12,662	13,580	14,106	14,832	15,624	16,689	18,274	19,368
Federal Government	4,828	5,059	5,242	5,353	5,531	5,698	5,914	6,303	6,518
State & local Government	7,115	7,603	8,338	8,753	9,301	9,926	10,775	11,971	12,850
Total private	445,780	464,061	488,577	518,190	546,788	575,080	610,812	654,966	696,201
Households	381,204	395,480	413,697	435,499	455,888	475,936	502,130	536,305	567,055
Farm	24,640	24,943	25,549	26,311	26,911	28,108	29,886	31,609	32,860
Nonfarm noncorporate	21,684	23,837	27,387	32,028	27,357	42,762	48,441	54,344	60,987
Corporate nonfinancial	18,279	19,795	21,939	24,345	26,623	28,493	30,575	32,933	35,527

Table IA-3(a)

REPLACEMENT COST STOCK OF NONRESIDENTIAL STRUCTURES
(\$ millions)

	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
All sector total	286,743	299,952	314,471	342,234	378,428	405,220	425,242	445,774
Total public	145,207	153,029	161,766	176,522	195,185	209,735	222,559	235,995
Federal Government	44,579	47,872	50,716	53,614	56,925	59,483	61,683	63,983
State & local government	100,628	105,157	111,050	122,908	138,260	150,252	160,876	172,012
Total private	141,536	146,923	152,705	165,712	183,243	195,485	202,683	209,779
Institutional	15,035	15,844	16,869	18,709	21,025	22,781	24,155	25,530
Farm	10,848	10,735	11,029	11,704	12,505	12,852	13,358	13,529
Nonfarm noncorporate	8,426	8,934	9,487	10,764	12,598	13,745	14,352	15,659
Corporate financial	2,496	2,695	2,991	3,414	3,890	4,347	4,750	5,236
Corporate nonfinancial	104,731	108,715	112,329	121,121	133,225	141,760	146,068	149,825

Source: see text.

Table IA-3(b)

REPLACEMENT COST STOCK OF NONRESIDENTIAL STRUCTURES
(\$ millions)

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
All sector total	466,709	493,634	525,140	557,603	594,320	642,981	701,880	762,306	821,453
Total public	249,245	266,539	286,877	308,833	332,764	361,839	395,752	431,548	459,832
Federal Government	65,831	68,395	71,791	75,401	79,308	82,694	87,329	93,438	96,898
State & local government	183,414	198,144	215,086	233,432	253,456	279,145	308,423	338,110	362,934
Total private	217,464	227,095	238,263	248,770	261,556	281,142	306,128	330,758	361,621
Institutional	27,158	29,370	32,019	34,742	37,785	41,498	45,833	50,297	55,741
Farm	14,232	14,329	14,345	14,497	14,863	15,422	16,087	16,706	17,178
Nonfarm noncorporate	16,162	17,508	19,486	21,386	23,628	27,040	30,926	34,846	39,438
Corporate financial	5,577	6,069	6,544	7,298	8,067	8,913	9,961	11,128	12,330
Corporate nonfinancial	154,335	159,819	165,869	170,847	177,213	188,269	203,321	217,781	236,934

Table IA-4(a)

REPLACEMENT COST STOCK OF PRODUCER DURABLES
(\$ millions)

	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
All sector total	138,507	147,919	155,595	170,044	189,057	204,492	212,077	220,232
Total public	12,404	14,557	15,974	17,627	20,170	22,187	23,896	25,414
Federal Government	5,755	7,249	7,814	8,300	9,387	10,038	10,571	11,047
State & local government	6,649	7,308	8,160	9,327	10,783	12,149	13,325	14,367
Total private	126,103	133,362	139,621	152,417	168,887	182,305	188,181	194,818
Institutional	1,708	1,778	1,854	2,023	2,261	2,396	2,474	2,532
Farm	18,430	19,484	20,065	20,996	21,781	22,583	23,623	24,215
Nonfarm noncorporate	25,934	27,032	28,139	30,722	34,240	36,290	37,426	38,272
Corporate financial	2,043	2,269	2,592	3,044	3,575	4,099	4,551	4,995
Corporate nonfinancial	77,988	82,799	86,971	95,632	107,030	116,937	120,107	124,804

Source: see text.

Table IA-4(b)

REPLACEMENT COST STOCK OF PRODUCER DURABLES
(\$ millions)

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
All sector total	227,447	232,566	240,189	249,735	264,133	285,134	314,277	345,085	376,982
Total public	27,051	29,231	30,936	32,636	34,213	36,674	39,710	43,514	47,329
Federal Government	11,667	12,814	13,481	13,764	13,783	14,372	14,866	15,455	15,796
State & local government	15,384	16,417	17,457	18,872	20,430	22,302	24,844	28,059	31,533
Total private	200,396	203,335	209,251	217,099	229,920	248,460	274,567	301,571	329,653
Institutional	2,556	2,549	2,534	2,531	2,577	2,671	2,849	3,065	3,278
Farm	24,052	24,139	24,419	25,263	25,983	27,402	29,412	31,695	34,069
Nonfarm noncorporate	38,667	38,541	38,316	38,264	38,950	40,495	43,301	46,536	50,024
Corporate financial	5,271	5,623	5,938	6,353	6,738	7,178	7,766	8,365	8,974
Corporate nonfinancial	129,850	132,483	138,044	144,688	155,672	170,714	191,239	211,910	233,308

Table IA-5

INVENTORIES
(\$ millions)

	<u>All sector total</u>	<u>Federal Government</u>	<u>Total private</u>	<u>Farm</u>	<u>Nonfarm Noncorporate</u>	<u>Corporate</u>
1952	110,867	7,475	103,392	23,174	14,116	66,102
1953	114,042	12,945	101,097	18,647	14,539	67,911
1954	114,645	15,495	99,150	18,462	14,386	66,302
1955	123,258	17,291	105,967	17,859	15,143	72,965
1956	130,036	15,144	114,892	18,514	15,836	80,542
1957	135,045	15,002	120,043	21,193	16,259	82,591
1958	140,662	17,641	123,021	26,199	16,513	80,309
1959	142,852	17,912	124,940	22,748	17,272	84,920
1960	146,954	18,637	128,317	22,962	17,596	87,759
1961	148,983	17,561	131,422	24,305	17,785	89,332
1962	155,833	18,208	137,625	25,487	18,372	93,766
1963	160,719	17,734	142,985	24,888	18,407	99,690
1964	165,247	16,903	148,344	23,159	19,061	106,124
1965	178,575	15,945	162,630	26,667	20,178	115,785
1966	194,397	12,927	181,470	28,373	21,155	131,942
1967	200,690	12,925	187,765	26,476	21,786	139,503
1968	216,173	14,029	202,144	29,451	23,403	149,290

Source: see text.

Table IA-6(a)

EXTENSION OF GOLDSMITH WEALTH ESTIMATES: PRIVATE SECTOR
(Millions of 1958 Dollars)

	1952	1953	1954	1955	1956	1957	1958	1959	1960
1) Total residential structures	308,340	321,626	336,794	354,960	369,891	382,557	395,547	412,139	425,597
2) 1-4 family nonfarm	259,585	271,722	285,627	302,770	316,687	328,036	339,155	353,067	363,918
3) Multi-family nonfarm	28,730	29,292	30,021	30,615	31,172	32,077	33,566	35,876	38,156
4) Noncorporate	16,201	16,436	16,756	17,009	17,243	17,667	18,371	19,471	20,701
5) Corporate	12,527	12,853	13,261	13,601	13,922	14,428	15,212	16,396	17,451
6) Farm residential structures	20,025	20,612	21,146	21,575	22,032	22,444	22,826	23,196	23,523
7) Total nonresidential struc.	156,438	162,155	168,052	175,003	183,763	192,164	198,863	205,248	212,813
8) Institutions	16,971	17,844	18,962	20,111	21,347	22,692	24,180	25,660	27,324
9) Noncorporate (nonfarm)	13,424	13,379	13,655	14,611	15,789	16,269	16,749	17,428	18,318
10) Corporate	114,825	119,346	123,518	128,102	134,147	140,472	144,971	149,010	153,864
11) Farm	11,218	11,586	11,917	12,179	12,480	12,731	12,963	13,150	13,307
12) Total producers' durable	147,259	154,214	159,149	166,433	173,784	180,449	182,424	186,766	192,123
13) Institutions	1,914	2,005	2,069	2,164	2,259	2,346	2,372	2,428	2,498
14) Noncorporate (nonfarm)	36,347	37,067	37,203	37,854	38,757	39,072	39,326	39,597	39,869
15) Corporate	87,766	92,837	97,081	103,188	109,658	116,029	117,481	121,398	126,801
16) Farm	21,232	22,305	22,796	23,227	23,110	23,002	23,245	23,343	22,955
17) Total consumer durables	94,605	101,382	106,620	117,399	123,602	128,590	129,143	134,563	139,589
18) Total inventories	117,453	114,315	110,162	116,862	122,245	125,107	127,495	128,912	124,358
19) Noncorporate	15,500	15,900	15,700	16,300	16,500	16,700	16,600	17,300	17,600
20) Corporate	77,300	78,300	76,000	81,400	86,500	87,000	84,800	89,000	91,900
21) Farm	24,653	20,115	18,462	19,162	19,245	21,407	26,095	22,612	14,858

Source: see text.

Table IA-6(b)

EXTENSION OF GOLDSMITH WEALTH ESTIMATES: PRIVATE SECTOR
(Millions of 1958 Dollars)

	1961	1962	1963	1964	1965	1966	1967	1968
1) Total residential structures	438,489	453,265	468,744	483,281	496,970	508,119	517,980	530,566
2) 1-4 family nonfarm	373,447	383,408	393,405	402,195	410,821	417,572	423,957	431,878
3) Multi-family nonfarm	41,207	45,720	50,931	56,453	61,318	65,527	68,816	73,333
4) Noncorporate	22,509	25,382	28,933	32,958	36,912	40,284	42,960	46,449
5) Corporate	18,693	20,333	21,992	23,488	24,595	25,427	26,034	27,058
6) Farm residential structures	23,835	24,137	24,408	24,633	24,831	25,020	25,207	25,355
7) Total nonresidential struc.	220,265	227,896	235,221	243,547	255,046	267,937	278,862	289,565
8) Institutions	29,109	31,098	32,902	34,923	37,220	39,554	41,639	43,584
9) Noncorporate (nonfarm)	19,558	20,959	22,786	24,795	27,166	29,779	31,832	33,769
10) Corporate	158,150	162,262	165,831	169,996	176,747	184,609	191,299	198,062
11) Farm	13,448	13,577	13,702	13,833	13,913	13,995	14,092	14,150
12) Total producers' durable	195,203	201,142	208,355	218,978	233,243	251,448	268,309	284,956
13) Institutions	2,538	2,414	2,500	2,409	2,566	2,514	2,683	2,850
14) Noncorporate (nonfarm)	39,649	39,538	39,369	39,758	40,244	41,836	43,637	45,672
15) Corporate	130,200	136,374	143,140	153,066	165,834	181,294	195,061	208,588
16) Farm	22,816	22,816	23,346	23,745	24,619	25,804	26,928	27,846
17) Total consumer durables	142,437	149,064	157,937	169,095	183,941	199,270	210,632	227,007
18) Total inventories	135,532	141,835	146,312	151,044	162,117	176,892	176,054	190,994
19) Noncorporate	17,800	18,400	18,300	18,900	19,600	20,000	20,200	20,700
20) Corporate	93,500	98,100	103,200	109,100	116,500	130,100	130,900	143,200
21) Farm	24,232	25,335	24,812	23,044	26,017	26,792	24,954	27,094

Table IA-7(a)

PUBLIC SECTOR WEALTH ESTIMATES

(Millions of 1958 Dollars)

	1952	1953	1954	1955	1956	1957	1958	1959	1960
Federal Civilian Structures	58,220	60,567	62,328	62,920	63,285	63,903	64,769	65,824	66,796
Residential	3,918	3,862	3,789	3,715	3,657	3,737	4,015	4,402	4,585
Nonresidential	54,302	56,705	58,539	59,205	59,628	60,166	60,754	61,422	62,211
Buildings	30,388	32,011	33,261	33,497	33,441	33,373	33,306	33,278	33,314
Highways	1,090	1,119	1,153	1,193	1,230	1,284	1,352	1,403	1,498
Conservation & Development	21,810	22,574	23,134	23,533	23,981	24,539	25,124	25,747	26,363
Other	1,014	1,001	991	982	976	970	972	994	1,036
Federal Equipment (Civilian)	6,938	8,656	9,194	9,321	9,902	10,160	10,467	10,820	11,422
Federal Inventories	7,952	13,964	16,679	18,553	15,742	15,154	17,571	17,805	18,507
State and Local Structures	119,495	125,304	132,396	140,103	147,947	156,595	166,786	177,671	187,721
Residential	4,468	4,959	5,220	5,394	5,564	5,802	6,169	6,498	6,771
Nonresidential	115,027	120,345	127,176	134,709	142,383	150,793	160,617	171,173	180,950
Buildings	37,993	40,266	42,978	46,015	48,916	52,071	55,292	58,203	61,091
Highways	47,714	49,738	52,752	56,023	59,266	62,991	68,039	73,990	79,169
Sewer & Water Systems	17,940	18,786	19,685	20,637	21,725	22,811	23,872	24,935	25,958
Conservation & Development	1,733	1,787	1,846	1,939	2,078	2,211	2,316	2,428	2,553
Public Service Enterprises	6,527	6,618	6,717	6,865	7,138	7,409	7,734	8,147	8,622
Other	3,120	3,150	3,198	3,230	3,260	3,300	3,364	3,470	3,557
State and Local Equipment	8,016	8,726	9,601	10,474	11,375	12,297	13,194	14,072	15,061

Source: see text.

Table IA-7(b)
 PUBLIC SECTOR WEALTH ESTIMATES
 (Millions of 1958 Dollars)

	1961	1962	1963	1964	1965	1966	1967	1968
Federal Civilian Structures	67,973	69,193	70,418	71,743	73,131	74,388	75,213	75,815
Residential	4,764	4,854	4,810	4,804	4,831	4,801	4,725	4,673
Nonresidential	63,209	64,339	65,608	66,939	68,300	69,587	70,488	71,142
Buildings	33,407	33,554	33,853	34,279	34,693	34,440	34,172	33,947
Highways	1,587	1,694	1,822	1,930	2,023	2,129	2,219	2,311
Conservation & Development	27,145	27,958	28,757	29,535	30,375	31,278	32,043	32,643
Other	1,070	1,133	1,176	1,195	1,209	1,740	2,054	2,241
Federal Equipment (Civilian)	12,539	13,185	13,403	13,311	13,682	13,810	13,981	14,104
Federal Inventories	17,508	18,099	17,681	16,819	15,556	12,207	12,182	12,906
State and Local Structures	198,475	209,284	221,208	233,791	246,610	259,874	270,606	281,782
Residential	7,153	7,689	7,890	8,138	8,363	8,659	9,015	9,326
Nonresidential	191,323	201,595	213,318	225,653	238,247	251,215	261,591	272,456
Buildings	64,113	66,914	70,156	73,598	77,362	81,657	86,198	90,628
Highways	84,674	90,315	96,731	103,203	109,348	115,505	118,713	122,088
Sewer & Water Systems	27,045	28,209	29,444	30,927	32,519	34,007	35,563	37,439
Conservation & Development	2,689	2,856	3,125	3,382	3,748	4,103	4,506	4,868
Public Service Enterprises	9,043	9,364	9,782	10,288	10,825	11,323	11,807	12,402
Other	3,759	3,937	4,080	4,255	4,445	4,620	4,804	5,031
State and Local Equipment	16,064	17,073	18,376	19,730	21,230	23,079	25,382	28,155

Table IA-8
 ALL OPEN-END INVESTMENT COMPANIES
 (\$. millions)

	<u>Total assets</u>	<u>Cash</u>	<u>U.S. Government securities</u>	<u>Corporate & foreign bonds</u>	<u>Corporate shares</u>	<u>Commercial paper</u>
1952	3,990	135	132	347	3,376	--
1953	4,290	161	133	352	3,644	--
1954	6,251	159	158	449	5,485	--
1955	7,989	121	260	482	7,061	65
1956	9,170	140	280	676	7,995	79
1957	8,831	135	281	790	7,510	115
1958	13,399	204	406	946	11,812	31
1959	16,479	251	579	1,136	14,447	66
1960	17,804	271	647	1,304	15,482	100
1961	24,054	365	723	1,668	21,297	1
1962	22,706	346	787	1,726	19,576	271
1963	27,022	412	780	1,916	23,670	244
1964	29,584	483	835	2,341	25,797	128
1965	37,959	578	874	2,754	33,262	491
1966	37,460	570	1,545	3,136	31,130	1,079
1967	49,034	748	924	3,251	43,051	1,060
1968	57,725	880	1,254	3,736	50,494	1,361

Source: see text.

Table IA-9(a)

ALL OTHER INVESTMENT COMPANIES
(\$ millions)

	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Cash	20	15	16	35	30	41	34	37	46
U.S. Government securities	128	127	123	203	179	177	147	110	216
State & local government securities	--	--	--	--	--	--	--	--	--
Corporate and foreign bonds	85	95	161	180	222	292	311	366	479
Corporate shares	3,165	3,251	4,725	5,677	5,237	4,839	5,642	5,925	5,866
Commercial paper	--	--	--	--	--	--	--	--	--
Mortgages	363	376	372	361	348	328	294	263	247
Miscellaneous assets	32	36	35	46	46	53	57	56	95
Total assets	3,793	3,900	5,432	6,502	6,062	5,730	6,485	6,757	6,949
Total liabilities	49	58	68	85	110	123	133	161	149
Bonds	15	15	15	15	23	24	17	17	19
Short-term loans	7	7	7	7	7	6	6	6	7
Miscellaneous liabilities	27	36	46	63	80	93	110	138	123
Net worth	3,744	3,842	5,364	6,417	5,952	5,607	6,352	6,596	6,800

Source: see text.

Table IA-9(b)

ALL OTHER INVESTMENT COMPANIES
(\$ millions)

	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
Cash	73	108	24	74	44	72	97	150
U.S. Government securities	170	168	264	229	153	252	353	569
State & local government securities	20	55	82	137	238	292	329	362
Corporate and foreign bonds	452	492	513	544	338	443	605	540
Corporate shares	6,640	6,469	7,601	7,757	6,941	6,499	8,675	9,422
Commercial paper	--	27	3	44	38	7	6	8
Mortgages	242	239	268	289	301	317	330	312
Miscellaneous assets	115	139	146	154	164	160	187	207
Total assets	7,712	7,697	8,901	9,228	8,217	8,042	10,582	11,570
Total liabilities	195	218	237	255	272	296	306	311
Bonds	23	16	21	25	4	25	24	20
Short-term loans	6	7	7	8	20	21	21	21
Miscellaneous liabilities	166	195	209	222	248	250	261	270
Net worth	7,517	7,479	8,664	8,973	7,945	7,746	10,276	11,259

Table IA-10.
 PORTFOLIO COMPOSITION: NATIONAL BANKS
 (In per cent)
 Personal Trusts and Estates

<u>Asset Category</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
I. Bonds and notes	<u>28.02</u>	<u>26.01</u>	<u>24.75</u>	<u>23.97</u>	<u>22.76</u>	<u>22.12</u>
A. U.S. Government & agency issues	9.29	8.63	8.31	8.40	7.68	6.59
B. State & local government issues	10.54	10.34	9.66	9.77	8.77	9.43
C. Other bonds and notes	8.19	7.04	6.78	5.80	6.31	6.10
II. Corporate stock	<u>59.92</u>	<u>62.46</u>	<u>63.64</u>	<u>63.47</u>	<u>64.89</u>	<u>65.97</u>
A. Common	58.12	60.59	62.05	61.91	63.40	64.11
B. Preferred	1.80	1.87	1.59	1.56	1.49	1.86
III. Real estate & mortgages	<u>6.72</u>	<u>5.91</u>	<u>6.40</u>	<u>7.80</u>	<u>7.40</u>	<u>7.04</u>
A. Mortgages	2.01	1.33	1.75	2.14	2.17	2.13
B. Real estate	4.71	4.58	4.65	5.66	5.23	4.91
IV. Cash and deposits	<u>3.74</u>	<u>3.80</u>	<u>3.38</u>	<u>3.36</u>	<u>3.42</u>	<u>3.26</u>
A. Time & savings deposits	2.01	2.31	2.25	2.09	2.11	1.90
1. Savings & loan shares	.37	.38	.40	.36	.33	.30
2. Time deposits	1.64	1.93	1.85	1.73	1.78	1.60
a. Own bank	1.16	1.43	1.34	1.07	1.27	1.20
b. Other banks	.48	.50	.51	.66	.51	.40
B. Cash and demand deposits	1.73	1.49	1.13	1.27	1.31	1.36
V. Miscellaneous assets	<u>1.72</u>	<u>1.73</u>	<u>1.64</u>	<u>1.43</u>	<u>1.49</u>	<u>1.59</u>
Total (per cent)	100.00	100.00	100.00	100.00	100.00	100.00
Total assets (\$10 ⁶)	47,932	54,443	60,952	54,272	62,217	71,987

Source: see text.

Table IA-11
 PORTFOLIO COMPOSITION: ALL INSURED BANKS
 (In per cent)
 Personal Trusts and Estates

<u>Asset Category</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
I. Bonds and notes	<u>23.00</u>	<u>22.31</u>	<u>21.99</u>	<u>23.30</u>	<u>22.15</u>	<u>21.64</u>
A. U.S. Government & agency issues	7.84	7.42	7.21	7.23	6.62	5.72
B. State and local government issues	10.82	10.52	9.69	10.08	9.03	9.67
C. Other bonds and notes	4.34	4.37	5.09	5.99	6.50	6.25
II. Corporate stock	<u>68.07</u>	<u>68.76</u>	<u>69.17</u>	<u>67.28</u>	<u>68.58</u>	<u>69.30</u>
A. Common	65.84	66.91	67.44	65.65	67.02	67.37
B. Preferred	2.23	1.85	1.73	1.63	1.56	1.93
III. Real estate & mortgages	<u>4.47</u>	<u>4.38</u>	<u>4.66</u>	<u>5.52</u>	<u>5.32</u>	<u>5.11</u>
A. Mortgages	1.01	.94	1.21	1.50	1.54	1.53
B. Real estate	3.46	3.44	3.45	4.02	3.78	3.58
IV. Cash and deposits	<u>3.24</u>	<u>3.30</u>	<u>2.96</u>	<u>2.89</u>	<u>2.90</u>	<u>2.80</u>
A. Time and savings deposits	1.77	2.02	1.97	1.85	1.83	1.67
1. Savings & loan shares	.46	.46	.48	.43	.39	.35
2. Time deposits	1.31	1.56	1.49	1.42	1.44	1.31
a. Own bank	.88	1.11	1.05	.82	.98	.94
b. Other banks	.43	.45	.46	.60	.46	.37
B. Cash & demand deposits	1.47	1.28	.99	1.04	1.07	1.13
IV. Miscellaneous assets	<u>1.20</u>	<u>1.24</u>	<u>1.20</u>	<u>1.01</u>	<u>1.06</u>	<u>1.15</u>
Total (per cent)	100.00	100.00	100.00	100.00	100.00	100.00
Total assets (\$10 ⁶)	101,200	105,443	114,952	113,000	126,223	138,368

Source: see text.

Table IA-12(a)

PERSONAL TRUSTS AND ESTATES: BALANCE SHEETS

\$10⁶

	<u>Total*</u> <u>assets</u>	<u>Common</u> <u>stock</u>	<u>Preferred</u> <u>stock</u>	<u>State &</u> <u>local</u>	<u>Corporate</u> <u>bonds</u>	<u>U.S. Govt.</u> <u>securities</u>	<u>Mort-</u> <u>gages</u>	<u>Cash</u>	<u>Other*</u> <u>assets</u>
A. Personal Trusts other than Common Trust Funds									
1951	34,590	16,420	1,500	4,600	1,800	7,000	690	640	1,940
1952	34,880	17,850	1,470	5,260	1,390	5,590	710	690	1,920
1953	34,290	17,290	1,390	5,400	2,150	4,770	810	580	1,900
1954	42,080	23,740	1,680	6,100	2,650	4,680	930	410	1,890
1955	48,000	28,510	1,610	6,620	2,580	4,860	980	970	1,870
1956	48,860	30,650	1,450	7,210	2,460	3,690	830	680	1,890
1957	44,103	27,210	1,291	7,791	2,335	2,513	671	385	1,907
1958	53,355	36,017	1,274	7,787	2,589	2,552	738	475	1,923
1959	59,351	40,018	1,235	9,098	2,604	2,794	772	496	2,334
1960	60,723	40,873	1,244	9,182	2,717	2,932	831	530	2,414
1961	72,592	52,059	1,296	10,064	2,880	2,256	886	536	2,615
1962	72,975	49,499	1,316	11,644	3,033	2,773	942	552	3,216
B. Personal Trusts and Estates other than Common Trust Funds									
1951	38,326	17,020	1,556	4,762	1,808	8,992	794	828	2,566
1952	38,647	18,686	1,541	5,500	1,410	7,252	793	899	2,566
1953	37,822	18,123	1,459	5,654	2,184	6,196	906	757	2,543
1954	46,246	25,059	1,775	6,431	2,711	6,123	1,048	539	2,560
1955	53,136	30,359	1,717	7,041	2,663	6,414	1,114	1,286	2,542
1956	54,528	33,156	1,571	7,791	2,579	4,948	958	916	2,610
1957	49,660	29,833	1,417	8,533	2,482	3,415	786	526	2,669
1958	60,665	40,034	1,418	8,646	2,788	3,516	876	657	2,729
1959	67,541	44,491	1,375	10,104	2,806	3,849	916	687	3,313
1960	69,103	45,420	1,384	10,192	2,926	4,038	985	734	3,425
1961	81,956	57,697	1,438	11,142	3,093	3,099	1,048	739	3,700
1962	81,659	54,167	1,442	12,727	3,217	3,761	1,100	752	4,493

* Includes real estate.

Source: see text.

Table IA-12(b)

PERSONAL TRUSTS AND ESTATES: BALANCE SHEETS

\$10⁶

	<u>Total*</u> <u>assets</u>	<u>Common</u> <u>stock</u>	<u>Preferred</u> <u>stock</u>	<u>State &</u> <u>local</u>	<u>Corporate</u> <u>bonds</u>	<u>U.S. Govt.</u> <u>securities</u>	<u>Mort-</u> <u>gages</u>	<u>Cash</u>	<u>Other*</u> <u>assets</u>
C. Common Trust Funds									
1951	820	310	110	**	90	290	10	10	**
1952	1,040	410	130	10	130	340	10	10	**
1953	1,290	546	160	10	220	331	10	10	**3
1954	1,596	748	190	26	289	318	14	10	**
1955	1,869	911	214	31	358	322	20	11	1
1956	1,974	985	209	39	417	278	27	17	1
1957	1,965	936	205	44	526	211	30	14	**
1958	2,434	1,292	221	47	647	174	33	19	1
1959	2,668	1,437	211	42	710	210	38	18	**
1960	2,812	1,454	215	45	810	220	46	22	1
1961	3,551	1,986	232	84	955	219	52	22	1
1962	3,576	1,753	239	152	1,090	258	59	24	3
D. All Personal Trusts and Estates									
1951	39,146	17,330	1,666	4,762	1,898	9,282	804	838	2,566
1952	39,687	19,096	1,671	5,510	1,540	7,592	803	909	2,566
1953	39,112	18,663	1,619	5,664	2,404	6,526	916	767	2,543
1954	47,841	25,807	1,965	6,457	3,000	6,441	1,062	549	2,560
1955	55,005	31,270	1,931	7,072	3,021	6,736	1,134	1,297	2,543
1956	56,502	34,141	1,780	7,830	2,996	5,226	985	933	2,611
1957	51,625	30,769	1,622	8,577	3,008	3,626	816	540	2,669
1958	63,099	41,326	1,639	8,693	3,435	3,690	909	676	2,730
1959	70,209	45,928	1,586	10,146	3,516	4,059	954	705	3,313
1960	71,915	46,874	1,599	10,237	3,736	4,258	1,031	756	3,426
1961	85,507	59,684	1,670	11,226	4,048	3,318	1,100	761	3,701
1962	85,235	55,920	1,681	12,879	4,307	4,019	1,159	776	4,496

* Includes real estate.

** < .5 million.

Table IA-13(a)

ASSET COMPOSITION OF ALL COMMON TRUST FUNDS--END OF YEAR
(In per cent)

	1954	1955	1956	1957	1958	1959	1960
Total Assets	1,595.7	1,868.7	1,974.4	1,965.5	2,434.4	2,666.7	2,812.6
Cash	.7	.6	.9	.7	.8	.7	.8
U.S. Government securities	19.9	17.2	14.1	10.8	7.1	7.9	7.9
Marketable: ≤ 1 year	.2	.3	.3	.7	.5	.8	.7
Marketable: > 1 year	7.7	7.2	5.8	4.9	4.3	5.9	6.6
Other nonmarketable	12.0	9.8	8.0	5.2	2.4	1.1	.5
State & local govt. sec.	1.6	1.7	2.0	2.2	1.9	1.6	1.6
Corporate & foreign bonds	18.1	19.2	21.1	26.7	26.5	26.6	28.8
Domestic corporate	17.1	18.1	19.8	24.7	24.5	23.4	25.0
Other	1.0	1.1	1.3	2.0	2.0	3.2	3.8
Private placements	n.a.						
Mortgages	.9	1.1	1.4	1.5	1.4	1.4	1.6
Preferred stock	11.9	11.5	10.6	10.4	9.1	7.9	7.6
Common stock	46.9	48.7	49.9	47.7	53.1	53.9	51.7
Bank & finance	5.4	5.0	4.6	4.5	5.2	5.2	5.1
Utility	9.9	10.1	10.2	10.6	11.8	11.4	12.6
Other	31.6	33.6	35.1	32.6	36.1	37.3	34.0
Savings accounts	*	*	*	*	*	*	*
Other assets	--	--	--	--	--	--	--

N.A.: Not available.

* : < .05%

Sources: see page c.

Table IA-13(b)
 ASSET COMPOSITION OF ALL COMMON TRUST FUNDS--END OF YEAR
 (In per cent)

	1961	1962	1963	1964	1965	1966	1967	1968
Total Assets	3,550.9	3,577.7	4,539.8	5,819.7	7,529.1	7,612.0	8,347.5	9,553.5
Cash	.6	.7	.8	.7	1.0	.9	1.0	1.3
U.S. Government securities	6.2	7.2	11.0	10.9	9.2	8.9	6.2	5.2
Marketable: ≤ 1 year	.6	.8	1.6	1.1	1.0	1.1	.8	1.3
Marketable: > 1 year	5.3	6.2	----	9.8	8.2	7.8	5.4	3.9
Other nonmarketable	.3	.2						
State & local govt. securities	2.4	4.2	7.6	12.1	14.9	17.8	17.7	16.3
Corporate & foreign bonds	26.9	30.5	24.1	23.1	25.0	26.3	25.6	23.9
Domestic corporate	23.0	26.0	----	24.1	23.1	21.4	21.7	20.5
Other	3.9	4.5						
Private placements	n.a.	n.a.	n.a.	n.a.	3.6	4.8	3.9	3.4
Mortgages	1.5	1.6	2.0	2.3	2.4	2.7	2.6	2.4
Preferred stock	6.5	6.7	4.9	3.7	2.9	2.3	2.2	2.6
Common stock	56.0	49.0	49.4	47.0	44.2	40.5	44.3	47.7
Bank & finance	6.6	5.6	5.0	4.2	3.6	3.5	3.3	4.0
Utility	13.7	12.7	11.6	10.6	8.9	8.2	7.0	7.2
Other	35.7	30.7	32.8	32.2	31.6	28.8	33.9	36.5
Savings accounts	*	.1	----					
Other assets	--	--	----	.2	.2	.4	.5	.6

N.A.: Not available.

* : < .05%

Sources: see page c .

Table IA-13(c)

Sources: 1954, Federal Reserve Bulletin, August 1956, page 801.
1955-56, Federal Reserve Bulletin, June 1957, page 623.
1957, Federal Reserve Bulletin, May 1958, page 536.
1958, Federal Reserve Bulletin, May 1959, page 478.
1959, Federal Reserve Bulletin, May 1960, page 480.
1960, Federal Reserve Bulletin, May 1961, page 527.
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1962, Federal Reserve Bulletin, June 1963, page 776.
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1966-68, Hanzaryk, Unpublished manuscript.

Table IA-14(a)

ASSETS OF PERSONAL TRUSTS AND ESTATES (\$10⁶)

	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
Total assets	39,146	39,687	39,112	47,842	55,005	56,502	51,625	63,089	70,209
Cash	838	909	767	549	1,297	933	540	676	705
U.S. Government securities	9,282	7,592	6,526	6,441	6,736	5,226	3,626	3,690	4,059
State & local government	4,762	5,510	5,664	6,457	7,072	7,830	8,577	8,693	10,146
Corporate bonds	1,898	1,540	2,404	3,000	3,021	2,996	3,008	3,435	3,516
Mortgages	804	803	916	1,062	1,134	985	816	909	954
Preferred stock	1,666	1,671	1,619	1,965	1,931	1,780	1,622	1,639	1,586
Common stock	17,330	19,096	18,663	25,807	31,270	34,141	30,769	41,326	45,928
Total, other assets	2,566	2,566	2,543	2,560	2,543	2,611	2,669	2,730	3,313
Real estate	1,403	1,403	1,390	1,399	1,390	1,428	1,459	1,492	1,811
Time deposits	720	720	713	718	713	732	749	766	929
Miscellaneous	443	443	440	443	440	451	461	472	573

Source: see text.

Table IA-14(b)

ASSETS OF PERSONAL TRUSTS AND ESTATES (\$10⁶)

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
Total assets	71,915	85,507	85,235	101,200	105,443	114,952	113,000	126,223	138,368
Cash	756	761	776	1,491	1,347	1,143	1,170	1,354	1,560
U.S. Government securities	4,258	3,318	4,019	7,930	7,829	8,292	8,166	8,358	7,910
State & local government	10,237	11,226	12,879	10,953	11,092	11,142	11,395	11,396	13,377
Corporate bonds	3,736	4,048	4,307	4,390	4,610	5,851	6,764	8,199	8,654
Mortgages	1,031	1,100	1,159	1,027	995	1,386	1,698	1,939	2,123
Preferred stock	1,599	1,670	1,681	2,258	1,948	1,986	1,844	1,963	2,676
Common stock	46,874	59,684	55,920	66,626	70,553	77,518	74,184	84,594	93,220
Total, other assets	3,426	3,701	4,496	6,524	7,069	7,633	7,778	8,422	8,847
Real estate	1,873	2,023	2,458	3,506	3,622	3,967	4,548	4,767	4,955
Time deposits	961	1,038	1,261	1,802	2,137	2,292	2,091	2,317	2,298
Miscellaneous	592	640	777	1,216	1,310	1,374	1,139	1,338	1,594

TABLE IA-15(a)
 PORTFOLIO OF FRATERNAL LIFE INSURANCE COMPANIES
 (\$10⁶)

Assets	1951	1952	1953	1954	1955	1956	1957	1958	1959
Mortgages	385.1	423.0	452.6	493.5	595.7	651.1	677.3	716.6	738.4
Corporate stocks	97.0	103.6	94.0	102.9	99.5	98.1	92.2	118.8	132.7
Total bonds	1,570.5	1,606.0	1,628.2	1,665.1	1,694.8	1,730.3	1,700.4	1,743.8	1,834.4
Corporate	938.0	959.0	923.2	1,008.2	1,025.1	1,058.6	1,060.3	1,107.8	1,173.0
State and local	392.0	401.0	376.4	424.6	432.3	445.1	436.4	438.4	451.2
U.S. Government	174.5	178.0	171.0	192.5	196.6	183.5	162.1	155.9	168.3
Unallocated	66.0	68.0	157.6	39.8	40.8	43.1	41.6	41.7	42.0
Real estate	56.0	68.9	79.4	86.8	93.3	93.7	105.6	110.3	115.9
Certified loans	86.3	88.7	92.6	98.8	105.4	110.4	113.2	119.7	127.2
Time & savings deposits	.2	.2	.2	.3	.3	.3	.3	.3	.3
Cash & bank deposits	30.1	28.3	35.6	39.8	28.7	21.7	25.4	26.3	26.4
Other	34.6	40.3	53.3	65.9	64.1	74.5	79.9	82.9	89.2
Total	2,260.0	2,359.0	2,436.0	2,553.0	2,682.0	2,780.0	2,794.0	2,919.0	3,065.0

Source: see text.

TABLE I A-15(b)
 PORTFOLIO OF FRATERNAL LIFE INSURANCE COMPANIES
 (\$10⁶)

Assets	1960	1961	1962	1963	1964	1965	1966	1967	1968
Mortgages	726.1	810.1	829.2	857.0	884.8	917.1	1,035.3	1,112.1	1,061.0
Corporate stocks	142.3	148.7	152.2	180.7	210.0	214.7	220.6	244.9	259.3
Total bonds	1,951.3	1,852.4	1,940.6	2,030.2	2,101.6	2,158.9	2,315.7	2,394.9	2,435.9
Corporate	1,336.0	1,312.3	1,429.7	1,536.8	1,614.0	1,742.5	1,916.8	2,010.5	2,051.9
State and local	460.4	379.6	306.8	275.1	276.4	257.4	259.9	256.1	229.0
U.S. Government	154.9	122.9	166.0	179.3	168.0	159.1	139.0	127.8	110.0
Unallocated	--	37.7	38.1	39.1	43.1	--	--	.4	45.0
Real estate	125.9	133.5	152.2	170.0	168.0	175.1	171.0	190.0	202.2
Certified loans	141.4	141.3	147.9	158.7	164.4	174.4	192.7	210.8	210.0
Time & savings deposits	1.0	.6	.7	.7	.7	.8	.4	.4	.9
Cash & bank deposits	25.4	30.3	25.6	33.0	35.0	33.5	23.8	23.3	24.7
Other	99.3	108.0	119.2	119.6	121.2	132.9	139.8	142.5	135.1
Total	3,213.0	3,225.0	3,368.0	3,550.0	3,685.0	3,807.0	4,100.0	4,319.0	4,329.0

Table IA-16
 ASSETS OF FRATERNAL LIFE INSURANCE COMPANIES
 (\$10⁶)

Year	<u>Total Assets</u> 10 Largest	<u>Total Assets</u> All Fraternal	Per Cent
1951	990.38	2,260.00	.438
1952	1,052.08	2,359.00	.446
1953	1,101.02	2,436.00	.452
1954	1,164.49	2,553.00	.456
1955	1,220.93	2,682.00	.455
1956	1,289.20	2,780.00	.464
1957	1,359.47	2,794.00	.487
1958	1,447.36	2,919.00	.496
1959	1,536.29	3,065.00	.501
1960	1,582.59	3,213.00	.493
1961	1,732.64	3,225.00	.537
1962	1,830.74	3,368.00	.544
1963	1,968.52	3,550.00	.555
1964	2,106.06	3,685.00	.572
1965	2,275.99	3,807.00	.598
1966	2,417.25	4,100.00	.590
1967	2,530.79	4,319.00	.586
1968	2,775.63	4,329.00	.641

Source: see text.

Table IA-17(a)

PERCENTAGE BREAKDOWN OF ASSETS OF TEN OF THE
LARGEST FRATERNAL LIFE INSURANCE COMPANIES
(In per cent)

	1951	1952	1953	1954	1955	1956	1957	1958	1959
Mortgages	17.04	17.93	18.58	19.33	22.21	23.42	24.24	24.55	24.09
Corporate stocks	4.29	4.39	3.86	4.03	3.71	3.53	3.30	4.07	4.33
Total bonds	69.49	68.08	66.84	65.22	63.19	62.24	60.86	59.74	59.85
Corporate	41.50	40.67	37.90	39.49	38.22	38.08	37.95	37.95	38.27
State and local	17.35	16.99	15.45	16.63	16.12	16.01	15.62	15.02	14.72
U.S. Government	7.69	7.53	7.02	7.54	7.33	6.60	5.80	5.34	5.49
Unallocated	2.94	2.88	6.47	1.56	1.52	1.55	1.49	1.43	1.37
Real estate	2.48	2.92	3.26	3.40	3.48	3.37	3.78	3.78	3.78
Certified loans	3.82	3.76	3.80	3.87	3.93	3.97	4.05	4.10	4.15
Time & savings deposits	.01	.01	.01	.01	.01	.01	.01	.01	.01
Cash & bank deposits	1.33	1.20	1.46	1.56	1.07	.78	.91	.90	.86
Other	1.53	1.71	2.19	2.58	2.39	2.68	2.86	2.84	2.91
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: see text.

Table IA-17(b)

PERCENTAGE BREAKDOWN OF ASSETS OF TEN OF THE
LARGEST FRATERNAL LIFE INSURANCE COMPANIES
(In per cent)

	1960	1961	1962	1963	1964	1965	1966	1967	1968
Mortgages	22.60	25.12	24.62	24.14	24.01	24.09	25.25	25.75	24.51
Corporate stocks	4.43	4.61	4.52	5.09	5.70	5.64	5.38	5.67	5.99
Total bonds	60.73	57.44	57.62	57.19	57.03	56.71	56.48	55.45	56.27
Corporate	41.58	40.69	42.45	43.29	43.80	45.77	46.75	46.55	47.40
State and local	14.33	11.77	9.11	7.75	7.50	6.76	6.34	5.93	5.29
U.S. Government	4.82	3.81	4.93	5.05	4.56	4.18	3.39	2.96	2.54
Unallocated	--	1.17	1.13	1.10	1.17	--	--	.01	1.04
Real estate	3.92	4.14	4.52	4.79	4.56	4.60	4.17	4.40	4.67
Certified loans	4.40	4.38	4.39	4.47	4.46	4.58	4.70	4.88	4.85
Time & savings deposits	.03	.02	.02	.02	.02	.02	.01	.01	.02
Cash & bank deposits	.79	.94	.76	.93	.95	.88	.58	.54	.57
Other	3.09	3.35	3.54	3.37	3.29	3.49	3.41	3.30	3.12
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table IA-18(a)

BALANCE SHEET OF MORTGAGE BANKING, 1951-1968
(In millions of dollars)

	1951	1952	1953	1954	1955	1956	1957	1958	1959
Total assets	<u>692.6</u>	<u>861.1</u>	<u>955.9</u>	<u>1,202.5</u>	<u>1,447.3</u>	<u>1,541.7</u>	<u>1,501.8</u>	<u>1,870.6</u>	<u>2,259.9</u>
Cash (including escrow)	113.7	127.8	151.3	157.5	169.7	185.3	208.3	246.3	289.1
Mortgage & const. loans	454.1	597.8	623.6	882.6	1,113.6	1,155.2	1,045.9	1,333.5	1,615.4
Mortgage loans	--	490.5	501.0	713.0	878.0	944.4	861.0	1,069.5	1,287.2
Construction	--	107.3	122.6	169.6	235.6	210.8	184.9	264.0	328.2
Notes & accts. receivable	33.8	34.7	54.8	30.2	41.7	47.1	53.3	43.8	55.1
Title I & Other small loans	2.5	3.7	3.4	1.2	3.9	4.4	9.7	15.0	13.1
Other current assets	17.8	18.1	20.0	34.2	33.3	37.2	47.1	34.3	40.0
Noncurrent assets	70.7	79.1	102.8	96.8	85.1	112.5	137.5	197.7	247.2
Total liabilities	<u>692.6</u>	<u>861.1</u>	<u>955.9</u>	<u>1,202.5</u>	<u>1,447.3</u>	<u>1,541.7</u>	<u>1,501.8</u>	<u>1,870.6</u>	<u>2,259.9</u>
Escrows	69.3	82.0	95.5	101.2	108.4	121.1	133.0	166.9	191.9
Notes payable	383.3	485.9	544.1	738.1	970.0	998.6	907.8	1,157.4	1,439.9
To banks	364.1	466.5	522.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
To others	19.2	19.4	21.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Accounts payable	20.5	19.7	20.5	22.3	29.6	28.9	28.0	30.3	38.3
Undisbursed mortgage loans	25.5	53.7	52.2	49.0	36.8	28.2	26.0	58.7	50.8
Other current liabilities	22.8	23.0	22.2	44.5	55.9	57.6	55.7	69.4	70.1
Noncurrent liabilities	19.1	27.2	34.1	36.7	34.7	76.6	86.2	89.8	119.9
Net worth	152.1	169.5	187.3	210.7	211.9	230.7	265.1	298.1	349.0

Sources: see text.

Table IA-18(b)

BALANCE SHEET OF MORTGAGE BANKING, 1951-1968
(In millions of dollars)

	1960	1961	1962	1963	1964	1965	1966	1967	1968
Total assets	<u>2,360.2</u>	<u>2,884.5</u>	<u>3,262.5</u>	<u>4,474.2</u>	<u>4,686.6</u>	<u>5,226.4</u>	<u>4,535.8</u>	<u>4,543.1</u>	<u>4,371.5</u>
Cash (including escrow)	316.2	366.9	398.4	716.7	850.5	791.6	838.9	890.2	971.8
Mortgage & const. loans	1,615.0	1,972.1	2,216.0	3,117.5	3,172.1	3,683.4	2,904.7	2,829.5	3,315.1
Mortgage loans	1,227.6	1,513.0	1,638.2	2,255.2	2,382.8	2,744.1	2,155.5	2,135.2	2,369.1
Construction	387.4	459.1	577.8	862.3	789.3	939.3	749.2	694.3	946.0
Notes & accts. receivable	71.3	87.5	117.1	100.8	142.3	152.8	111.2	126.0	113.8
Title I & Other small loans	18.9	15.4	28.7	89.0	113.7	89.2	107.0	114.0	137.9
Other current assets	57.8	55.8	83.3	140.3	134.4	130.2	143.2	160.9	202.5
Noncurrent assets	281.0	386.8	419.0	309.9	273.6	379.2	430.8	422.5	474.6
Total liabilities	<u>2,360.2</u>	<u>2,884.5</u>	<u>3,262.5</u>	<u>4,474.2</u>	<u>4,686.6</u>	<u>5,226.4</u>	<u>4,535.8</u>	<u>4,543.1</u>	<u>4,371.5</u>
Escrows	217.3	255.8	281.2	623.4	734.0	684.6	733.6	770.6	844.3
Notes payable	1,450.3	1,754.9	2,012.1	2,982.5	3,144.6	3,642.1	2,854.9	2,774.5	3,223.3
To banks	n.a.	n.a.	n.a.	2,877.0	3,014.1	3,522.8	2,722.8	2,656.7	3,064.0
To others	n.a.	n.a.	n.a.	105.5	130.5	119.3	132.1	117.8	159.3
Accounts payable	39.9	42.7	50.6	78.2	71.3	96.4	64.8	77.4	95.0
Undisbursed mortgage loans	53.9	62.2	68.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other current liabilities	82.9	90.4	91.0	139.6	95.4	79.8	97.6	104.3	153.7
Noncurrent liabilities	132.8	195.6	233.4	157.7	156.5	219.5	276.3	277.3	293.9
Net worth	383.1	482.9	525.6	492.8	484.8	504.0	508.6	539.0	605.7

Sources: see text.

Table IA-19

PAR VALUE OF CORPORATE BONDS OUTSTANDING
\$ Millions

	<u>Railroad</u>	<u>Utility</u>	<u>Industrial</u>	<u>Finance</u> ^{a/}	<u>Total</u>
1947	9,630	10,667	6,853	548	27,698
1948	9,698	12,689	8,698	973	32,058
1949	9,896	14,081	9,832	1,403	35,212
1950	9,990	15,176	10,314	1,778	37,258
1951	10,332	16,632	12,332	1,946	41,242
1952	10,587	18,222	15,441	2,176	46,426
1953	10,798	20,601	16,938	3,418	51,755
1954	10,666	22,108	18,884	3,682	55,340
1955	10,719	23,792	20,101	4,852	59,464
1956	10,845	25,298	22,053	5,983	64,179
1957	10,975	29,193	24,264	6,978	71,410
1958	10,972	31,902	27,305	7,184	77,363
1959	10,739	34,059	28,348	8,178	81,324
1960	10,565	36,537	29,316	9,750	86,168
1961	10,395	38,253	32,126	10,525	91,299
1962	10,297	40,515	33,831	11,358	96,001
1963	10,281	42,278	36,315	13,164	102,038
1964	10,386	45,081	38,458	15,808	109,733
1965	10,630	46,031	42,047	18,515	117,223
1966	11,217	50,220	47,975	19,379	128,791
1967	11,480	55,138	57,668	20,681	144,967
1968	10,770	59,893	65,434	21,750	157,847

Source: see text.

a/ Includes insurance and real estate.

Table IA-20

CORPORATE STOCK OUTSTANDING
(\$ millions)

	<u>Total outstanding</u>	<u>Investment company</u>	<u>Other Domestic</u>	<u>Foreign</u>	<u>Domestic nonfinancial</u>	<u>Domestic^c financial^{1/}</u>
1952	189,682	7,199	180,235	2,248	152,834	34,600
1953	186,182	7,569	176,565	2,048	151,234	32,900
1954	256,191	10,976	242,809	2,406	213,685	40,100
1955	306,125	13,632	289,672	2,821	257,904	45,400
1956	308,426	14,301	291,103	3,022	259,204	46,200
1957	278,990	13,797	262,500	2,693	221,997	54,300
1958	395,017	19,232	372,095	3,690	318,527	72,800
1959	444,506	22,503	417,774	4,229	351,277	89,000
1960	445,935	23,858	417,410	4,667	348,368	92,900
1961	590,860	31,172	554,086	5,602	444,458	140,800
1962	506,890	29,701	472,475	4,714	390,376	111,800
1963	637,801	34,955	597,701	5,145	396,856	135,800
1964	721,504	39,498	676,736	5,270	567,934	147,300
1965	811,817	45,163	761,606	5,048	616,569	190,200
1966	741,954	44,299	693,331	4,324	566,830	170,800
1967	948,075	58,481	884,356	5,238	738,187	204,650
1968	1,126,238	68,569	1,051,205	6,464	828,874	290,900

^{1/} Includes investment company shares.

Source: see text.

Table IA-21(a)
CORPORATE STOCK OUTSTANDING,
1952-1960
(In millions of dollars)

	1952	1953	1954	1955	1956	1957	1958	1959	1960
Total outstanding	189,682	186,182	256,191	306,125	308,426	278,990	395,017	444,506	445,935
Investment company	7,199	7,569	10,976	13,632	14,301	13,797	19,232	22,503	23,858
Other domestic	180,235	176,565	242,809	289,672	291,103	262,500	372,095	417,774	417,410
Foreign	2,248	2,048	2,406	2,821	3,022	2,693	3,690	4,229	4,667
Memo:									
Domestic nonfinancial	152,834	151,234	213,685	257,904	259,204	221,997	318,527	351,277	348,368
Domestic financial (including investment companies)	34,600	32,900	40,100	45,400	46,200	54,300	72,800	89,000	92,900
Held by:									
Households	142,772	138,382	191,130	225,244	222,040	198,811	288,670	323,612	320,874
Investment company shares	7,199	7,569	10,976	13,632	14,301	13,797	19,232	22,503	23,858
Other	135,573	130,813	180,154	211,612	207,739	185,014	269,438	301,109	297,016
Foundations	4,433	4,569	5,508	6,916	7,510	6,894	7,855	9,287	8,964
Colleges & universities	1,770	1,808	2,478	3,064	3,354	3,098	4,014	4,294	4,165
Personal trusts	20,767	20,282	27,772	33,201	35,921	32,391	42,965	47,514	48,473
Mutual savings banks	336	431	571	655	705	767	862	813	829
Life insurance cos.	2,446	2,573	3,268	3,633	3,503	3,391	4,109	4,561	4,981
Property & casualty insurance companies	4,326	4,459	5,942	6,930	7,219	6,664	8,374	9,149	9,372
Fraternal insurance companies	104	94	103	100	98	92	119	133	142
Private pension funds	1,843	2,392	3,154	6,085	7,065	7,489	11,561	14,525	16,546
State & local pension funds	56	75	99	127	161	212	270	345	431
Open-end investment companies	3,376	3,644	5,485	7,061	7,995	7,510	11,812	14,447	15,482
Other investment companies	3,165	3,251	4,725	5,677	5,237	4,839	5,642	5,925	5,866
Brokers & dealers	583	572	702	857	657	741	459	538	509
Rest of the world	3,705	3,650	5,254	6,575	6,961	6,091	8,305	9,363	9,302

Source: see text.

Table IA-21(b)

CORPORATE STOCK OUTSTANDING,
1961-1968
(In millions of dollars)

	1961	1962	1963	1964	1965	1966	1967	1968
Total outstanding	590,860	506,890	637,801	721,504	811,817	741,954	948,075	1,126,238
Investment company	31,172	29,701	34,955	39,498	45,163	44,299	58,481	68,569
Other domestic	554,086	472,475	557,701	676,736	761,606	693,331	884,356	1,051,205
Foreign	5,602	4,714	5,145	5,270	5,048	4,324	5,238	6,464
Memo:								
Domestic nonfinancial	444,458	390,376	496,856	567,934	616,569	566,830	738,187	828,874
Domestic financial (including investment companies)	140,800	111,800	135,800	148,300	190,200	170,800	204,650	290,900
Held by:								
Households	431,314	356,844	458,105	522,874	587,617	529,867	686,624	827,978
Investment company shares	31,172	29,701	34,955	39,498	45,163	44,299	58,481	68,569
Other	400,142	327,143	423,150	483,376	542,454	485,568	628,143	759,409
Foundations	10,623	9,760	10,922	13,124	14,924	14,127	15,621	17,472
Colleges & universities	5,003	4,564	5,488	6,207	7,012	6,282	7,754	8,143
Personal trusts	61,354	57,601	68,884	72,501	79,567	76,028	86,557	95,896
Mutual savings banks	894	1,043	1,158	1,259	1,426	1,467	1,686	1,937
Life insurance companies	6,258	6,302	7,135	7,938	9,126	8,755	11,779	13,230
Property & casualty insurance companies	11,755	11,124	12,955	14,745	15,304	13,759	17,709	18,114
Fraternal insurance companies	149	152	180	210	215	221	245	259
Private pension funds	22,856	21,895	27,670	33,527	39,692	38,509	49,491	59,577
State & local pension funds	583	780	989	1,262	1,614	2,102	2,772	4,051
Open-end investment companies	21,297	19,576	23,670	25,797	33,262	31,130	43,051	50,496
Other investment companies	6,640	6,469	7,601	7,757	6,941	6,499	8,675	9,422
Brokers & dealers	326	444	559	468	518	565	600	137
Rest of the world	11,808	10,336	12,485	13,835	14,599	12,643	15,511	19,528

Table IA-22(a)
ISSUES AND PURCHASES OF CORPORATE STOCK, 1952-1960
(In millions of dollars)

	1952	1953	1954	1955	1956	1957	1958	1959	1960
Total issues	3,149	2,400	2,650	3,001	3,890	3,993	4,292	4,617	3,633
Investment company	648	519	592	935	1,231	1,245	1,833	2,046	1,851
Other domestic	2,441	1,932	1,802	1,893	2,548	2,713	2,127	2,376	1,696
Foreign	60	-51	256	173	111	35	332	195	86
Memo: Total Domestic Issues	3,089	2,451	2,394	2,828	3,779	3,958	3,960	4,422	3,547
Domestic nonfinancial	2,302	1,818	1,574	1,944	2,281	2,440	2,073	2,244	1,574
Domestic financial (including investment co.)	787	633	820	884	1,498	1,518	1,887	2,178	1,973
Purchased by:									
Households	-409	171	2,612	1,084	-791	181	3,212	3,380	-6,920
Investment company shares	648	519	592	935	1,231	1,245	1,833	2,046	1,851
Other	-1,057	-348	2,020	149	-2,022	-1,064	1,379	1,334	-8,771
Foundations <u>1/</u>	180	298	-883	239	479	329	-1,164	134	545
Colleges & universities <u>1/</u>	142	103	-103	64	239	168	66	-352	273
Personal trusts <u>1/</u>	1,766	293	-1,178	-309	2,169	936	-359	-2,323	5,401
Mutual savings banks	109	95	140	84	50	62	95	-49	16
Life insurance companies	164	93	270	65	-2	43	78	192	352
Property & casualty insurance	181	190	163	163	136	125	134	267	264
Fraternal insurance cos. <u>1/</u>	0	-6	-27	-22	-4	7	-4	-5	21
Private pension funds	478	545	709	739	941	1,135	1,381	1,743	1,946
State & local pension funds	15	19	24	28	34	51	58	75	86
Open-end investment companies	473	563	297	511	560	815	987	1,295	1,021
Other investment companies <u>2/</u>	0	-9	360	73	23	-90	146	-170	452
Brokers & dealers	49	-10	131	155	-200	84	-284	79	-27
Rest of the world	1	55	135	127	256	147	-54	351	203

1/ Assumes price appreciation as in Dow-Jones Industrial Average.

2/ Assumes price appreciation as in Standard and Poor's Composite.

Source: see text.

Table IA-22(b)

ISSUES AND PURCHASES OF CORPORATE STOCK, 1961-1968
(In millions of dollars)

	1961	1962	1963	1964	1965	1966	1967	1968
Total issues	6,194	3,170	1,364	3,738	3,309	5,569	6,984	5,273
Investment company	3,219	2,381	1,673	2,513	3,639	4,653	4,671	5,999
Other domestic	2,650	688	-249	1,431	-37	1,169	2,267	-900
Foreign	325	101	-60	-206	-293	-253	46	174
Memo: Total Domestic Issues	5,869	3,069	1,424	3,944	3,602	5,822	6,938	5,099
Domestic nonfinancial	2,472	592	-300	1,386	25	1,180	2,304	-843
Domestic financial (including investment co.)	3,397	2,477	1,724	2,558	3,577	4,642	4,634	5,942
Purchased by:								
Households	-1,974	-4,374	-4,314	5,299	-1,191	-16,413	-3,335	-13,593
Investment company shares	3,219	2,381	1,673	2,513	3,639	4,653	4,671	5,999
Other	-5,193	-6,755	-5,987	2,786	-4,830	-21,066	-8,006	-19,592
Foundations <u>1/</u>	-17	280	-462	579	349	2,234	-636	1,134
Colleges & universities <u>1/</u>	55	100	138	-76	122	605	504	56
Personal trusts <u>1/</u>	3,604	2,824	1,386	-6,087	-832	12,747	-999	5,406
Mutual savings banks	65	149	115	101	167	41	219	251
Life insurance companies	465	433	246	546	708	268	1,064	1,427
Property & casualty insurance	260	248	156	103	87	391	588	1,071
Fraternal insurance companies <u>1/</u>	-19	19	2	4	-17	51	-9	3
Private pension funds	2,258	2,198	2,170	2,212	3,124	3,676	4,991	4,713
State & local pension funds	152	197	209	273	352	488	670	1,279
Open-end investment companies	1,131	909	759	1,131	1,237	1,335	2,061	1,653
Other investment companies <u>2/</u>	-64	-41	619	39	-448	416	1,129	368
Brokers & dealers	-45	119	115	-94	51	35	37	-463
Rest of the world	323	109	225	-292	-400	-305	700	1,968

1/ Assumes price appreciation as in Dow-Jones Industrial Average.

2/ Assumes price appreciation as in Standard and Poor's Composite.

Table IB-1

ALL DOMESTIC SECTORS
(\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	1,115.3	1,851.3	3,079.5
Land	199.4	411.7	715.4
Reproducible tangible assets	915.9	1,439.6	2,364.1
Structures	576.2	924.4	1,537.1
Durables	228.8	368.2	610.8
Inventories	110.9	147.0	216.2
Financial Assets	1,398.2	2,291.8	4,348.7
Monetary reserves	29.5	25.1	22.5
Currency and demand deposits	136.4	150.9	208.6
Short-term claims	335.2	564.1	1,136.0
Time deposits	82.6	173.3	402.6
Short-term U.S. Govt. securities	61.0	80.5	112.6
Other short-term claims	191.6	310.3	620.9
Long-term claims	464.0	771.2	1,342.5
Bonds	237.5	313.4	479.4
Mortgages	91.4	206.8	397.5
Claims on life insurance, pensions, and personal trusts	135.2	251.0	465.6
Corporate shares	186.0	436.6	1,106.7
Equity in unincorporated business	210.3	269.2	392.2
Miscellaneous assets	36.8	74.7	140.2
Total Assets	2,513.5	4,143.1	7,428.2
Total Liabilities	971.8	1,555.5	2,791.2
Monetary reserves	2.4	2.7	5.1
Currency and demand deposits	137.4	152.2	211.1
Short-term debt	319.0	535.6	1,060.5
Time deposits	84.9	176.8	412.1
Short-term U.S. Govt. securities	63.9	88.2	119.4
Other short-term debt	170.2	270.6	529.0
Long-term debt	462.3	769.1	1,337.3
Bonds	235.7	311.3	474.2
Mortgages	91.4	206.8	397.5
Claims on life insurance, pensions, and personal trusts	135.2	251.0	465.6
Miscellaneous liabilities	50.7	95.9	177.2
Net Worth	1,541.7	2,587.6	4,637.0

Table IB-2

HOUSEHOLDS
(\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	386.3	670.6	1,051.8
Land	58.7	148.6	250.9
Reproducible tangible assets	327.6	522.0	800.9
Structures	237.3	381.2	567.1
Consumer durables	90.3	140.8	233.8
Inventories	--	--	--
Financial Assets	716.9	1,196.7	2,312.0
Monetary reserves	--	--	--
Currency and demand deposits	59.3	63.9	107.4
Short-term claims	84.4	173.1	374.7
Time deposits	78.5	164.4	355.1
Short-term U.S. Govt. securities	5.2	7.6	16.3
Other short-term claims	.7	1.1	3.3
Long-term claims	211.0	358.5	593.8
Bonds	58.6	78.0	93.6
Mortgages	17.3	29.6	34.5
Claims on life insurance, pensions, and personal trusts	135.2	251.0	465.6
Corporate shares	142.8	320.9	828.0
Equity in unincorporated business	210.3	269.2	392.2
Miscellaneous assets	9.1	11.1	15.9
Total Assets	1,103.2	1,867.3	3,363.8
Total Liabilities	95.4	216.6	409.8
Monetary reserves	--	--	--
Currency and demand deposits	--	--	--
Short-term debt	38.1	77.4	161.4
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	38.1	77.4	161.4
Long-term debt	56.1	136.8	244.1
Bonds	--	--	--
Mortgages	56.1	136.8	244.1
Claims on life insurance, pensions, and personal trusts	--	--	--
Miscellaneous liabilities	1.2	2.4	4.3
Net Worth	1,007.8	1,650.7	2,954.0

Table IB-3

SELECTED NONPROFIT INSTITUTIONS
(\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	23.0	44.7	87.6
Land	6.3	14.9	28.6
Reproducible tangible assets	16.7	29.8	59.0
Structures	15.0	27.2	55.7
Producer durables	1.7	2.6	3.3
Inventories	--	--	--
Financial Assets	10.1	20.4	37.0
Monetary reserves	--	--	--
Currency and demand deposits	.1	.2	.5
Short-term claims	--	--	--
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term claims	--	--	--
Long-term claims	3.2	5.5	7.1
Bonds	3.1	5.2	6.6
Mortgages	.1	.3	.4
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	6.2	13.1	25.7
Equity in unincorporated business	--	--	--
Miscellaneous assets	.6	1.6	3.8
Total Assets	33.1	65.1	124.6
Total Liabilities	3.4	9.8	20.7
Monetary reserves	--	--	--
Currency and demand deposits	--	--	--
Short-term debt	*	.6	2.9
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	*	.6	2.9
Long-term debt	3.4	9.2	17.8
Bonds	--	--	--
Mortgages	3.4	9.2	17.8
Claims on life insurance, pensions, and personal trusts	--	--	--
Miscellaneous liabilities	--	--	--
Net Worth	29.7	55.3	103.9

Table IB-4

NONFINANCIAL CORPORATIONS
(\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	281.4	446.2	757.9
Land	21.2	55.9	102.9
Reproducible tangible assets	260.2	390.3	655.0
Structures	116.1	172.6	272.4
Producer durables	78.0	129.9	233.3
Inventories	66.1	87.8	149.3
Financial Assets	126.3	206.7	357.3
Monetary reserves	--	--	--
Currency and demand deposits	28.8	32.2	28.1
Short-term claims	70.6	129.2	247.9
Time deposits	.9	2.8	24.8
Short-term U.S. Govt. securities	10.7	15.1	9.8
Other short-term claims	59.0	111.3	213.3
Long-term claims	9.9	6.8	8.7
Bonds	9.9	6.8	8.7
Mortgages	--	--	--
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	--	--	--
Equity in unincorporated business	--	--	--
Miscellaneous assets	17.0	38.5	72.6
Total Assets	407.7	652.9	1,115.2
Total Liabilities	165.6	275.0	499.9
Monetary reserves	--	--	--
Currency and demand deposits	--	--	--
Short-term debt	82.0	120.0	222.1
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	82.0	120.0	222.1
Long-term debt	60.2	108.3	204.1
Bonds	44.1	76.3	136.8
Mortgages	16.1	32.0	67.3
Claims on life insurance, pensions, and personal trusts	--	--	--
Miscellaneous liabilities	23.4	46.6	73.8
Net Worth	242.1	377.9	615.3

Table IB-5

FARM BUSINESS
(\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	138.1	178.8	266.2
Land	67.3	92.9	152.6
Reproducible tangible assets	70.8	85.9	113.6
Structures	29.2	38.8	50.1
Producer durables	18.4	24.1	34.1
Inventories	23.2	23.0	29.4
Financial Assets	8.3	7.6	9.4
Monetary reserves	--	--	--
Currency and demand deposits	7.1	5.8	6.1
Short-term claims	--	--	--
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term claims	--	--	--
Long-term claims	--	--	--
Bonds	--	--	--
Mortgages	--	--	--
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	--	--	--
Equity in unincorporated business	--	--	--
Miscellaneous assets	1.2	1.8	3.3
Total Assets	146.4	186.4	275.6
Total Liabilities	13.9	23.6	51.4
Monetary reserves	--	--	--
Currency and demand deposits	--	--	--
Short-term debt	6.7	10.9	23.8
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	6.7	10.9	23.8
Long-term debt	7.2	12.8	27.5
Bonds	--	--	--
Mortgages	7.2	12.8	27.5
Claims on life insurance, pensions, and personal trusts	--	--	--
Miscellaneous liabilities	--	--	--
Net Worth	132.5	162.8	224.2

Table IB-6
 NONFARM NONCORPORATE BUSINESS
 (\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	74.0	112.4	202.8
Land	10.8	18.2	29.0
Reproducible tangible assets	63.2	94.2	173.8
Structures	23.2	37.9	100.4
Producer durables	25.9	38.7	50.0
Inventories	14.1	17.6	23.4
Financial Assets	16.2	20.8	26.6
Monetary reserves	--	--	--
Currency and demand deposits	10.4	12.4	12.5
Short-term claims	4.0	5.3	8.8
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term claims	4.0	5.3	8.8
Long-term claims	--	--	--
Bonds	--	--	--
Mortgages	--	--	--
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	--	--	--
Equity in unincorporated business	--	--	--
Miscellaneous assets	1.7	3.0	5.3
Total Assets	90.2	133.2	229.4
Total Liabilities	12.4	26.8	61.4
Monetary reserves	--	--	--
Currency and demand deposits	--	--	--
Short-term debt	4.3	13.2	24.8
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	4.3	13.2	24.8
Long-term debt	8.0	13.6	36.6
Bonds	--	--	--
Mortgages	8.0	13.6	36.6
Claims on life insurance, pensions, and personal trusts	--	--	--
Miscellaneous liabilities	--	--	--
Net Worth	77.8	106.4	168.0

Table IB-7
 FEDERAL GOVERNMENT
 (\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	72.0	119.3	166.7
Land	10.8	18.4	33.5
Reproducible tangible assets	61.2	100.9	133.2
Structures	48.1	70.6	103.4
Producer durables	5.6	11.7	15.8
Inventories	7.5	18.6	14.0
Financial Assets	50.0	55.9	91.5
Monetary reserves	1.6	1.7	3.3
Currency and demand deposits	7.4	7.2	6.6
Short-term claims	37.0	37.2	67.7
Time deposits	.4	.3	.4
Short-term U.S. Govt. securities	--	--	--
Other short-term claims	36.6	36.9	67.3
Long-term claims	2.9	5.7	9.8
Bonds	*	*	1.4
Mortgages	2.9	5.7	8.4
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	--	--	--
Equity in unincorporated business	--	--	--
Miscellaneous assets	1.2	4.1	4.1
Total Assets	122.0	175.2	258.2
Total Liabilities	243.6	263.4	333.2
Monetary reserves	2.4	2.7	5.1
Currency and demand deposits	--	--	--
Short-term debt	66.7	91.3	124.5
Time deposits	--	--	--
Short-term U.S. Govt. securities	63.9	88.2	119.4
Other short-term debt	2.8	3.1	5.1
Long-term debt	171.6	168.1	203.6
Bonds	157.0	146.3	171.1
Mortgages	--	1.3	1.7
-- -Claims on life insurance, pensions, and personal trusts	14.6	20.5	30.8
Miscellaneous liabilities	2.9	1.2	*
Net Worth	-121.7	-88.2	-75.0

Table IB-8

STATE AND LOCAL GOVERNMENTS
(\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	135.0	266.5	518.0
Land	23.7	60.6	110.7
Reproducible tangible assets	111.3	205.9	407.3
Structures	104.6	190.5	375.8
Producer durables	6.7	15.4	31.5
Inventories	--	--	--
Financial Assets	20.9	30.8	62.3
Monetary reserves	--	--	--
Currency and demand deposits	7.4	6.4	10.0
Short-term claims	4.0	12.3	31.4
Time deposits	1.6	4.6	19.1
Short-term U.S. Govt. securities	1.5	6.8	10.0
Other short-term claims	.9	.9	2.3
Long-term claims	9.5	12.1	20.8
Bonds	9.1	10.8	18.5
Mortgages	.4	1.3	2.3
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	--	--	--
Equity in unincorporated business	--	--	--
Miscellaneous assets	--	--	--
Total Assets	155.9	297.3	580.3
Total liabilities	32.7	74.5	132.8
Monetary reserves	--	--	--
Currency and demand deposits	--	--	--
Short-term debt	2.5	3.7	9.2
Time deposits	--	--	--
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	2.5	3.7	9.2
Long-term debt	30.2	70.8	123.7
Bonds	30.2	70.8	123.7
Mortgages	--	--	--
Claims on life insurance, pensions, and personal trusts	--	--	--
Miscellaneous liabilities	--	--	--
Net Worth	123.2	222.8	447.5

Table IB-9

 FINANCIAL INSTITUTIONS
 (\$ billions)

	<u>1952</u>	<u>1960</u>	<u>1968</u>
Tangible Assets	5.1	13.2	28.5
Land	1.6	2.3	7.2
Reproducible tangible assets	4.5	10.9	21.3
Structures	2.5	5.6	12.3
Producer durables	2.0	5.3	9.0
Inventories	--	--	--
Financial Assets	441.7	741.3	1,432.3
Monetary reserves	27.9	22.9	19.2
Currency and demand deposits	7.9	11.2	17.0
Short-term claims	135.4	206.9	405.6
Time deposits	1.2	1.3	3.2
Short-term U.S. Govt. securities	43.7	50.8	76.5
Other short-term claims	90.5	154.8	325.9
Long-term claims	227.6	382.9	702.4
Bonds	156.9	212.9	350.7
Mortgages	70.7	169.9	351.8
Claims on life insurance, pensions, and personal trusts	--	--	--
Corporate shares	37.0	102.6	253.0
Equity in unincorporated business	--	--	--
Miscellaneous assets	6.0	14.6	35.2
Total Assets	446.8	754.5	1,460.8
Total Liabilities	404.8	666.1	1,282.2
Monetary reserves	--	--	--
Currency and demand deposits	137.4	152.2	211.1
Short-term debt	118.7	218.5	491.8
Time deposits	84.9	176.8	412.1
Short-term U.S. Govt. securities	--	--	--
Other short-term debt	33.8	41.7	79.7
Long-term debt	125.5	249.4	479.8
Bonds	4.4	17.8	42.6
Mortgages	.5	1.2	2.4
Claims on life insurance, pensions, and personal trusts	120.6	230.4	434.8
Miscellaneous liabilities	23.2	46.0	99.2
Net Worth	42.0	88.4	178.6

APPENDIX II

ESTIMATES OF THE VALUE OF LAND IN THE UNITED STATES HELD BY VARIOUS SECTORS OF THE ECONOMY, ANNUALLY, 1952 TO 1968

(By Grace Milgram, Assistant Director for Research, Institute of Urban Environment, Columbia University in the City of New York.)

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G. M., MARCH 1970.

1. TRENDS, 1952 TO 1968

This paper is an attempt to develop a time series of the market value of land, exclusive of improvements, in the United States from 1952 to 1968, ascribed to major sectors of the economy, as part of a balance sheet of the nation's wealth. The final results of this effort indicate that the total land value in 1952 was estimated at \$201 billion (Table II-1). By 1968, it had increased by three and a half times in current dollars to \$726 billion, at an average annual rate of increase somewhat over 8.3 percent. Privately held land increased at the slightly lower average rate of 8.1 percent each year.

At the same time, the ownership of land shifted dramatically among institutional sectors. This is particularly notable in farmland and household holdings of land underlying 1- to 4-family residential structures, vacant lots and acreage (Table II-2). The farm holdings dropped from 34 to 23 percent, while the other three items together increased from 29 to 35 percent of the value of all American land. Non-farm corporate-held land also showed a great relative increase, rising from 11 to 15 percent, although total business land, including that held by partnerships and proprietorships, increased more slowly, going from 16 to 19 percent of the total.

Table II-1

Estimated Value of Land by Sector
 United States, 1952-1968
 (billions of dollars)

<u>Year</u> <u>End</u>	<u>All Sectors</u>	<u>Non-farm</u> <u>Households</u> ¹	<u>Non-profit</u> <u>Institutions</u>	<u>Unincorporated</u> <u>Business</u>	<u>Agriculture</u>	<u>Nonfarm</u> <u>Corporations</u>	<u>State & Local</u> <u>Governments</u>	<u>Federal</u> <u>Govern.</u>
1952	201.3	58.7	6.3	10.8	69.2	21.8	23.7	10.8
1953	218.2	64.9	7.3	12.5	68.5	26.1	28.2	10.8
1954	233.9	72.7	7.9	12.6	71.4	27.5	30.2	11.5
1955	265.0	84.9	9.1	14.0	75.6	33.2	35.9	12.2
1956	297.8	97.3	10.3	15.9	81.9	38.4	40.6	13.4
1957	329.2	108.9	11.2	17.5	86.8	43.8	46.5	14.4
1958	362.4	121.9	12.5	18.7	94.1	48.5	51.4	15.2
1959	398.8	140.0	13.9	17.8	99.3	54.9	56.4	16.6
1960	420.4	148.6	14.9	18.2	101.6	58.1	60.6	18.4
1961	455.8	161.9	16.4	19.4	107.2	64.0	66.3	20.6
1962	454.9	172.9	17.8	21.5	112.8	69.6	71.9	22.1
1963	524.3	184.8	19.4	21.9	120.2	76.1	78.0	23.9
1964	563.1	198.0	21.1	23.1	128.0	82.7	84.6	25.5
1965	603.4	212.7	22.9	23.7	138.1	88.7	90.1	27.3
1966	645.9	224.5	24.8	26.2	146.6	96.5	97.9	29.5
1967	687.0	237.7	26.9	27.6	155.7	103.3	104.3	31.5
1968	726.5	250.9	28.6	29.0	163.7	110.0	110.7	33.5

¹ Including land under 1 - 4 family structures, vacant lots, and acreage.

Table II-2

Percentage Distribution of Land Value Among Sectors,
United States, 1952, 1960 and 1968

<u>Sector</u>	<u>1952</u>	<u>1960</u>	<u>1968</u>
All Sectors	100.0	100.0	100.0
Nonfarm Households	29.2	35.4	34.6
Institutions	3.1	3.5	3.9
Unincorporated Business	5.4	4.3	4.0
Agriculture	34.3	24.2	22.5
Nonfarm Corporations	10.8	13.8	15.1
State and Local Governments	11.8	14.4	15.2
Federal Government	5.4	4.4	4.6

The major part of these shifts occurred in the earlier years from 1952 to 1960, rather than from 1960 to 1968. Indeed, the proportion of total value held by households decreased slightly in the second half of the period, because the increasing proportion of value held in land underlying residences and in vacant lots was not great enough to counterbalance the absolute drop in the value of acreage. It is, of course, no accident that the drop in proportion held as farmland is close to the increased proportion in residential and business land. The conversion of farmland to urban use, although not necessarily a direct and immediate transformation in the case of any individual piece of land withdrawn from agriculture, has been a pervasive process throughout the country during the past two decades. State and local governmental holdings also rose sharply, from 12 to 15 percent of all land, while the federal share dropped by a percentage point to 4 percent in the mid-period, but recovered slightly by the end of 1968.

2. COMPARISON WITH PREVIOUS STUDIES

These estimates are based upon a variety of sources of data and assumptions. One would expect that the importance of land, which represents roughly a fifth of the wealth of the country, would have resulted in a large body of carefully derived information, but this is not the case. Instead, the data available are fragmentary and unsatisfactory in quality.

The studies of land prices that have been made in the past fall into three general classes; empirical investigations; estimates based on a perpetual inventory of national wealth; and estimates derived from real property tax assessment data. The empirical investigations are typically concerned with small areas, and within these, with land in particular uses. Many are cross-sectional, reporting differences in value of land in various uses or locations at a particular time, rather than over a period of time. They frequently report price changes of assessment parcels of land, for sites of buildings, or for other shifting size classifications without indicating any means of transforming the values into a price for a constant amount of land, whether square foot or acre. If they do present data on price changes for a unit size, the geographical or land use restrictions may be too narrow to permit expansion of the findings to broader regions of either the metropolitan area or the nation. Any effort to estimate national land values solely on the basis of empirical data relating to market transactions would require a massive new research effort, not the compilation or further analysis of an already existing body of information.

Because of these deficiencies in past efforts to collect direct valuations, the land components of national wealth have been estimated primarily by means of the perpetual inventory method, developed largely by Raymond W. Goldsmith and carried forward by John W. Kendrick.¹ Here the value of real property is established for a benchmark year, then the value of new construction is added annually, and estimated depreciation of buildings and withdrawals from the existing stock are subtracted. The land value is then estimated

¹ Raymond W. Goldsmith, *The National Wealth of the United States in the Postwar Period*, a study of the National Bureau of Economic Research (Princeton: Princeton University Press, 1962). The estimates contained in this work were carried forward to 1966 by John W. Kendrick, reported in "The Wealth of the United States," *Finance*, January 1967, pp. 10ff.

as a ratio of net structure value. Obviously, these estimates are only as valid as the construction estimates and the depreciation and land-structure ratios, no one of which is without some question.

An alternative source of estimate lies in the assessment data collected by American cities for the real property tax, the major source of municipal revenues. Since 1956 the ratio of assessed values to market value has been estimated at five-year intervals by the Bureau of the Census on the basis of a sample survey of actual sales during a six-month period. Allan Manvel has used the Census of Governments data to prepare an estimate of land values, making assumptions as to the relation of the assessed value of land to its true market value, as compared with the census-derived estimate of the ratio of the assessed value to the market value of the total property, and making further assumptions as to the proportion of market value of real property ascribable to the land component.² Manuel Gottlieb has subjected this study to a critical review, pointing out the statistically inadequate basis for estimates of national average rates which were used in some of the categories.³ Manvel has made it clear that he himself is aware of the tentative nature of his estimates, but Gottlieb's work serves to point out once again the absence of solid information, and the unfortunate necessity of drawing general conclusions from incomplete data if any estimates at all are to be derived.

It is encouraging that some comparability exists between estimates derived by the perpetual inventory method and those based on the Census of Governments data. It is difficult to make a direct comparison, since the types of land included are not precisely the same. A discussion of the sources, and their differences and discrepancies, is included in *U.S. Land Prices—Directions and Dynamics*.⁴ Table II-3 of this study, taken from that work, summarizes the conclusions and is presented here to indicate the order of magnitude involved.

In the estimates which follow, major reliance will be placed on a third source of data, reports of the book value, or acquisition cost, of land. That held by corporations is reported to the Internal Revenue Service,⁵ and "cost" of federal land is reported by the General Service Administration.⁶ The Census of Governments issues report on state and local governmental finances, which show capital outlay for "land and existing structures."⁷ Daniel Creamer made use of the IRS data to estimate the value of land held by manufacturing firms. Creamer applied the ratio between book value of land and depreciated value of structures to an estimate of annual investment in real property developed by Patrick Huntley.⁸ This produced an annual estimate of additional investment in land, which he added to the book value of the stock, adjusted by an inflation factor to obtain an annual estimate of the value of land holdings.

² Allan D. Manvel, "Trends in the Value of Real Estate and Land, 1956 to 1966," in *Three Land Research Studies* Research Report No. 12, prepared for the National Commission on Urban Problems (Washington, D.C.: U.S. Government Printing Office, 1968).

³ Manuel Gottlieb, "Did USA Land Values Double between 1956-1966—A Critique of the Douglas Report" (Milwaukee, University of Wisconsin Economics Department, 1969), mimeographed.

⁴ Grace Milgram, *U.S. Land Prices—Directions and Dynamics*, Research Report No. 13, prepared for the National Commission on Urban Problems (Washington, D.C.: U.S. Government Printing Office, 1968).

⁵ *Statistics of Income*, Treasury Department, Bureau of Internal Revenue, annual series.

⁶ *Inventory Report on Real Property Leased to the United States Throughout the World*, Washington: General Services Administration, unpublished annually.

⁷ *Government Finances*, Department of Commerce, Bureau of the Census, annual series.

⁸ Dr. Creamer kindly made his and Patrick Huntley's unpublished estimates available for this study.

Table II-3

Comparative Estimates of Total Private, Non-Institutional Land Value and Average Annual Percent Change, United States, Selected Years, 1922 to 1966

A. Absolute Values in Current Prices (billions of dollars)						
<u>Estimate</u>	<u>1922</u>	<u>1930</u>	<u>1938</u>	<u>1945</u>	<u>1956</u>	<u>1966</u>
Keiper, <u>et al.</u> ¹	95	112	94	-	244	-
Goldsmith ² - Kendrick ³	-	-	-	121 ^a	207 (228) ^b	354
Manvel ⁴	-	-	-	-	282 ^b	549
B. Average Annual Percent Change						
	<u>1922- 1930</u>	<u>1930- 1938</u>	<u>1945- 1956</u>	<u>1938- 1956</u>	<u>1956- 1966</u>	
Keiper, <u>et al.</u>	2.1	-2.1	-	5.4	-	
Goldsmith- Kendrick	-	-	5.0 (5.9)	-	5.5 (4.5)	
Manvel	-	-	-	-	6.9 (6.0) ^c	

Notes: a. Taken from Goldsmith, op. cit., Table II, p. 55, Col. 4.

b. The categories of land included in the three estimates vary slightly, primarily in the exclusion or inclusion of land owned by public utilities. Keiper excluded public utilities. Goldsmith himself reports that for land included in Keiper's estimate, his figure would approximate \$207 billion, whereas Manvel estimates comparable land as reported by Goldsmith as valued at \$228 billion. He has adjusted the figures estimated from Census of Governments reports to include publicly held and state-assessed properties based on constant land-value proportion. A similar adjustment has been made by the authors of this report in the 1966 figure.

c. These percentages are based on the unadjusted estimates made by Manvel. The lower estimate (in the parenthesis) is the percentage change if it is assumed that there is no increase in the proportion of land in all real property values. The higher figure, preferred by Manvel, assumes an increasing proportion of value ascribable to land.

Sources: 1. Joseph S. Keiper, Ernest Kurnow, Clifford D. Clark, and Harvey H. Siegel, Theory and Measurement of Rent (Philadelphia: Chilton, 1961), Chapter II. 2. Raymond W. Goldsmith, The National Wealth of the United States; the Postwar World (Princeton: Princeton University Press, 1962), Table II, pp. 86-87. 3. John W. Kendrick, "The Wealth of the United States," Finance, January 1967, p. 10 ff. 4. Allen D. Manvel, Trends in the Value of Real Estate and Land, 1956 to 1966, Research Report No. 12 (National Commission on Urban Problems, Washington, D.C., 1968), p. 16.

In the current study, use of the ratio of land to structure value is avoided for the most part, and the value of the stock of land is raised by price indexes developed directly for land, rather than by a general price index. Some of the assumptions underlying the computations are heroic, and averages are drawn from small, and possibly unrepresentative, samples. Yet none of the crucial assumptions duplicates any of those necessary in making estimates by means of a perpetual inventory or of assessment data, both of which employ an estimate of the land to structure-value ratio. Hence, despite its deficiencies, an independent estimate of total land values is produced. The only categories for which this is not true are farmland, vacant lots, and household ownership of residential land and acreage. For the first, the estimates of the Department of Agriculture were adopted; for lots and acreage, those of Manvel, drawn from the Census of Governments, were used: residential land value is based on a land-structure ratio applied to a perpetual inventory estimate of the structure value. If this estimate approaches the others, it can only serve to increase our confidence in the essential reliability of the figures.

Because of the time periods to which other studies apply, the most appropriate comparisons for the estimates made here are those prepared by Allan Manvel and by Goldsmith and Kendrick for 1956 and 1966. These estimates, adjusted to cover all privately held land, are given in Table II-4. The current estimate falls between those of Goldsmith and Kendrick, which are low, and those of Manvel, which are considerably higher. Since our study has, in essence, accepted Goldsmith's 1952 estimates as a base from which to begin, it is not surprising that our result is closer to Goldsmith's figure in 1956. The rate of increase, however, is higher than that of the other series, so that it is much closer to Manvel's estimate by 1966. The range in these estimates is large, with the highest in 1966 over 50 percent greater than the lowest. Yet, in view of the data gaps which have been spanned by simplifying assumptions in each of these estimates, it is indeed gratifying that they are as close as they are.

Table II-4

Comparative Estimates of Total Private, Non-Institutional
Land Value and Average Annual Percent Change
United States, 1956 to 1966

<u>Estimate</u>	<u>1956</u> (billions of dollars)	<u>1966</u>	<u>Annual Rate of Change</u> (percent)
Goldsmith- Kendrick	207	354	5.5
Manvel	282	549	6.9
Milgram	234	494	7.8

Source: Tables II-1 and II-3

3. METHODS OF ESTIMATION

Although the general approach in the derivation of this estimate was the use of reported book value of holdings, book value data are not available for all sectors. Thus, it was necessary to employ different bases of estimation to obtain the desired aggregates. The methods used for each sector are described in the following sections of this report.

a. Book Values

In reporting to the Internal Revenue Service, businesses divide their assets among those that are depreciable, depletable, and non-depreciable, in order to take advantage of the tax benefits to be gained from depreciating capital assets. For corporations, complete data are available from their balance sheets. Regulations applicable to partnerships and proprietorships do not require the same information to be filed, and data are uneven. In the case of vacant land, the reported book value is the price in the year of acquisition, carried forward without change from year to year. In the case of newly acquired property which consists of both land and structure, the acquisition price is normally divided between the two types of assets in accordance with the ratio of land and structure in the assessed value if the site is within a local taxing jurisdiction which makes a separate determination, or through some other appraisal method. Once again, this figure is carried forward as the book value of the land. No adjustments are made for changes in its market value so long as the land remains in the same ownership.

Ideally, to determine the market value at any given time from the book value, we should have a land price index by which to adjust the value of the stock of land continuing in the same ownership; a distribution of book values by date of acquisition or a benchmark estimate of total market value at a given year; and a record of the former and newly adjusted book-value of land transacted during the year so that any sold could be subtracted from the stock before the stock's value has been changed by application of the price index, and added at market value after the stock adjustment. In fact, we have none of these figures, and a large part of this work, therefore, consists of deriving estimates of these items.

b. Land Price Indexes

There are a number of data sources from which a rudimentary index can be derived for different types of land, at least to 1966 (Table II-5). Chief among these is the series on value of farmland prepared by the Department of Agriculture.⁹ It is the only published series in which values are reported on a per acre basis, thus lending itself directly to the preparation of an index for farmland.

Unfortunately, the series refers only to land in farm use, excluding that which has been converted from farm to non-agricultural use during the year. The land undergoing urbanization is undoubtedly that with the most rapidly increasing price. In fact, farmland in non-metropolitan counties, although at a lower price, shows a greater increase than that in metropolitan counties, primarily because of the greater diversion of land to urban use in the latter.¹⁰ Hence, an index based on land continuing in farm use will tend to underestimate changes in national land prices, though the degree of underestimation cannot be determined. The estimated farm value, however, does include some effect of increased demand resulting from urban expansion and speculative activities preceding such expansion, not simply an increased value arising from agricultural activities. The farmland index, consequently, has been taken as representative of all non-metropolitan land, whether in farm or small city use.

⁹ For 1950 to 1967, a summary table is presented in *Farm Real Estate Market Developments*, Economic Research Service, U.S. Department of Agriculture, CD-70, April 1968, Table 21, p. 27. For later years the estimate is based on unpublished data from FRS.

¹⁰ Department of Agriculture, Economic Research Service, unpublished memorandum by William H. Scofield, December 1967.

Table II-5

Land Price Indexes for Non-Metropolitan, Metropolitan Ring, and
Central City Areas, United States, 1952-1966
(1952=100)

<u>Year</u>	<u>Non-metropolitan</u> (1)	<u>Metropolitan</u> <u>Ring of SMSA</u> (2)	<u>Central City</u> (3)
1952	100	100	100
1953	99	135	117
1954	104	143	123
1955	111	180	145
1956	121	200	160
1957	129	230	180
1958	141	250	195
1959	149	270	209
1960	153	290	220
1961	162	310	236
1962	170	325	250
1963	182	345	265
1964	195	360	280
1965	211	370	290
1966	225	390	309

Sources: Col. 1 computed from data of Col. 5, Table 21, p. 27,
Farm Real Estate Market Developments, CD-70, April, 1968,
Economic Research Service, Department of Agriculture;
Col. 2, Table II-6; Col. 3, see text.

Since 1956, there has also been available an estimate of market value of the public domain managed by the Bureau of Land Management of the Department of the Interior, which gives, in addition, the acreage under its jurisdiction.¹¹ This estimate is based on appraisals of the value of similar land in the private sector, which is subject to normal market transactions. The Bureau has translated its estimates into a price index, which can be considered appropriate for the type of land in the public domain; that is, land largely devoted to grazing and forests. Although the level of prices is much lower than that of farmland, the rate of increase is slightly greater, supporting the view that the farm index understates rising trends. The Bureau's index has been used in conjunction with others in estimating the value of federal land.

Three sources of price data are available for urbanizing land (Table II-6). One is the FHA series of site prices for new construction financed with FHA-insured mortgages.¹² This is located largely in suburban areas. These data, of course, incorporate not only changes in raw land prices, but also increases in costs of land preparation and changes in the size of sites.

¹¹ Unpublished memorandum supplied by Jean Dubois, Bureau of Land Management, Department of Interior.

¹² Reported in annual issues of *Statistical Yearbook*, U.S. Department of Housing and Urban Development. Prior to 1966, the series was issued as part of the *Annual Report*, Federal Housing and Home Finance Agency.

Table II-6

Components of Metropolitan Ring Land Price Index
(1952=100)

<u>Year</u>	<u>Adjusted FHA Site Prices</u> (1)	<u>Los Angeles Residential Land</u> (2)	<u>Northeast Philadelphia, All Land</u> (3)	<u>Estimated Metropolitan Ring</u> (4)
1952	100	100	100	100
1953	105	124	177	135
1954	110	146	173	143
1955	118	172	250	180
1956	129	202	218	200
1957	137	246	304	230
1958	144	261	355	250
1959	151	280	380	270
1960	155	310	410	290
1961	159	330	440	310
1962	165	350	470	325
1963	176	360	500	345
1964	182	370	520	360
1965	196	380	540	370
1966	204	395	565	390
1967		410	575	410*
1968		420	585	430*

Col. 1 adjusted for increase in costs of site preparation and size. See text.

Col. 2 curve smoothed graphically and extended from data in Frank G. Mittelbach, Patterns of Land Utilization and Costs: A Study of Los Angeles, Table VI-4, p. VI-9, (unpublished manuscript).

Col. 3 curve smoothed graphically and extended from data in Grace Milgram, The City Expands (Washington, D. C. : Government Printing Office, 1968), Table 28, p. 86.

Column 4 is the average of columns 1-3

*Extrapolated

Maisel has estimated that approximately half of the increase from 1950 to 1962 in the San Francisco area arose from increases in land prices and the remaining half from the other two factors.¹³ Although San Francisco land prices are not typical of those of the nation as a whole, the discrepancy in factors affecting these changes in price would almost certainly be less than the level of prices. In the absence of similar studies in other places, the annual nationwide average increase in site value was reduced by fifty percent, and the resulting series transformed into an index.

There are also two studies available which report changes in per-acre prices of land over time within a single developing suburban area, one for Los Angeles and one for Philadelphia.¹⁴ These series were smoothed by graphic methods and the curves projected for the years after conclusion of each study. No other studies could be found in which data were reported in a form permitting their incorporation into a time series. The three series reported above were combined through an unweighted average, and the base converted to 1953 equal to 100. This index was used to compute the price change in land in the metropolitan ring areas.

No aggregate land price data could be found for central cities, although scattered information which reveals a variety of movements is available for various cities. Studies of urban renewal sites showed an overall increase, although the degree varied among cities.¹⁵ Con-

¹³ Sherman J. Maisel, "Background Information on Costs of Land for Single-Family Housing," in *Housing in California*, Appendix to Report, Governor's Advisory Commission on Housing Problems, San Francisco, 1963, Table 4, p. 226.

¹⁴ Frank G. Mittelbach, *Patterns of Land Utilization and Costs: A Study of Los Angeles*, University of California, Los Angeles, unpublished manuscript; Grace Milgram, *The City Expands* (Washington, D.C.: Government Printing Office, 1968).

¹⁵ For example, see Neil N. Gold and Paul Davidoff, "The Supply and Availability of Land for Housing for Low and Moderate-Income Families," in *Technical Studies*, Report of the President's Committee on Urban Housing (Washington, D.C.: Government Printing Office, 1969), Vol. II, Table 76, p. 373.

sultation with a number of realtors and other experts familiar with city development indicated a general belief that, in toto, city values have risen, but not so rapidly as those in suburban areas. An index for metropolitan central city land was constructed, falling halfway between the farmland and suburban indexes already developed. This is imprecise as to level, but not as to position within the major land submarkets.

c. The Stock of Land

It would have been preferable to have an independently derived initial valuation of land at some base period. It was beyond the scope of this study, however, to attempt either a de novo construct of a land value inventory for the 1950's, or to carry back the price indexes for a long enough period so that the value of the beginning stock of land would prove unimportant when considered in relation to newly purchased land over the whole period. As a consequence, Goldsmith's valuation was employed as a starting point in the estimates for all sectors except agriculture and individual households (Table II-7).¹⁶ For smaller sectors than those reported in Goldsmith's table, proportions were taken in the same ratio as the book value of the subsector to the book value of the larger sector which reported.

For corporations and local and state governments, the 1952 estimates were used as the base year. For federal government lands, the series of acquisitions begins in 1956, so that year was taken as the base and the years from 1952 to 1955 were extrapolated from subsequent trends. Book values for the land holdings of unincorporated businesses, institutions, and households are not available, so other methods not requiring an independent figure for a base year were used to estimate their value. In general, book values of sectors in the base year were approximately one-third of the amount reported in 1968.

¹⁶ Goldsmith, *op. cit.*, Table A-41, p. 188.

Table II-7

Estimated Value of Land Held by Nonfarm Corporations
and Governments, United States, 1952
(millions of dollars)

Corporate Holdings

Total	21,753
Finance	10,080
Manufacturing	4,926
Retail and Wholesale	2,751
Services	1,701
Public Utilities	872
Mining	297
Contract Construction	235
Other	891
Federal Government	10,797
State and Local Governments	23,700

It is obvious that any addition to the stock between successive years is brought in at current market value. These annual differences were computed and assumed to be the value of land at current market price. There is almost certainly some land included in what we call the "stock," which, in fact, was transacted and, hence, already raised to market value. Application of a price index to this part of the stock would thus raise the value of that transacted land twice. There are no data by which to estimate the extent of this overstatement. Mortgages on 1- to 4-family unit properties insured by FHA had a median duration of approximately ten years,¹⁷ indicating a transaction or prepayment rate of approximately 5 percent each year. In early years, almost all of these are likely to be sales rather than prepayment of mortgage by the owner. Residential sales, however, are influenced by the great mobility of the American population. There is no reason to suppose that other sectors of the economy transact properties at so high a rate. In a rapidly developing section of Philadelphia subject to speculative forces, the maximum proportion of vacant land acreage transacted was 11 percent, and this steadily decreased over the years until it reached 3 percent of available vacant land.¹⁸ Thus, turnover rates of 4 to 5 percent might be considered normal in number of properties, though possibly not in value of properties. The proportion of real property transacted each year—that is, structure and land—is almost certainly lower than this, particularly in view of the increasing tendency to sell companies through transfers of stock rather than by transfer of real property. Whatever its extent, this overestimate in the stock of land to be increased by the index offsets to some degree the underestimate which may exist because of the downward bias in the non-metropolitan land index component.

¹⁷ Department of Housing and Urban Development, *Statistical Yearbook, 1966*, FHA Table 72, p. 142.

¹⁸ Grace Milgram, *The City Expands*, *op. cit.*, Table 19, p. 69.

d. Estimate of Value by Sector

Since we have not one index, but three, the land owned by any sector must be divided among the three types before its value is raised by the index. This was done differently for each sector.

(1) *Corporations*.—For corporations, there is of course no inventory of location of types of establishment by size of parcels they occupy, which would permit a direct allocation. Number of establishments and number of employees are reported for the United States, for metropolitan areas in total, and for individual SMSA's. These are also reported for counties, so that it is possible to distinguish between central counties and ring counties in SMSA's. The establishments in central cities have more employees on the average, but presumably are more intensive in their use of land per employee—certainly in area, although not necessarily in dollar value. There is no information to answer the question of whether companies which have located outside of central cities in order to get more space are satisfied merely to achieve additional space, or whether they also want to reduce total land expenditure. On the other hand, each establishment, no matter how small, uses some land. As a result, the sheer number of establishments has some effect. Consequently, land values were divided among metropolitan and non-metropolitan areas in accordance with a ratio which took account of both the proportion of employees and of reporting units in their respective areas, using the national totals for the economic sector (Table II-8). One estimate was made based on data for 1963, midway in the time period investigated here, and kept constant for 1952 and subsequent years. Within metropolitan areas, a similar ratio was determined by which to divide the 1952 stock. It was based on the average values of employment and number of establishments in central and ring counties in twelve SMSA's in 1951 (Table II-9).

Table II-9

Percentage of Employees and Establishments in Central Counties,
by Subsector, Twelve Selected SMSA's, 1951

Metropolitan Area	Subsector							
	Services		Finance		Public Utilities		Construction	
	Empl.	Estab.	Empl.	Estab.	Empl.	Estab.	Empl.	Estab.
Atlanta	96	91	93	98	98	50	90	86
Boston	60	48	76	56	62	45	43	29
Chicago	93	89	97	97	96	86	89	81
Cleveland	98	97	95	96	97	88	96	93
Dayton	83	85	74	63	88	66	86	78
Detroit	91	88	92	89	90	88	85	81
Indianapolis	91	88	92	86	95	60	92	79
New Orleans	91	90	97	96	87	80	93	90
New York	92	88	96	94	91	87	79	66
St. Louis	78	68	83	71	76	60	61	51
San Francisco	88	83	91	87	89	77	75	68
Washington	84	80	81	80	73	57	58	48
Average	87	83	83	84	88	70	79	70
Weighted Average	84	80	88	88	82	66	73	64

Since 1952, there has been, of course, a trend toward movement of industrial and commercial establishments away from central cities. Dorothy K. Newman has reported on value of new construction in central cities and ring areas for selected industrial groups.¹⁹ For land not carried in the stock but newly transacted from year to year, in sectors on which she reported, the deviation between central city and ring was made on the basis of her report (Table II-10). For sectors not given, the proportions used for 1952 were adjusted in favor of suburban values to a small degree.

Values were estimated separately for each of the seven most important industries, by application of the appropriate index to each type of land, in accordance with the procedure described above (Table II-11). The total values for these industries were then expanded by the proportion their book value bears to total book value of all corporations, minus the industry-class agricultural, forestry, and fishing, to give a total estimate of market value of holdings of nonfarm corporations (Table II-12). The agricultural category was excluded because corporate farm holdings are included by the Department of Agriculture in its estimates of the value of farmland. A very slight undervaluation results from the omission of corporate forestry and fishing land. The IRS reports were available only through 1966 at the time this report was prepared. Estimates for 1967 and 1968 are straight-line extrapolations of the trend of previous years.

¹⁹ Dorothy K. Newman, "The Decentralization of Jobs," *Monthly Labor Review*, 90 (May 1967), p. 7-13.

Table II-11

Estimated Value of Land Held by Corporations in Seven Major Industry Groups
 United States, 1952-66
 (millions of dollars)

<u>Year</u>	<u>Total</u>	<u>Manufacturing</u>	<u>Retail & Wholesale</u>		<u>Mining</u>	<u>Services</u>	<u>Public Utilities</u>	<u>Contract Construction</u>	<u>Finance</u>
			<u>Trade</u>						
1952	20,862	4,926	2,751		297	1,701	872	235	10,080
1953	24,774	5,762	3,200		308	2,031	983	289	12,201
1954	26,322	6,069	3,421		344	2,121	981	317	13,079
1955	31,556	7,474	4,122		374	2,564	1,109	390	15,523
1956	36,617	9,042	4,630		393	2,870	1,254	448	17,980
1957	41,698	10,199	5,185		431	3,319	1,443	528	20,593
1958	46,870	11,378	5,855		495	3,639	1,615	615	23,274
1959	52,885	12,345	6,327		522	4,046	1,741	667	26,034
1960	56,273	13,237	6,806		548	4,269	2,015	763	28,635
1961	62,074	14,556	7,125		636	4,743	2,275	989	31,751
1962	67,477*	15,348	7,954		690	5,138	2,444	1,119	34,784
1963	73,759	16,721	8,704		760	5,587	2,629	1,264	38,094
1964	80,018	18,125	9,485		848	6,093	2,841	1,447	41,180
1965	86,194	19,757	10,211		919	6,517	3,037	1,664	44,090
1966	93,775	21,748	11,155		1,012	7,229	3,308	1,888	47,515

* Interpolated.

Table II-12

Estimated Market Value of Land Held by Nonfarm Corporations
 United States, 1952-66
 (millions of dollars)

<u>Year</u>	<u>Total Value of Stock</u>	<u>Seven Major Industry Groups</u>			<u>Ratio Book Value Seven Industries to Total</u>
		<u>Total Stock</u>	<u>Result of Price Rise</u>	<u>Net Addition</u>	
1952	21,754	20,862			95.9
1953	26,054	24,774	24,297	477	95.2
1954	27,533	26,322	25,878	444	95.6
1955	33,217	31,556	30,973	583	95.0
1956	38,383	36,617	35,335	1,282	95.4
1957	43,755	41,698	40,928	770	95.3
1958	48,520	46,870	45,190	1,680	96.6
1959	54,917	52,885	51,331	1,554	96.3
1960	58,133	56,273	54,547	1,726	96.8
1961	63,994	62,074	59,887	2,187	97.0
1962	69,636	67,477*	NA	NA	96.9
1963	76,119	73,759	69,839	3,920	96.8
1964	82,664	80,018	77,867	2,151	96.8
1965	88,678	86,194	83,369	2,825	97.2
1966	96,477	93,775	91,117	2,658	97.2

* Interpolated.

It should be noted that the differences in value resulting from the allocation process are marginal. Thus, for corporations, if all land is assumed to be covered by the non-metropolitan price index, the 1966 valuation differs by \$19.2 billions, or 18 percent of the valuation obtained with land allocated among types. Differences resulting from relatively minor variations in allocation among the three types of land would be correspondingly less. Differences would be much greater, of course, if values resulting from an assumption of total non-metropolitan location were compared with those obtained by an assumption of total location in the metropolitan ring, but the latter assumption is completely unreasonable and, therefore, the degree of difference has not been tested.

(2) *Partnerships and proprietorships*.—Although the Internal Revenue Service has reports for some years for the book value of land held by partnerships and proprietorships, these are incomplete both as to industries and years. It can be assumed, however, that in any industry, rentals bear some relatively constant relation to gross receipts, and that rentals, in turn, are a reflection of the value of the land, regardless of the institutional form of the business.

The gross receipts for each type of business are reported by industry. Following the line of reasoning described above, the ratio of gross receipts of partnerships and of proprietorships to corporations was calculated (Table II-13) and applied to the previously estimated land holdings of corporations to derive an estimate of the value of land held by the other types of businesses (Table II-14). These were totaled and expanded by the same ratios as those used to expand the corporate sector, thus producing the estimates of total value of land held by unincorporated businesses.

Table II-13

Gross Receipts of Partnerships and Proprietorships as a Percent of Corporate Receipts, by Industry
United States, 1952-1966

Year	Industry and Business Form													
	Manufacturing		Retail & Wholesale Trade		Mining		Services		Utilities		Contract Construction		Finance	
	Part.	Prop.	Part.	Prop.	Part.	Prop.	Part.	Prop.	Part.	Prop.	Part.	Prop.	Part.	Prop.
1952	3.98	2.92	33.90	59.97	18.45	8.87	67.26	162.06	1.56*	6.39*	1.56*	6.39*	15.67	5.09
1953	3.70	2.62	31.18	52.17	17.24	9.93	63.86	156.02	1.56*	6.39*	1.56*	6.39*	15.93	15.73
1954	3.42	2.32	28.46	44.37	16.03	10.08	60.46	149.98	1.56*	6.39*	1.56*	6.39*	16.19	16.37
1955	3.13	2.02	25.74	36.58	14.82	10.19	57.06	143.94	1.56*	6.39*	1.56*	6.39*	16.45	17.02
1956	2.85	1.98	33.02	38.28	13.61	10.49	53.67	131.18	1.56*	6.39*	1.56*	6.39*	16.72	16.62
1957	2.57	1.95	20.29	40.19	12.40	10.80	50.27	118.42	1.56*	6.39*	1.56*	6.39*	16.98	16.35
1958	2.47	1.95	19.01	37.72	10.74	13.67	50.32	116.74	1.92	7.21	1.92	7.21	13.56	18.48
1959	2.16	1.88	16.47	36.54	9.67	10.15	43.16	112.06	1.82	6.67	1.82	6.67	11.69	12.22
1960	2.02	1.90	14.70	33.19	9.68	14.42	41.98	105.20	1.56	6.80	1.56	6.80	10.21	13.41
1961	1.85	1.78	14.03	32.14	8.48	10.41	40.65	99.15	1.76	6.18	1.76	6.18	11.34	12.21
1962	1.66	1.68	12.48	30.36	7.63	8.26	39.01	98.01	1.40	5.97	1.40	5.97	12.02	11.17
1963	1.46	1.52	11.66	29.38	7.86	8.00	37.62	94.09	1.38	5.04	1.38	6.04	12.07	15.93
1964	1.45	1.48	10.84	28.40	8.09	7.75	36.22	90.16	1.36	6.12	1.36	6.12	12.12	10.68
1965	1.11	1.44	9.60	27.13	7.28	7.92	34.04	81.51	1.52	6.39	1.52	6.39	11.15	11.44
1966	1.09	1.28	9.28	26.09	6.35	8.04	33.17	77.68	1.31	6.11	1.31	6.11	12.61	12.20

* Data unavailable, percentage extrapolated.

SOURCE: Calculated from "Statistics of Income," U.S. Bureau of Internal Revenue, Tax Returns of Corporations, Partnerships, and Sole Proprietorships.

Table II-14

Estimated Value of Land Held by Partnerships and Proprietorships in Seven Major Industry Groups
 United States, 1952-1966
 (millions of dollars)

<u>Year</u>	<u>Total</u>	<u>Manufacturing</u>	<u>Retail & Wholesale Sales</u>	<u>Mining</u>	<u>Services</u>	<u>Public Utilities</u>	<u>Contract Construction</u>	<u>Finance</u>
1952	10,471	340	2,643	81	3,901	70	336	3,100
1953	11,914	366	2,679	84	4,466	78	379	3,862
1954	12,128	368	2,492	90	4,463	78	378	4,259
1955	13,347	366	2,569	93	4,516	88	419	5,296
1956	15,212	437	2,839	95	5,305	100	431	6,005
1957	16,722	461	3,136	101	5,598	115	448	6,863
1958	18,064	503	3,322	101	6,079	147	456	7,456
1959	17,102	499	3,354	101	6,280	148	495	6,225
1960	17,634	520	3,259	132	6,284	168	507	6,764
1961	18,817	529	3,290	120	6,631	181	589	7,477
1962	19,936	513	3,407	110	7,040	180	620	8,066
1963	21,162	498	3,572	121	7,359	195	658	8,759
1964	22,397	532	3,722	135	7,700	213	705	9,390
1965	23,087	505	3,751	140	7,703	240	786	9,962
1966	25,422	515	3,945	145	8,013	226	785	11,793

Source: Same as Table II-13.

(3) *Federal government.*—The process by which federally owned land was evaluated was similar in concept to that used for corporations, but differed in execution because of the difference in available data. Since 1956, the General Services Administration has issued an annual inventory of real property owned by the United States government, classified urban or rural, as well as by agency, state, predominant usage, and other categories.²⁰ Acreage of land is given, and “cost” of land and buildings separately. In the case of property held for some time, cost is the actual acquisition cost to the government, including zero cost for public domain land or gifts. For example, the “cost” of the land obtained in the Louisiana Purchase, or through Seward’s Folly in Alaska, has not been adjusted to current values. Current acquisitions, however, are supposed to be reported at actual cost or, if acquired through donation or means other than purchase, at the estimated fair price had the parcel been purchased.²¹ As with corporations, the difference in cost between subsequent years produces a net figure on the value of newly acquired ground.

Although each year the acreage is classified urban or rural, the cost is given only as a total and, of course, it cannot be divided in the same ratio as the acreage. To aid in this allocation, use was made of the values of farmland and of the public domain in the jurisdiction of the Bureau of Land Management. After an examination of the governmental agencies which held the land and the predominant usage within each agency, it was decided that the rural land held by the government could reasonably be valued by a formula which ascribed one-tenth to the farmland value and nine-tenths to the type of land held in the public domain. An estimated average acreage price for rural land held by the government was thus produced (Table II-15). Multiplication of the rural acreage for 1956 by this figure gave an estimated total value of government-held rural land in 1956, which was then subtracted from Goldsmith’s governmental estimate of 1956 to produce a benchmark figure for urban land for that year. For each year thereafter, the difference in number of rural acres was multiplied by the average price of rural land and the result subtracted from the difference in cost to obtain the additional urban values (Table II-16). The results for each year were added to the appropriate stock, after the value of the urban stock had been raised by the urban price index and that of the rural stock raised by the non-metropolitan index, as described in the section dealing with corporate land. In actual practice, since the value of the public domain is directly reported, its acreage was subtracted from rural acreage at the start of this process, and its value added to the total for each year after all the other calculations were completed. A slight overestimate results from the failure to exclude federal land leased to farmers and grazers, whose value is also included in the Department of Agriculture estimates. The current value of this land is estimated at \$3.8 million, and thus would have no appreciable effect on the figures reported here.²² The values for 1952 through 1955 were estimated from trends of the non-metropolitan price index, and those for 1967 and 1968 were estimated by extrapolation of the trend shown in the immediately preceding years.

²⁰ General Services Administration, *Inventory Report on Real Property Owned by the United States throughout the World*. Annual publication, beginning 1956.

²¹ *Ibid.*, June, 1968, p. 3.

²² Letter to author from William H. Scofield, Economic Research Service, Department of Agriculture, May 14, 1970.

Table II-J5

Estimated Average Price Per Acre of Rural Federal Land,
United States, 1956-1967

<u>Year</u>	<u>Public Domain</u> (1)	<u>Farmland</u> (2)	<u>Rural Public Land</u> (3)
1956	\$ 5.34	\$ 66.14	\$11.42
1957	4.89	72.13	10.89
1958	4.95	76.98	12.15
1959	5.07	84.03	12.97
1960	6.59	89.05	14.84
1961	8.90	91.20	17.13
1962	9.88	96.47	18.54
1963	10.68	101.74	19.79
1964	11.30	108.67	21.04
1965	12.68	116.26	23.04
1966	14.06	125.85	25.24
1967	15.35	134.20	27.24

- Source:**
- Col. 1 Computed from price index supplied by Jean Dubois, Bureau of Land Management, Department of Interior.
 - Col. 2 Farm Real Estate Market Developments, Economic Research Service, Digest of Agriculture, Table 21, p. 27.
 - Col. 3 See text for method of derivation from data in Columns 1 and 2.

Table II-16

Estimated Value of Land Held by the Federal Government
in the United States, 1952-68
(millions of dollars)

A. Net Additions

Year	Value of Stock ¹	Net Addition to Stock during Year		
		Total	Rural	Urban
1952				
1953				
1954				
1955				
1956	2,463			
1957	2,512	48	-2	50
1958	2,552	41	11	30
1959	2,752	198	476	-278
1960	3,146	393	188	205
1961	2,956	157	3	154
1962	3,462	157	3	154
1963	3,765	303	3	300
1964	3,980	215	20	196
1965	4,128	144	18	131
1966	4,393	264	20	244
1967		264	1	263
1968				

¹Excluding public domain administered by Bureau of Land Management, Department of Interior.

Table II-16 (cont.),

B. Change in Value of Stock

Year	Estimated Total	Increased Value of Standing Stock, by Location		Addition of New Land, by Location		Total Value Public Domain
		Rural	Urban	Rural	Urban	
1952	10,797*					
1953	10,763*					
1954	11,488*					
1955	12,237*					
1956	13,400			2,621	8,230	2,549
1957	14,399	2,804	9,218	2,802	9,268	2,329
1958	15,218	3,054	10,009	3,065	10,039	2,114
1959	16,609	3,244	10,742	3,725	10,464	2,420
1960	18,361	3,837	10,987	4,025	11,192	3,144
1961	20,559	4,261	11,975	4,270	12,124	4,160
1962	22,106	4,484	12,857	4,487	13,011	4,608
1963	23,859	4,801	13,792	4,604	14,092	4,963
1964	25,541	5,140	14,938	5,160	15,134	5,247
1965	27,279	5,573	15,739	5,591	15,870	5,818
1966	29,494	5,982	16,822	6,002	17,066	6,426
1967	31,518*			6,500*	18,000*	7,000
1968	33,543*			7,000*	19,000*	7,500

*Extrapolated.

(4) *State and local governments.*—As part of its series on governmental finance, the Bureau of the Census issues annually a report on the expenditures of state and local governments for a number of classes, including land and existing buildings. A major, but undeterminate, number of existing structures are purchased to be cleared, and their cost of acquisition can, in fact, be considered a part of the land cost. In the present estimates, the actual amounts reported by the Census were reduced by 10 percent, to adjust both for that part of the acquisition which, in fact, applied to existing structures bought to be used as such, and for any sales of land which may have occurred but are not separately reported in revenues.²³ These figures then served as the equivalent to the net acquisition to the stock (Table II-17). For the 1952 base value, Goldsmith's estimate of that year was accepted.

No means of separating the land into classes was found. No data exist on the total amount of land owned, or annually acquired, by municipalities inside and outside of metropolitan areas—either by acreage, or by dollar value. If it were assumed that all land was non-metropolitan in character, it would have been valued at \$95 billion by the end of 1968. Since the land is located in all three of the classes, it seemed more reasonable to raise its value by the central city land index, which itself fell between the non-metropolitan and ring area indexes. This procedure produced a land value of \$110 billion in 1968, 15 percent higher than the first figure.

²³ In the absence of factual data, there are differing judgments as to the most appropriate adjustment to make. Mr. Maurice Criz, Assistant Chief of the Governments Division, Bureau of the Census, believes that 2 or 3 per cent would be more accurate (letter to the author, November 20, 1970). Since the absolute magnitude of land acquisition is low, the differences resulting from use of the lower adjustment rate would affect only the figures after the decimal point in Table II-1, col. 7.

Table II-17

Estimated Market Value of Land Holdings of State and Local Governments
 United States, 1952-68
 (millions of dollars)

<u>Year</u>	<u>Value of Stock (end of year)</u>	<u>Result of Price Rise</u>	<u>Net Addition</u>
1952	23,700		
1953	28,206	27,729	477
1954	30,233	29,616	617
1955	35,902	35,071	832
1956	40,573	39,492	1,081
1957	46,529	45,442	1,087
1958	51,383	50,252	1,131
1959	56,377	54,980	1,397
1960	60,599	59,195	1,404
1961	66,284	64,841	1,443
1962	71,938	70,261	1,677
1963	77,982	76,254	1,728
1964	84,641	82,661	1,980
1965	90,128	88,027	2,102
1966	97,860	95,536	2,324
1967	104,300*	101,500	2,500
1968	110,700*	108,000	2,700

* Extrapolated.

As with the other sectors for which data were not available, the estimates for 1967 and 1968 were extrapolated from trends of the previous years.

(5) *Non-profit institutions.*—Data which would permit an estimate of land ownership by non-profit institutions is completely lacking. Some tax jurisdictions do publish reports of the assessed value of real property owned by these institutions. The assessments, however, are made in an even more cursory manner than assessments in general, since no tax payments result from the process. In addition, the jurisdictions involved are scattered and not notably representative. Only occasionally is an effort made to separate land and other real property. Moreover, the relation of land to structure value is extremely variable, even for a single type of institution. Balance sheets of assets are only rarely available for public perusal.

Under these circumstances, it was assumed that the percentage which institutional holdings formed of all holdings during the 1950's, as reported by Goldsmith, would continue during the 1960's. The 1950-58 percentages were calculated, projected forward, and applied to total holdings, as calculated for other sectors (Table II-18).

Table II-18

Estimated Value of Land Held by Institutions, United States, 1952-68

<u>Year</u>	<u>Non-profit Institutions as Percentage of Non-institutional Total</u>	<u>Total Value (millions of dollars)</u>
1952	3.24	6,300
1953	3.45	7,277
1954	3.50	7,911
1955	3.55	9,084
1956	3.57	10,263
1957	3.53	11,224
1958	3.56	12,455
1959	3.62	13,935
1960	3.67	14,883
1961	3.73	16,390
1962	3.78	17,802
1963	3.84	19,387
1964	3.89	21,083
1965	3.95	22,928
1966	4.00	24,842
1967	4.08	26,930
1968	4.10	28,612

(6) *Household property.*

A. *One-to-four family residential land.* The major part of residential property is owned by households for their own use, rather than as an investment. This, of course, is particularly true of single-family structures. Most multi-family structures, which are an increasing part of the inventory, are owned by investors, who report to IRS in the same way as other types of property-holders, either as corporations or as proprietors or partnerships. The value of the land on which they are built, therefore, is included in either the nonfarm corporations or unincorporated business sector. Owner-occupants may report property tax payments and mortgage interest payments, but they have no reason to report either the total value, or land and structure values, of their homes to IRS or to any agency other than the U.S. Census Bureau, once a decade. The decennial housing census includes estimates of value of single-family owner-occupied structures, and of average value of units in other classes of residential structures, so that an estimate of total worth of the residential stock can be developed for 1960. Comparable figures do not exist for 1950, when data were published only for mortgaged structures.

Consequently, for estimates of residential land values, reliance must be placed either on the Census of Governments assessment data or on a perpetual inventory—which is obviously preferable for annual estimates. In order to utilize this method, attention was focused on the rate of depreciation and on the land-structure value ratio, particularly for single-family structures.

In *The National Wealth*, Goldsmith assumed an eighty-year life with straight-line depreciation, or 1.25 percent a year. This is somewhat lower than the compound rate of 2 percent used by Grebler *et al.* to approximate a straight-line 1.4 percent rate.²⁴ In developing

²⁴ Leo Grebler *et al.*, *Capital Formation in Residential Real Estate* (Princeton: Princeton University Press, 1956), p. 381.

his formula, Grebler and his colleagues made use of an FHA study which showed an annual average linear rate of depreciation of 1.2 percent. They also allowed for demolitions at a variable rate for each decade; that for 1940-53 was estimated at .12 percent annually of the structural value of the stock at the beginning of the year. Goldsmith's depreciation estimate is gross, including demolitions.

In the face of differences between the housing market in 1952-68 and that of the earlier period, FHA records were examined for current valuations of older single-family structures. The records actually available were the error print-outs for all appraisals of single-family homes for which application had been made for mortgage insurance in the last five months of 1968, constituting 2,191 usable records. The entire record for the property is printed, with a notation of the column in which the error occurred. This cannot be considered a random sample, but there is no reason to suppose that a systematic bias is introduced. Entries for which an error occurred in any of the items relevant to this study were, of course, excluded.

The reported sale price, the estimated site value, and the estimated replacement cost were taken for all transactions, classified by year of construction. The transactions were further classified by the four major geographical regions of the country, but no differences emerged and the final results were analyzed only for the country as a whole. Site value was subtracted from both sale price and replacement cost estimates, and the difference between sale price and replacement cost calculated for each time-class, to obtain the average loss of value of the structures independent of changes in site values (Table II-19). A regression of loss of value against years produced an estimated straight-line annual depreciation rate of 0.6 percent, about half of that shown in the earlier study.

Table II-19

Residential Depreciation Rates as Estimated by the Loss in Value Reflected in the Difference between Sales Price and Replacement Cost Taken as a Percent of Replacement Cost, by Date of Construction for Single-Family Structures Submitted for FHA Mortgage Insurance in Last Quarter, 1968

<u>Date of Construction</u>	<u>Percent</u>
1967	7.0
1966	8.5
1965	10.3
1964	16.6
1963	11.2
1962	11.6
1961	16.2
1960	14.5
1959	12.0
1958	16.6
1956-57	14.8
1954-55	15.8
1952-53	17.7
1950-51	19.1
1948-49	18.3
1946-47	21.8
1941-45	21.0
1936-40	27.2
1931-35	32.3
1926-30	30.0
1916-25	42.4
1901-15	42.5
Before 1901	57.0

The withdrawal rate, however, seems to have increased. Such a finding is consistent with the increase in demolitions resulting from urban renewal and highway programs in the last two decades, and from an apparent acceleration in the so-called filtration process, marked most vividly by a growing volume of abandoned structures. The report on components of change in the housing stock, 1950 to 1960, showed a loss of 3,716,000 units, or 8 percent of the total 1950 stock of 46,137,000.²⁵ An examination of the size, condition, and value in 1950 shows that the withdrawn units were smaller, in worse condition, and of lower value than the units remaining in the stock. For owner-occupied units, the median value of the withdrawn units was about two-thirds of those remaining, and rental values showed the same proportion. The estimated 8 percent loss in numbers is thus equivalent to an approximately 5.3 percent loss in value. In annual terms, this results in an estimated decline of 0.5 percent, for a total decrease from depreciation and withdrawal of 1.1 per year. This rate was applied to the perpetual inventory of residential structures developed in the study and described in Appendix I.

To determine the estimated value of the land, land-structure ratios were applied to the structural values developed by the perpetual inventory, with a combined depreciation and withdrawal rate of 1.1 percent. Computationally, the ratios used are essentially the site-to-value proportions reported for existing single-family housing with FHA-insured mortgages, but reduced in each year by one percentage point.

Structures covered by FHA mortgages are not representative of the whole range of houses in the country. Site-structure ratios from two other sources were compared with them. First, in connection with its efforts to develop a construction cost index, the Census of Housing has prepared a site-to-value estimate for new houses in 1968. Second, on request, the Mortgage Guarantee Insurance Corporation examined the estimated site-to-value ratios for a random sample of mortgages it had insured in 1968, covering both new and existing structures (Table II-20). For new structures, the Census of Housing and MGIC figures were very close, while the FHA figures for the latest available data was over a percentage point higher. For existing housing—again, the latest available FHA data—FHA was a percentage point higher than MGIC. The trend has been toward a higher ratio so it is probable that, were 1968 figures available, the discrepancy would be greater. Moreover, the ratio of new housing is lower than that for existing ones, and though new housing is only a small component of the total housing supply in any one year, it would tend to lower the overall ratio to some degree. Inclusion of 2-to-4 unit structures also tends to lower the ratio. In view of these considerations, the trends shown by the FHA ratios were accepted, but at the slightly lower level.

²⁵ Census of Housing, 1960, *Components of Inventory Change*, Vol. IV, part 1A, Table 3, pp. 46-47.

Table II-20

Average Site-to-Total Value Ratios for Single-Family Structures
United States, 1966 and 1968

<u>A. New Construction</u>		
<u>Source of Estimate</u>	<u>Year</u>	<u>Ratio</u> (Percent)
FHA	1966	19.6
Census of Housing	1968	18.1
MGIC	1968	17.9
<u>B. Existing Housing</u>		
<u>Source of Estimate</u>	<u>Year</u>	<u>Ratio</u>
FHA	1966	21.2
MGIC	1968	20.2

The value of land so estimated has been ascribed to the household sector (Table II-21). The proportion of structures containing one-to-four units that are owned by business enterprises is very small. Their value has already been included in the estimate of business holdings. This double-counting, however, serves as an offset to land underlying multiunit buildings owned by individuals (not included among partnerships nor sole proprietorships), for which no estimate has been made.

B. *Vacant lots.* The valuations placed upon vacant lots in the Census of Governments reports have been accepted here, with linear interpolation for intermediate years. These values have been included with those of land underlying 1-to-4 family structures in the household sector. The same problem of double-counting of business holdings exists here as in the case of residential land. The extent to which such land is, in fact, owned by businesses rather than by individuals is another unanswered question in land economics; such indications as there are lead to the conclusion that, in general, the proportion is not large.

Table II-21

Estimated Value of Land Held by Households, United States, 1952-68
(millions of dollars)

<u>Year</u>	<u>Total</u>	<u>Underlying 1-to-4 Family Structures</u>	<u>Vacant Lots</u>	<u>Acreages</u>
1952	58,969	36,140	15,949	6,880
1953	66,125	39,147	17,068	9,910
1954	74,849	43,535	18,374	12,940
1955	88,994	52,271	19,773	16,950
1956	101,296	61,096	21,200	19,000
1957	112,106	67,326	22,730	22,050
1958	124,282	74,972	24,260	25,050
1959	141,579	87,669	25,810	28,100
1960	149,372	90,922	27,350	31,100
1961	161,925	98,835	28,940	34,150
1962	172,899	109,569	30,430	32,900
1963	184,843	119,323	33,870	31,650
1964	197,990	130,230	37,310	30,450
1965	212,651	142,701	40,750	29,200
1966	224,494	152,344	44,200	27,950
1967	237,694	163,351	47,643	26,700
1968	250,894	174,358	51,087	25,450

C. *Acreage*.—There is one remaining type of land which is not reported and whose dimension is difficult to estimate. This is the value of acreage owned by individuals and, hence, not included in any of the other classes of holders. It encompasses recreational land owned by individuals, rather than by business concerns; abandoned farmland not put to other business or residential use; and any investment by individuals not classified as proprietors, in land within or outside of urban areas, which has not been legally subdivided and, hence, included as lots in the Census of Governments assessment data. Except for ground in areas undergoing development, where prices may increase sharply prior to platting, land in this class would have a low acreage price, and would be of greater importance in estimates of acreage than of value.

The difference between the Census of Governments estimate for acreage and farms, and that of the Department of Agriculture for farmland, ranges from \$30 billion in 1956 to \$68 billion in 1961 and then drops to \$56 billion in 1966 (Table II-22). These amounts would seem to be the maximum values of nonfarm acreage that have been omitted from the estimate. In fact, the omission cannot be this high, since much of the land classified as acreage is owned by business organizations and institutions, or is the site for second homes, whose structural value is included in the perpetual inventory. For purposes of this estimate, the amount of difference has been interpolated on a straight line between the years for which data are available. For 1967 and 1968 the 1961-68 trend was continued. For 1952 to 1956, it was assumed that prices of acreage had increased at the same rate as the suburban price index; that the greater increase in value of acreage from 1956 to 1961 over that shown by the index was the result of increased amounts of land; and that land was added to the inventory from 1952 to 1956 at the same rate as in the next five-year period, 1952-56. The change in valuation of acreage was divided equally among the four years. It was then assumed that half the calculated amounts were attributable to the household sector.

Table II-22

Estimate of Value of Acreage Held by Household Sector,
United States, 1952-1968
(billions of dollars)

<u>Year</u>	<u>Value of Farmland</u> (1)	<u>Value of Farms and Acreage</u> (2)	<u>Value of Acreage</u> (3)	<u>Household Share of Acreage Value</u> (4)
1952	69.2		13.2	6.6
1953			17.4	8.7
1954			21.6	10.8
1955			25.8	12.9
1956	81.9	111.9	30.0	15.0
1957			37.7	18.9
1958			45.3	22.7
1959			53.0	26.5
1960			60.6	30.3
1961	107.2	175.5	68.3	34.2
1962			65.8	32.9
1963			63.3	31.7
1964			60.9	30.5
1965			58.4	29.2
1966	146.6	202.5	55.9	28.0
1967			53.4	26.7
1968			50.9	25.5

SOURCE: Col. 1 Table 1, Col. 5.
 Col. 2 1956 and 1966: Allan Manvel, "Trends in the Value of Real Estate and Land, 1956 to 1966," Table 1, p. 6; 1961: Taxable Property Values, Census of Governments, 1962, Table 9, p. 41.
 Col. 3 1956, 1961, and 1966, Col 3 - Col. 1. Other years by extrapolation or interpolation.
 Col. 4 50 percent of Col. 3. See text.

APPENDIX III

ESTIMATES OF BALANCE SHEETS AND INCOME STATEMENTS OF FOUNDATIONS AND COLLEGES AND UNIVERSITIES

(Ralph L. Nelson, Queens College, City University of New York)

FOUNDATIONS

a. Types of Foundations Included

The series relate to foundations that meet F. Emerson Andrews' definition, contained in *The Foundation Directory*, of "a non-governmental, non-profit organization having a principal fund of its own, managed by its own trustees or directors, and established to maintain or aid social, educational, charitable, religious or other activities serving the common welfare."

Not included, therefore, are a number of other kinds of philanthropic agencies though they may contain the term "foundation" in their names. Many are fund raising organizations, distributing their receipts to health and welfare agencies. Others operate institutions such as hospitals, schools, and research institutes. Neither these nor other types hold large endowments or emphasize the making of grants in their programs.

Also excluded from this series are foundations organized to conduct programs of corporation giving, the so-called company-sponsored foundations. Despite assets on the order of \$1.4 billion in 1968, most of these foundations serve as reservoirs whose purpose is to smooth corporate contributions flows. Relatively few of them have achieved the status of being fully or even substantially endowed.

The series thus includes foundations established by individuals and families, many of which are full endowed. Others are still in the process of forming and developing, serving in part as conduits for personal giving, and awaiting the large endowment transfers that commonly take place on the death of the founder. Also included are community foundations, whose endowment is typically built through small and medium size gifts and bequests from many individuals.

b. Sources of Data and Estimation Procedures

Estimates of total income, outlays and assets were based primarily on data presented in the three editions of *The Foundation Directory* and the *Treasury Department Report on Private Foundations*. The Directory provided benchmark data for the years centering about 1956, 1960, and 1965, while the Treasury Department Report provided totals for 1962. The first two editions of the Directory provided asset data for many foundations in ledger value only, which must be kept in mind when comparing them with market value estimates based on cumulative additions to endowment, adjusted by security price indexes. For

1962 and 1965, the benchmark totals were expressed in market values, so less ambiguous comparisons are possible.

The year 1962 was taken as the base year in developing this series. This was because the Treasury Department survey of some 6,000 foundations provided market value data for a larger list of foundations than any other compilation. Moreover, the data for all foundations related to the same year whereas in *The Foundation Directory* the assets of listed foundations may have been for any of several years. In compiling the Directory, the objective was to present the most recent information, insofar as this was feasible; therefore the data for a given foundation may have related to any of three or four years.

The Treasury Department estimate, adjusted to exclude company-sponsored foundations, indicated the total 1962 market value for the assets of all foundations to be \$15,085 million. Working forward and backward in time from this point, estimates were made of annual additions to assets, in current dollars, resulting from new endowments. Adjusting for these additions, we were able to provide totals for successively later or earlier years. The cumulative total was, of course, adjusted for changes in securities price levels before continuing the series.

The price index employed for stock prices was the Standard and Poor's 500-stock index. For bonds, it was the corporate AAA market value index. In both cases 1962 was taken as 100. Stocks were given a weight of 0.75, bonds a weight of 0.25.

The estimates of the annual increase in foundation assets, resulting from factors other than security price changes, were based on data on receipts and outlays of foundations. Here the Treasury Report, Edition 3 of *The Foundation Directory*, and the several Patman reports¹ provided information on receipts of gifts and contributions, on investment income and on outlays for grants and administrative and project expenses.

For the 1960-1965 period, comprehensive tabulations appeared with sufficient frequency to require relatively little interpolation. Before

¹ *Tax Exempt Foundation and Charitable Trusts: Their Impact on Our Economy*, Select Committee on Small Business, House of Representatives. Washington, D.C., December 31, 1962; December 21, 1966; March 26, 1968; and June 30, 1969.

1960, the problem was more complicated. To develop the annual growth in assets from endowment gifts required a rather detailed examination of the time pattern in the establishment of new foundations and of the dates on which transfers were made; the latter usually coming some time after foundations were initially established. Fortunately, much of this kind of estimation had already been done in preparing *The Investment Policies of Foundations*.² With some rudimentary interpolation, it was possible to develop a tolerably defensible series on annual increments to endowment for the period 1953-60. Estimates of annual increments for the period since 1965 are based on extrapolations of the several receipts and outlays series. A relatively orderly pattern of growth for each series was assumed. There is no way, however, of determining whether the assumption led to accurate estimates.

Comparison of benchmark totals with the series developed by the procedures described above was possible for the 1956-60, 1960-62, and 1964-65 periods, since comprehensive data were presented in the three editions of *The Foundation Directory*. As mentioned above, the presence of ledger value data and the spread of several years in asset data given in each edition of the Directory makes direct and precise comparisons impossible. However the rough comparisons, allowing for the effects of these statistical biases, suggest that the estimates probably come close to actual market values.

Having developed the annual series on total market value of foundation assets (see Table A III-1), the next step was to estimate the composition of total assets by type, in as much detail as possible. Here the several Patman reports proved valuable. They contained detailed asset breakdowns for groups of 534 to 647 foundations, including most of the largest foundations. The Patman totals accounted for between two-thirds and three-fourths of total estimated assets of all foundations. The Treasury Department Report also provided asset breakdowns. The two sources thus provided direct data for the years 1960, 1962 and 1967.

² Ralph L. Nelson, *The Investment Policies of Foundations*, Russell Sage Foundation, 1967.

TABLE AIII-1
 ANNUAL INCOME STATEMENTS OF FOUNDATIONS, 1953-68
 (\$ Millions)

Year	Investment Income	Gifts & Contribu- tions Received	Total Receipts	Administra- tion & Project Expenses	Grants	Total Outlays	Net Increase in Assets (current dollars)
1968	1,040	1,300	2,340	220	1,670	1,890	450
1967	960	1,215	2,175	205	1,520	1,725	450
1966	880	1,135	2,015	195	1,370	1,565	450
1965	805	1,043	1,898	184	1,220	1,404	494
1965	740	952	1,692	170	1,060	1,230	462
1963	670	793	1,463	149	905	1,054	409
1962	601	729	1,330	135	803	938	392
1961	593	567	1,160	130	637	767	393
1960	562	525	1,087	120	557	677	410
1959	518	486	1,004	110	477	587	417
1958	467	447	914	100	448	548	366
1957	423	408	831	90	740	830	1
1956	372	369	741	80	599	679	62
1955	328	330	658	70	283	353	305
1954	277	291	568	60	219	279	289
1953	228	252	480	50	164	214	266

Asset breakdowns were much more sparse for the period before 1960. Eight foundations could be found that provided market value breakdowns for the years 1954 and 1958. These, then, were used as "benchmark years" and provided the means for interpolation of percentage distributions.

For the whole 1953-68 period interpolations were made of the percentage distributions of assets as indicated by the available direct data. The interpolation process was guided by such factors as year-to-year movements in stock and debt prices. This meant that the effect of such changes was in a rough way incorporated into the interpolation. Having developed an annual series on the percentage distribution of assets (shown in Table A III-2), it was applied to the estimated totals to provide dollar values for each type of asset. The final series (shown in Table A III-3), therefore, presents estimates of the market value, in current dollars, of the several types of foundation assets.

COLLEGES AND UNIVERSITIES

a. Coverage of Colleges and Universities

The series applies to all colleges and universities in the United States, including both privately and publicly controlled institutions. In compiling the data, separate tabulations were made for private and public institutions and these were combined for purposes of summary totals. The pattern of receipts and outlays differed between the two types of institutions. As would be expected, government support was more important in public institutions and private tuition and philanthropic receipts were more important in private institutions. The aggregate series does not separate the two types of institutions, nor does it provide breakdowns of receipts by source and objective.

TABLE AIII-2

Distribution of Foundation Assets, 1953-68

(percent)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Cash	1.0	1.0	0.9	0.8	0.7	0.6	0.8	1.3	1.2	2.6	2.2	1.6	1.3	1.2	1.0	1.0
A/R & N/R ^{a/}	1.3	1.2	1.4	1.3	1.4	1.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.4
Gov't Obligations																
U.S.	20.6	19.4	16.4	15.2	15.2	10.8	10.6	10.4	8.8	7.8	7.3	6.8	6.4	6.8	5.3	4.9
State & local	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.6
Corporate bonds	7.8	7.3	6.4	7.6	9.6	10.0	9.4	14.3	11.2	16.0	14.6	13.2	11.3	13.7	11.7	9.1
Mortgages	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.6	0.5	0.5
Corporate stock	67.2	69.2	72.8	72.7	70.6	75.1	75.0	71.6	72.3	64.7	67.5	70.3	73.2	70.7	72.4	75.4
Other investments	0.5	0.4	0.4	0.7	0.8	0.6	0.6	0.9	1.2	3.6	3.4	3.2	3.0	3.1	4.7	4.8
Tangible assets	0.4	0.4	0.5	0.5	0.5	0.5	1.0	2.7	2.2	1.9	1.8	1.8	1.8	1.7	1.8	1.7
Other assets	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.9	0.8	0.8	0.7	0.7	0.6	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a/ A/R is accounts receivable: N/R is notes receivable

TABLE AIII-3

Assets Of Foundations, 1953-68
(\$ millions)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Cash	68	80	86	83	68	63	99	163	176	392	356	299	265	240	216	232
A/R & N/R ^{a/}	88	96	133	134	138	126	173	175	206	211	227	261	285	260	302	324
Govt obligations																
U.S	1,401	1,544	1,558	1,570	1,484	1,130	1,313	1,302	1,293	1,177	1,181	1,269	1,305	1,359	1,144	1,135
State & local	7	8	10	10	10	10	12	25	29	30	32	37	41	40	129	139
Corporate bonds	530	581	608	785	937	1,046	1,164	1,289	1,646	2,414	2,362	2,464	2,304	2,737	2,524	2,109
Mortgages	41	48	57	62	59	63	74	88	118	136	129	131	143	120	108	116
Corporate stock	4,569	5,508	6,916	7,510	6,894	7,855	9,287	8,964	10,623	9,760	10,922	13,124	14,924	14,127	15,621	17,472
Other investments	34	32	38	72	78	63	74	113	176	543	550	597	612	619	1,014	1,112
Tangible assets	27	32	48	52	49	52	124	338	323	287	291	336	367	340	388	394
Other assets	34	32	48	52	49	52	62	63	103	136	129	149	143	140	129	139
Total	6,799	7,961	9,502	10,330	9,766	10,460	12,383	12,520	14,693	15,086	16,179	18,667	20,389	19,982	21,575	23,172

^{a/} A/R is accounts receivable; N/R is notes receivable

b. Sources of Data and Estimation Procedures

The basic source for the income statement data was the *Biennial Survey of Higher Education* for the period 1951-52 through 1963-64. Beginning in 1965-66, the Surveys have been taken annually, and the design of the questionnaire has been changed. Thus data for 1965-66 and 1966-67 (the latest year available) are not wholly comparable to those for earlier years. The differences, however, are minor and do not materially affect the continuity of the series.

As requested in the questionnaire, and presented in the statistical summaries by the Office of Education, the receipts and expenditures data are not organized as corporate income statement and balance sheet data are organized. Emphasis is on the source of moneys by type and objective, and likewise on the expenditure. Double counting occurs in places, and certain categories of receipts and expenditures are omitted. Fortunately, the double counting and omissions account for relatively minor parts of the totals.

Given the characteristics of the data, it was necessary to develop a systematic set of accounting categories into which the data could be put and which would lead to the development of an aggregate income statement. The test of the success with which the several receipts and expenditure categories were extracted from the Office of Education tabulations, and cast into income statement form, is reflected in the residual. As shown in Table A III-4, the residual, for most years, was gratifyingly small relative to the magnitudes of receipts and expenditures.

TABLE AIII-4
Annual Income Statements of Colleges and Universities, Calendar Years 1953-66

(\$ millions)

Year	Total Receipts, All Sources	Total Expenditures for Current Operations	Expenditures on Land Buildings & Equipment	New Funds in Endowment	Net Change in Unexpended Plant Funds	Interest on External Debt	"Cash Flow" Deficit before Financial Transfers	Net Increase in External Debt	Transfers from Endowment	Residual (Implied) Change in Cash Bal.
1966	15,930	13,160	3,391	526	(137)	274	(1254)	1,220	111	47
1965	14,119	11,457	2,835	471	171	205	(1020)	962	62	4
1964	12,258	9,722	2,432	438	194	162	(690)	644	44	(2)
1963	10,690	8,368	2,313	404	122	132	(649)	654	29	34
1962	9,415	7,395	1,988	360	119	105	(552)	569	19	30
1961	8,286	6,535	1,606	332	112	86	(385)	386	16	17
1960	7,301	5,739	1,415	318	53	72	(296)	337	21	62
1959	6,517	5,200	1,213	304	38	59	(297)	253	20	(24)
1958	5,932	4,633	1,136	280	87	45	(249)	248	13	12
1957	5,637	4,128	1,155	382	171	34	(233)	241	3	11
1956	4,968	3,639	965	379	111	25	(151)	171	(10)	10
1955	4,072	3,248	700	214	39	19	(148)	128	11	(9)
1954	3,613	2,956	624	156	14	15	(152)	104	23	(25)
1953	3,271	2,703	501	137	10	13	(93)	60	17	(16)

Note: Numbers in parentheses have negative values.

The basic estimates of income statement categories were based on academic fiscal year data, as provided to the Office of Education. All of the summary income statements were on a July 1–June 30 basis. In the period 1951–52 through 1965–66, where data were available only every other year, linear interpolations provided the estimates for the missing years. The only exception to this procedure was in the interpolation for 1956–57. Here, the effects of a very large Ford Foundation grant were included. Part of the grant was receded in the Biennial Survey of 1955–56, and an adjustment was required, prorating the grant between 1955–56 and 1956–57.

Having developed an annual income statement based on fiscal years ending on June 30, the next step was to convert the series to a calendar year basis. This was done by a simple averaging of successive pairs of academic (June 30) fiscal year totals.

Estimates of the financial assets of colleges and universities were made by cumulating net additions to endowment, beginning with a base year (June 30, 1952) estimate of total market value of \$3.2 billion. This was approximately 6 per cent above the book value of assets in that year of relatively low stock prices, and roughly accorded with what fragmentary evidence one could find on the market-to-book value ratio for that year.

	$\frac{\text{Market}}{\text{Book}}$	$\frac{\text{Weight}}$	
Government bonds.....	0.83	× .20	= .166
Nongovernment bonds.....	0.85	× .20	= .170
Common stocks.....	1.27	× .51	= .648
Preferred stocks.....	0.86	× .09	= .077
Total			1.061

The \$3.2 billion base value was then increased each year, by the addition of new endowments, the accumulated market value up to a given year being adjusted for the yearly changes in the level of securities prices. Two series were developed for total values of endowment, one using the stock price index as the adjustment factor, the other assuming that no change in securities prices had taken place, thus serving as a rough measure of the nonequity component of the trend.

Studies by the Boston Fund showed that, in market value, the percentage of total endowment in equities rose only moderately over the

period, from about 53 per cent to about 60 per cent.³ Given the strong growth in stock prices, this meant that, to keep the share of equity below 60 per cent, a persistent portfolio readjustment out of equities and into debt had to have occurred. To roughly capture this process, multipliers were selected to adjust the stock-based price totals and debt-based price totals. Using these multipliers, in each year adding to 1.00, the estimated total assets at market value, broken into two categories of debt and equity, were produced. The equity multiplier for 1952-53 was .47, rising by a uniform .01 per year to 1966-67. Thus the multiplier itself was independent of the stock price levels of any particular year. The equity-debt breakdown, of course, reflected the levels of stock prices as the equity multiplier applied to their fluctuating totals.

The application of the above procedure yielded broad breakdowns between debt and equity that agreed quite well with the distribution found by the Boston Fund in its studies covering from 50 to 60 per cent of total college and university endowments. Perhaps most gratifying, the June 30, 1967 market value estimate produced by the above procedure was \$12.0 billion. The first market value data developed by the Office of Education survey of all colleges and universities referred to that date. It was \$11.9 billion.

Having developed the annual series of total market values, the next step was to separate its distribution into more detailed equity and debt categories. (These may be seen in Table A III-5.) The distributions were based upon the detailed breakdowns for the institutions with the largest endowments, presented in the annual Boston Fund surveys. They, however, did not provide a breakdown between corporate and government bond holdings. Two Office of Education studies provided such a breakdown for 1948-58 and for 1963, and thus permitted separate estimates of the holdings of the two kinds of bonds.

The following procedures were used to place the endowment series on a December 31 basis. First, for all categories of assets other than common stock, the average of the June 30 values preceding and following the given December 31 was taken as the estimate of the year-end value. This was done on the assumption that market price levels for noncommon stock assets moved in a relatively smooth fashion, not subject to significant short term fluctuations.

³ Values for the early 1950's are from "College and University Endowments: A Survey," U.S. Office of Education, Circular 579, Washington, D.C., 1959. Values for the more recent period are based on data from annual issues of *The Study of College and University Endowment Funds*, Boston Fund, 1956-67.

TABLE AIII-5
Assets of Colleges and Universities, 1953-67
(\$ millions)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
	<u>Dollar Market Value of Endowments as of June 30</u>														
Cash or equivalent	40	44	52	52	81	60	47	30	40	102	143	190	288	254	156
Corporate bonds	584	602	718	979	1,223	1,052	1,217	1,476	1,509	1,745	1,637	1,674	1,847	1,995	2,088
Government bonds	620	551	458	544	516	751	811	989	1,006	1,157	1,082	1,123	1,239	1,338	1,392
Preferred stocks	265	254	259	238	238	204	176	177	144	145	125	110	122	127	180
Common stocks	1,392	1,915	2,573	2,988	2,802	3,568	4,048	3,766	4,955	4,084	4,952	5,833	6,767	5,963	7,020
Other investments	33	36	43	52	58	72	95	103	144	247	250	351	376	277	240
Real estate - leased	73	80	95	104	139	156	189	185	208	238	179	210	243	277	252
Real estate - operated	60	65	78	98	70	66	68	89	56	102	98	90	88	115	120
Mortgages	33	36	48	62	133	132	149	185	200	264	197	251	277	334	336
Other	33	36	43	47	52	48	41	44	64	43	72	200	232	242	300
Total	3,133	3,619	4,367	5,164	5,312	6,109	6,841	7,044	8,326	8,127	8,735	10,032	11,479	10,922	12,084
Physical plant & equipment ^{a/}	7,046	7,560	8,524	8,902	10,126	11,180	12,365	13,588	15,176	16,728	19,079	21,336	23,927	26,917	30,381
External debt	n.a.	539	677	795	1,020	1,276	1,515	1,782	2,190	2,553	3,315	3,862	4,603	5,786	7,487
	<u>Market Value as of December 31</u>														
Cash or equivalent	42	48	52	67	71	54	39	35	71	123	167	239	271	205	
Corporate bonds	593	660	849	1,101	1,138	1,130	1,347	1,493	1,627	1,691	1,656	1,760	1,921	2,042	
Government bonds	586	505	501	530	634	781	900	998	1,082	1,120	1,163	1,181	1,289	1,365	
Preferred stocks	260	257	249	238	221	190	177	161	145	135	118	116	125	154	
Common stocks	1,548	2,221	2,815	3,116	2,877	3,824	4,117	4,004	4,858	4,424	5,370	6,091	6,887	6,128	
Other investments	35	40	48	55	65	84	99	124	196	249	301	364	327	259	
Real estate - leased	77	88	100	122	148	173	187	197	223	209	195	227	260	265	
Real estate - operated	63	72	88	84	68	67	79	73	79	100	94	89	102	118	
Mortgages	35	42	55	98	133	141	167	193	232	231	224	264	306	335	
Other	35	40	45	49	50	45	43	54	54	58	136	216	237	271	
Total	3,274	3,973	4,802	5,460	5,405	6,489	7,155	7,332	8,567	8,340	9,424	10,547	11,725	11,142	

^{a/} Book value as of June 30

For the common stock December 31 market value series, a somewhat different procedure was followed. As explained above, the market value series was based on accumulations of endowments over academic years. A fairly continuous flow of endowment grants over the year was assumed, and the stock price index used to adjust the series was taken as the average of the twelve monthly averages of weekly indexes for the Standard and Poor's 500-stock index. The June 30 values of common stock holdings, thus estimated, were averaged for pairs of successive years to produce preliminary December 31 estimates.

To produce final December 31 estimates, recognition had to be taken of the fluctuating nature of common stock prices. This was done by the use of an adjustment factor which was expressed as the ratio of the 500-stock index for December 31 of a given year to the "monthly average of weekly indexes" used in the initial adjustment for market price trends. In this way, the level of the stock market on the last day of the year was incorporated into the December 31 asset holdings.

APPENDIX IV
THE ASSETS OF LABOR UNIONS
(Leo Troy, Rutgers University)

1. SOURCES AND METHODS

The sources of the statistics on union assets and liabilities are the financial reports of unions, filed annually with the U.S. Department of Labor under provisions of the Labor-Management Reporting and Disclosure Act of 1959, and reports published by individual organizations in journals, newspapers and convention proceedings. The latter source was used to add the financial reports of organizations not subject to the LMRDA of 1959 (primarily unions of government employees) and to fill certain gaps in reports filed with the USDL.

Data are available for 1962-66 and for 1968; 1967 is the average of 1966 and 1968. The figures were adjusted to compensate for variations in the number of unions on the tapes of the Department of Labor.

All figures on total assets, total liabilities and net assets are the sum figure for local unions, intermediate union groups, and regional, national, and international unions.

2. NOTES ON INDIVIDUAL ITEMS IN COMBINED BALANCE SHEET OF
LABOR UNIONS

The items shown in Table A IV-I, which should be regarded as preliminary, are dated at the end of the year and are defined as follows:

Cash: Includes cash on hand and in banks and other financial institutions, such as building and loan associations, savings and loan associations and credit unions, as well as in escrow accounts. Certificates of deposit are also included.

U.S. Treasury Securities: The value reported is original cost.

Mortgage Investments: The total value shown by the union is unrecovered cost. The mortgages were purchased on a block basis from banks or similar institutions. Mortgage secured loans made by a union are reported under loans receivable.

Other Investments: This item may be regarded as consisting primarily of equity holdings. However, it may also include U.S. Government obligations other than Treasury securities, as well as State, municipal, and foreign government securities. The value reported by the union is at cost.

Fixed Assets: Includes land, buildings, automotive equipment and office furniture and equipment at fair market value or net value, as shown on the unions' books.

Unclassified Assets: This is a residual item devised for this tabulation because of errors on the original USDL tapes.

Total Assets: This is the sum of reported totals.

Total Liabilities: This is the sum of the reported totals.

Net Worth: This is the arithmetic difference between total assets and total liabilities.

Table AIV-1
 Combined Balance Sheet of Labor Unions, 1962-68
 (millions of dollars)

	1962	1963	1964	1965	1966	1967	1968
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash	534	615	629	677	755	823	894
U.S. Treasury securities	406	407	379	392	423	444	465
Mortgages	134	147	143	138	144	149	153
Other investments	275	287	324	335	403	450	497
Fixed assets	267	281	302	348	344	377	410
Unclassified assets	155	139	134	135	137	143	151
Total assets	1,772	1,876	1,901	2,025	2,206	2,388	2,570
Liabilities	212	228	241	244	258	287	317
Net Worth	1,559	1,648	1,660	1,781	1,948	2,101	2,253

Source: See text.

APPENDIX V

THE DISTRIBUTION OF ASSETS AMONG INDIVIDUALS OF DIFFERENT AGE AND WEALTH

(By John Bossons,* University of Toronto and National Bureau of Economic Research)

The purpose of this appendix is to provide estimates of the distribution of the value of different assets over individuals characterized by age and gross wealth (total assets). The contributions of this are twofold: (1) to provide estimates of the distribution of wealth among individuals of different gross wealth within each of several different age classes, thus providing information on the relative importance of age as a factor determining wealth differentials, and (2) to do so for the entire household sectors. Though some estimates of the composition of asset portfolios for individuals classified by age and gross wealth have been provided in previous studies, these estimates have (through being based on estate tax return data) been limited to top wealth-holders.¹

The estimates presented in this appendix are based on data collected in the 1963 Survey of Consumer Finances conducted for the Board of Governors of the Federal Reserve System by the Census Bureau.² The survey responses were originally analyzed on a family unit basis; to obtain data for individuals, each set of data collected for a family unit was divided among family members using data on asset components and income shown for individuals within each family. Because a number of assets could not be divided between husband and wife on the basis of data collected from respondents, estimates were obtained using two extreme assumptions and compared with estimates obtained from estate tax returns for 1962; the proration basis used (allocating such assets exclusively to the husband) was based on the closer conformity to estate-tax-based wealth estimates thus obtained.

*The author is indebted to Nahide Craig, Lee Friedman, and Thad Mirer for programming and research assistance provided during the course of this study, and to the Board of Governors of the Federal Reserve System for providing a copy of a tape containing the individual responses to the 1963 Survey of Consumer Finance on which the analysis of this appendix is based.

¹ Recent studies of the distribution of wealth based on estate tax data include Robert J. Lampman, *The Share of Top Wealth-Holders in National Wealth, 1922-1956* (Princeton: Princeton University Press, 1962); James D. Smith, "Income and Wealth of Top Wealth-Holders in the United States, 1958," unpublished Ph.D. dissertation, University of Oklahoma, 1966; Internal Revenue Service, *Statistics of Income—1962, Personal Wealth Estimated from Estate Tax Returns* (Washington: U.S. Government Printing Office, 1967). For a review of previous studies, see Lampman, *op. cit.*, chapter 1. For data provided in these studies on the distribution of total assets by age and gross wealth of decedents, cf. Lampman, *op. cit.*, Table 48. Estimates of the distribution of assets by age and net wealth are provided in *Personal Wealth, op. cit.*, Tables 11-14.

² For a description of the survey, see Dorothy S. Projector and Gertrude S. Weiss, *Survey of Financial Characteristics of Consumers* (Washington: Board of Governors of the Federal Reserve System, 1966), especially pages 45-62.

In subsequent sections, the estimates obtained from analysis of the individual responses are presented. The aggregate estimates are compared to corresponding estimates obtained from other sources in Section 1. The distribution of assets, corporate stock, and other portfolio components are discussed in the subsequent three sections.

1. COMPARISON OF AGGREGATE WEALTH ESTIMATES FROM DIFFERENT SOURCES

Aggregate assets owned by the household sector are shown in Table V-1 derived from two sources, the flow-of-funds data described in Appendix I of this monograph and estimates obtained by aggregating responses to the Survey of Consumer Finance. Both are of the value of assets owned by individuals as of the end of 1962.

As is now well known, a number of assets tend to be systematically understated in survey responses.³ This tendency is clear from the comparison presented in Table V-1, which shows the survey aggregates substantially understating the aggregate value of certain components of household wealth, relative to estimates obtained from aggregate data. The aggregate value of savings accounts, U.S. government securities, state and local bonds, interests in personal trusts, and interests in pension reserves are particularly badly understated. (Certain other assets, notably currency and deposits, are understated because of omission on the survey questionnaire; currency held by respondents was for example not ascertained in the survey.)

³ Cf. Robert Ferber, *The Reliability of Consumer Reports of Financial Assets and Debts*, Studies in Consumer Savings, Number 6 (Urbana, Ill.: University of Illinois, 1966).

TABLE V-1
 ALTERNATIVE ESTIMATES OF AGGREGATE VALUE OF
 HOUSEHOLD WEALTH COMPONENTS, 1962

(billions of dollars)

	<u>Estimates Based</u> <u>on Flow of Funds</u>		<u>Estimates Based</u> <u>on Survey</u>		<u>Difference</u> <u>Between</u> <u>Estimates</u>
<u>Liquid Assets</u>					
Currency and Deposits	67.6		23.7		
Savings Accounts	204.8		104.8		
Brokerage Account Credit Balances	<u>1.2</u>	273.6	<u>0.6</u>	129.1	144.5
U.S. Government Securities	62.6		33.3		
State and Local Bonds	20.0		12.7		
Corporate and Foreign Bonds	<u>0.0</u>	<u>82.6</u>	<u>5.9</u>	<u>51.9</u>	<u>30.7</u>
TOTAL LIQUID ASSETS		356.2		181.0	175.2
<u>Other Assets</u>					
Stocks		372.6		376.9	-4.3
Mortgages and Notes	32.1		44.5		
Life Insurance	91.9		77.4		
Annuity Interest	--		1.1		
Interest in Personal Trust	<u>85.3</u>	209.3	<u>54.3</u>	177.3	32.0
Equity in Non-Corp. Business		290.9		172.4	118.5
Principal Residence	--		465.9		
Other Residence	--		128.3		
Household Goods	--	--	58.3	652.4	-652.4
Profit-Sharing Plans	--		6.9		
Pension Reserves	109.5		19.3		
Estates in Probate	--		11.5		
Miscellaneous	<u>14.3</u>	<u>123.8</u>	<u>--</u>	<u>37.7</u>	<u>-86.1</u>
TOTAL HOUSEHOLD ASSETS		<u>1352.4</u>		<u>1597.6</u>	<u>-245.2</u>

Notes for Table V-1:

The 1963 Federal Reserve Survey of Financial Characteristics of Consumers included 2557 respondents who gave data sufficiently complete to tabulate. As part of the Survey design, each respondent was given a weight reflecting the number of similar units (with respect to income) in the total population. These weights were accepted in calculating the above and following tables. Further information on the weighting procedure may be found in Dorothy S. Projector and Gertrude S. Weiss, Survey of Financial Characteristics of Consumers (Washington: Board of Governors of the Federal Reserve System, 1966), page 56.

After reinterviews, there were 556 cases for which some information was missing on wealth and/or income. These cases were accepted as respondents in the Survey because in most cases the missing amounts were judged to constitute a negligible portion of the consumer unit's wealth and income. Adjustments for these items were made in the Survey editing and processing procedure, generally imputing the mean value based on households with similar age and income characteristics. Further detail may be found in Projector and Weiss, op. cit., pp. 53-56.

Though the Survey included information on debt secured by each asset, only the gross values were used here, to facilitate comparison with wealth estimates based on other sources (such as the Internal Revenue Service Estate Tax Returns).

For two assets, life insurance and closely-held corporate stock, it was necessary to adjust Survey data. To obtain estimates of the equity value of life insurance policies, ratios of equity to face value, by age class, were applied to the Survey data on face values. These ratios were obtained from Internal Revenue Service, Statistics of Income - 1962, Personal Wealth (Washington: U.S. Government Printing Office, 1967), Table J, page 78.

In the case of closely-held corporations, the Survey data on book values of businesses in which the family had an active interest were adjusted upward by a factor of two, in order more adequately to reflect market values.

In the case of closely-held corporations and unincorporated businesses, book values rather than reported market values were used, reflecting the problems observed by Projector and Weiss, op. cit. It should be noted that the book values of unincorporated businesses included in this and other tables in this appendix are estimates of the value of equity in such businesses and hence may be negative in individual cases. Negative values for components of this item occur in 3 out of 2557 cases for active partnerships and in 5 cases for active sole proprietorships. Such negative values reflect the lack of limited liability for owners of unincorporated businesses. It is interesting to note that in only one case out of 2557 was the market value of any of these items reported negative.

The effect of most response errors underlying the aggregate understatement of savings accounts, bonds, and beneficial interests is to understate assets of almost all individuals by a relatively small dollar magnitude. That is, a large part of the error is likely to be relatively insignificant in its effect on estimates of the distribution of wealth, merely causing the true distribution of wealth to be dispersed around a slightly higher median than that estimated from the survey data without materially affecting the dispersion of the distribution around its median. It will consequently be assumed in this appendix that the response bias underlying the understatement of aggregate estimates obtained from the survey responses is not of material importance in analyzing the distribution of these aggregates over individuals in different wealth classes.⁴

A number of assets appear to be understated by or omitted in estimates of aggregate gross household sector wealth obtained from flow-of-funds data. In particular, corporate and foreign bonds, and a number of miscellaneous assets appear to be more accurately estimated by aggregating survey responses than by using flow-of-funds residuals.

The most serious divergencies between the two aggregate estimates shown in Table V-1 (other than for real property) arise in the cases of unincorporated business equity and of pension reserves. It is possible that the first may in many cases arise from the use of book values rather than market values to measure the value of interests in unincorporated businesses. The divergence in the case of pension reserves is indicative of the lack of knowledge among many individuals (particularly younger individuals) of the present value of their future pension rights.

Two estimates of the distribution of total assets over individuals in different wealth classes are summarized in Tables V-2 and V-3. The two estimates are based on polar extreme assumptions concerning the allocation of assets between husband and wife where no data for such allocation is available. In the first case, such assets are allocated exclusively to the husband; in the second case, they are split evenly between husband and wife. Examining the tables in the light of the estimates presented in Sections 3 and 4 below, it is evident that the

⁴ Response errors taking the form of deliberate omissions of important assets items by a respondent to the survey undoubtedly account for some of the aggregate understatement; response errors of this form would necessarily affect the dispersion as well as median of the distribution of assets subject to such error. It is assumed in this appendix that such deliberate omissions are of second-order importance compared to the effect of widespread omission of minor asset items. The major assets for which this assumption is likely to be invalid are equities in unincorporated businesses, in closely-held corporations, or in real estate. In these cases there may be frequent reporting of investments on the basis of their original cost rather than their current book or fair market values as well as cases of deliberate understatement.

allocation of assets is of material importance in those cases where the distribution of assets is relatively unequal.

A comparison with estimates obtained from estate tax returns of the survey estimates of total assets allocable to individuals with total assets of more than \$60,000 is presented in Table V-3. This table indicates that, for most assets other than corporate stocks, it would appear more accurate to allocate assets of husbands and wives exclusively to husbands than to split such assets among spouses. For corporate stocks, this would particularly appear to be the case, since estate-tax-based estimates of corporate stock are likely to be understated as a result of liquidations made in contemplation of death.

Comparing Table V-3 with Table V-1, it would appear that most of the understatement in the survey responses evident from Table V-1 is concentrated among individuals with total assets of less than \$60,000. The estate tax return estimates of liquid assets (cash and bonds) shown in Table V-3 are roughly \$50 million greater than the corresponding estimates obtained from the Survey of Consumer Finances. However, much of this understatement is likely to reflect liquidation of corporate stock and of unincorporated business assets to avoid liquidity problems at death. It would accordingly seem safe to assume that less than one-tenth of the \$175 million understatement of liquid assets shown in Table V-1 is allocable to top wealthholders.

There is a substantial understatement of equity in unincorporated businesses in estimates based on estate tax return data. (Equity in unincorporated business is not shown separately in the aggregated estate tax return data and is therefore included in "other assets" in Tables V-2 and V-3.) Such understatement is undoubtedly due to liquidation of interests in such businesses in contemplation of death, though mortality losses due to the decedent being a principal in such firms may also be a factor. The understatement of this item shown in Table V-3 is itself understated by the fact that such assets have been measured in terms of book value in the case of the survey responses, but are presumably measured at closer to market value on estate tax returns.

Holdings of real estate by individuals with assets of more than \$60,000 would appear to be significantly understated in survey responses, based on comparing the survey estimates shown in Table V-3 with the corresponding estate tax-based estimates. It is possible that this may be largely due to reporting of values closer to original costs than to current market values, the latter presumably being the basis for valuation on estate tax returns.

Table V-2

AGGREGATE VALUE OF COMPONENTS OF ASSETS IN HOUSEHOLD SECTOR FOR INDIVIDUALS
WITH ASSETS OF LESS THAN \$60,000

Dollar Billion

	Unallocated wealth of husband and wife allocated entirely to husband				Unallocated wealth of husband and wife split evenly			
	Below \$15,000	\$15,000 to \$30,000	\$30,000 to \$60,000	Total Under \$60,000	Below \$15,000	\$15,000 to \$30,000	\$30,000 to \$60,000	Total Under \$60,000
Currency, deposits & savings accounts	37.4	24.4	29.4	91.2	39.8	30.9	23.3	94.0
U.S. Government securities	6.3	5.1	7.5	18.9	6.9	6.7	6.4	20.0
State and local bonds	-	-	0.1	0.1	-	-	0.2	0.2
Corporation & foreign bonds	0.1	0.9	1.6	2.6	1.1	0.4	1.5	3.0
Stocks	3.6	10.3	27.0	40.9	9.4	22.4	37.6	69.4
Mortgages and notes	2.8	3.2	7.9	13.9	4.1	6.7	6.7	17.5
Life insurance equities	32.5	15.7	12.1	60.3	41.4	15.0	9.3	65.7
Real estate	126.6	183.0	130.6	440.2	259.8	143.3	74.9	477.9
Other	48.0	43.9	64.0	155.9	79.1	62.1	45.2	186.4
TOTAL	251.5	286.5	280.2	824.0	441.6	287.5	205.1	934.2

Source: Analysis of individual responses to 1963 Survey of Consumer Finances

Note: Figures may not add to totals due to roundings. For other notes, see next page.

Notes for Table V-2:

The basic wealth-holding unit for purposes of the Survey consists of families and unrelated individuals as defined by the Bureau of the Census. It was necessary for purposes of this table to decompose the Survey family data into individual data.

All wealth and income components in the survey were recorded in one of three ways: a single entry representing the total family wealth; two entries representing first the share of the husband and wife (H & W) and second, the share of the other family members (OFM); three entries, one each for the head, spouse, and all OFM. We may list the components by the way in which they were recorded. Note a component may appear on more than one list if its subcomponents are recorded in different ways.

<u>Single entry</u>	<u>Double entry</u>	<u>Triple entry</u>
Credit-Brokerage account	Income (all times)	Checking accounts
Other Federal securities		Savings deposits
State and local bonds		Federal savings bonds
Corporate and foreign bonds		Mortgages and notes (some types)
Stock (all types)		Life insurance (face)
Mortgages and notes (some types)		Annuities
Trust assets		
Noncorporate business assets		
Principal residence		
Other real estate		
Household goods		
Profit sharing plans		
Retirement plans		
Estates in probate		

Wealth was allocated in the following manner: In all cases wealth to OFM was split evenly among all adults other than head and spouse. If there were no such adults, OFM wealth was split evenly among the children.

For triple entry components, wealth was assigned as recorded (and OFM was split by the above procedures). For single entry items, the share to husband and wife income from that asset. If no income was reported, the wealth was divided evenly among wealth-holders in the family (one exception to this is when there is no wife present: the head then receives a double share). The share to OFM was computed as a residual in both cases. The H & W share was divided in two ways (applicable also to double-entry items); first, all H & W wealth was assigned to the husband; second, the wealth was evenly split between head and spouse. Wealth aggregates were estimated separately for each assumption.

For other notes, see notes to Table V-1.

Table V - 3

COMPARISON OF HOUSEHOLD SURVEY ESTIMATES WITH ESTIMATES OBTAINED
FROM ESTATE TAX RETURNS, 1962

(billions of dollars)

	Unallocated wealth of husband and wife allocated entirely to husband			Unallocated wealth of husband and wife split evenly between husband and wife			Estimates based on estate tax returns for individuals with assets over \$60,000
	Total from survey	Assets under \$60,000	Assets over \$60,000	Total from survey	Assets under \$60,000	Assets over \$60,000	
Cash	129.0	91.2	37.7	129.0	94.0	35.1	70.7
Bonds	51.8	21.6	30.2	51.8	23.2	28.6	47.9
Stocks	376.9	40.9	336.0	376.9	69.4	307.5	325.8
Mortgages & notes	44.5	13.9	30.6	44.5	17.5	26.8	30.4
Life insurance equity	77.4	60.3	17.1	77.4	65.7	11.6	15.6
Real estate	594.2	440.2	154.0	594.2	4183.7	110.5	188.0
Other assets	323.8	155.9	170.7	323.8	186.4	137.4	73.6
TOTAL	1,597.6	824.0	795.6	1,597.6	940.0	657.6	752.0

Notes and sources: Survey estimates are tabulated from individual responses. Estate tax estimates are obtained from Internal Revenue Service, Statistics of Income - 1962, Personal Wealth Estimates from Estate Tax Returns (Washington, USGPO, 1967)

Figures may not add to totals due to rounding.

Other notes as in Table V-2

2. DISTRIBUTION OF TOTAL ASSETS

The distribution of total wealth among individuals in different age and asset classes is shown in Table V-4. In these and all subsequent tables in this appendix, wealth components of husbands and wives which were not obtained separately in the survey interviews have been allocated exclusively to the husband.⁵ Allied estimates of the number of individuals in different age and wealth classes is presented in Table V-5.

⁵ For a description of the procedure used to decompose family data into estimates on an individual basis, see the notes to Table V-2.

Table V - 4

DISTRIBUTION OF HOUSEHOLD ASSETS AMONG INDIVIDUALS
CLASSIFIED BY AGE AND TOTAL ASSETS, 1962

Total assets owned by individuals	Age of Individual						
	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	All ages
	A. Total assets owned by all individuals in each class (billions of dollars)						
Less than \$15,000	15.0	32.6	52.0	63.3	48.0	46.3	257.3
\$15,000 - 30,000	3.5	41.3	62.3	75.1	54.5	49.9	286.5
30,000 - 60,000	1.1	23.5	55.4	68.5	80.5	51.3	280.2
60,000 - 100,000	0.9	4.1	21.5	29.8	37.7	45.4	139.3
100,000 - 200,000	2.6	1.3	40.0	23.4	48.0	21.4	136.7
200,000 - 500,000	0.6	8.2	15.2	31.8	44.8	56.9	157.5
500,000 - 1,000,000	2.1	2.3	15.6	15.1	27.8	38.2	101.0
Over \$1,000,000	---	25.3	24.8	63.4	60.0	65.5	239.0
ALL INDIVIDUALS	25.8	138.6	286.7	370.2	401.3	374.9	1,597.6

Table V-5

DISTRIBUTION OF NUMBERS OF INDIVIDUALS CLASSIFIED
BY AGE AND TOTAL ASSETS, 1962

Total assets owned by individuals	Age of Individual						
	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	All ages
A. Numbers of individuals (millions)							
Less than \$15,000	57.1	22.0	23.4	21.7	16.0	14.4	154.6
\$15,000 - 30,000	0.2	1.9	3.0	3.5	2.5	2.3	13.3
30,000 - 60,000	---	0.6	1.4	1.7	1.9	1.3	6.8
60,000 - 100,000	---	0.1	0.3	0.4	0.5	0.6	1.9
100,000 - 200,000	---	---	0.3	0.2	0.4	0.2	1.0
200,000 - 500,000	---	---	0.1	0.1	0.2	0.2	0.5
500,000 - 1,000,000	---	---	---	---	---	0.1	0.2
Over \$1,000,000	---	---	---	---	---	---	0.1
ALL INDIVIDUALS	57.3	24.7	28.4	27.5	21.4	19.0	178.4
B. Percentage distribution (percent of grand total)							
Less than \$15,000	32.0	12.4	13.1	12.1	8.9	8.1	86.6
\$15,000 - 30,000	0.1	1.1	1.7	1.9	1.4	1.3	7.5
30,000 - 60,000	---	0.3	0.8	1.0	1.1	0.7	3.8
60,000 - 100,000	---	---	0.2	0.2	0.3	0.3	1.0
100,000 - 200,000	---	---	0.2	0.1	0.2	0.1	0.6
200,000 - 500,000	---	---	---	0.1	0.1	0.1	0.3
500,000 - 1,000,000	---	---	---	---	---	---	0.1
Over \$1,000,000	---	---	---	---	---	---	0.1
ALL INDIVIDUALS	32.1	13.8	15.9	15.4	12.0	10.7	100.0

Table V-5

Total assets owned by individuals	Age of Individual						
	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	All ages
	B. Percentage distribution (percent of total wealth)						
Less than \$15,000	0.9	2.0	3.3	4.0	3.0	2.9	15.8
\$15,000 - 30,000	0.2	2.6	3.9	4.7	3.4	3.1	17.9
30,000 - 60,000	0.1	1.5	3.5	4.3	5.1	3.2	17.5
60,000 - 100,000	0.1	0.3	1.4	1.9	2.4	2.9	8.8
100,000 - 200,000	0.2	0.1	2.5	1.5	3.0	1.3	8.6
200,000 - 500,000	---	0.5	1.0	2.0	2.8	3.6	9.9
500,000 - 1,000,000	0.1	0.1	1.0	0.9	1.7	2.4	6.3
Over \$1,000,000	---	1.6	1.6	4.0	3.8	4.1	15.0
ALL INDIVIDUALS	1.6	8.7	17.9	23.2	25.1	23.5	100.0

Sources: Tables V-3 to V-19.
Individual responses to 1963 Federal Reserve Board Survey of Consumer Finances.

Note: Figures may not add to totals due to rounding.

The number of individuals with little wealth is pronounced, as is implied by the figures shown in Table V-5. Their importance in the distribution of wealth is shown in Table V-4. Though more than five-sixths of all individuals had less than \$15,000 in total assets, such individuals accounted for less than one-sixth of the total wealth of the household sector. Moreover, approximately 20 percent of the wealth owned by such individuals was attributable to individuals more than 64 years old.

By contrast, individuals with total assets worth more than \$200,000 accounted for virtually one-third of total assets of the household sector, even though comprising only 0.5 percent of the tabulated population. These individuals were heavily concentrated in higher age classes, with individuals more than 54 years old accounting for close to 60 percent of total assets held by members of these wealth classes.

The increasingly unequal distribution of wealth as age increases is to be expected on several grounds. The principal reason for this result is of course that lifetime incomes are distributed unequally (partly because of the incidence of bequests), and that human capital is ignored in the assets tabulated in this appendix. Were differences in human capital the only source of differences in lifetime income, financial wealth would be determined partly by variations in rates of return realized on invested capital but primarily as the integral of previous saving. Were consumption a constant fraction of lifetime income and were current income a constant fraction of lifetime income (regardless of age), then average wealth would increase with age the distribution of wealth would become more unequal as age increased. Taking the normal lifetime profile of income into account would change this conclusion only marginally. Both variations in rates of return on capital and variations in lifetime income on human capital would result in an increasingly unequal distribution of wealth as age increases.⁶

⁶ For a brief review of sources of income and wealth differentials, see J. E. Stiglitz, "The Distribution of Income and Wealth among Individuals," *Econometrica*, 37 (July 1969), pages 382-397.

To the extent that variations in rates of return on capital are in part attributable to rents on scarce types of human capital, we may expect the rate of increase of wealth with age to depend in part upon the fraction of total assets invested in corporate stock (since most of the variance in rates of return is attributable to returns on such assets).

3. DISTRIBUTION OF SHAREHOLDINGS

The ownership of common and preferred shares is heavily concentrated among older individuals and among individuals with large wealth. The total value of corporate stocks owned by individuals in different age and asset classes is shown in the first part of Table V-6; the share of household sector ownership of stocks allocable to individuals in each age and asset class is shown in the second half of this table. A comparison of Table V-6 with Table V-4 provides some interesting insights into the extent to which stock ownership is concentrated among upper age and asset classes.

While 72 percent of total assets in the household sector is owned by individuals more than 45 years old, 83 percent of corporate stock is owned by individuals older than 45. The effect of age becomes more pronounced as age increases. For individuals aged 45 to 54, their share of the aggregate value of stocks owned by the household sector is almost identical to their share of total assets in the household sector. Individuals aged 55 to 64 account for 28 percent of corporate stocks owned by the household sector and 25 percent of total assets. Individuals more than 64 years old account for 32 percent of the value of the stocks owned by all individuals, while accounting for only 23.5 percent of total assets.

Among individuals more than 45 years old, the relative importance of corporate stocks rises as total assets of the individual rise. Individuals in this age group with over \$200,000 of assets account for 63 percent of total stock owned by the household sector, while accounting for only 25 percent of total assets. Individuals more than 45 years old with assets above \$1 million account for more than one-third of total corporate stock held by the household sector and for only one-eighth of total household-sector wealth.

Table V-6

DISTRIBUTION OF HOUSEHOLD-OWNED CORPORATE EQUITIES AMONG
INDIVIDUALS CLASSIFIED BY AGE AND TOTAL ASSETS, 1962

Total assets owned by individuals	Age of Individual						
	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	All ages
A. Total amount of corporate equities owned by all individuals in each class (billions of dollars)							
Less than \$15,000	0.6	0.5	0.3	0.7	0.9	0.6	3.6
\$15,000 - 30,000	0.2	0.8	1.8	1.3	3.6	2.6	10.3
30,000 - 60,000	0.1	4.7	3.4	7.0	5.6	6.3	27.0
60,000 - 100,000	0.5	3.3	2.8	4.3	11.8	6.4	29.1
100,000 - 200,000	0.4	0.5	11.8	6.5	11.8	7.1	38.1
200,000 - 500,000	0.1	1.1	4.3	13.8	14.7	35.1	69.2
500,000 - 1,000,000	1.3	1.7	1.8	6.1	17.8	18.1	46.9
Over \$1,000,000	---	1.0	19.5	47.0	39.8	45.6	152.8
ALL INDIVIDUALS	3.2	13.6	45.7	86.7	106.0	121.8	377.0
B. Percentage distribution (percent of grand total)							
Less than \$15,000	0.2	0.1	0.1	0.2	0.2	0.2	0.9
\$15,000 - 30,000	---	0.2	0.5	0.4	1.0	0.7	2.7
30,000 - 60,000	---	1.2	0.9	1.9	1.5	1.7	7.2
60,000 - 100,000	0.1	0.9	0.7	1.1	3.1	1.7	7.7
100,000 - 200,000	0.1	0.1	3.1	1.7	3.1	1.9	10.1
200,000 - 500,000	---	0.3	1.1	3.7	3.9	9.3	18.4
500,000 - 1,000,000	0.4	0.5	0.5	1.6	4.7	4.8	12.4
Over \$1,000,000	---	0.3	5.2	12.5	10.5	12.1	40.5
ALL INDIVIDUALS	0.9	3.6	12.1	23.0	28.1	32.3	100.0

Source: Tables V-13 and V-19.

Note: Figures may not add to totals due to rounding.

The average ratio of the value of corporate stock to the value of assets owned by each individual in different age and asset classes is shown in Table V-7. Because of the relatively small sample size in each one of the cells, it would be erroneous to assign too much weight to specific numbers in this table. Moreover, because of the relatively small number of large-wealth owners who are young, it is necessary to be particularly wary of estimates shown for individuals below 45 years of age. The relatively high variance in the ratios of traded stock to total stock for individuals between 25 and 44 years old with wealth greater than \$60,000 reflects a predictably high variance in the relative importance of investments in closely-held companies. In part, this variance may be due to the incidence of bequests consisting of interests in closely-held companies. In part, the high variance may be due simply to the relative infrequency with which individuals less than 45 years old become proprietors of successful new corporations.

Average ratios of the value of traded stock to the value of total stock owned by individuals classified by age and gross wealth are shown in Table V-8.

Table V - 7
 AVERAGE RATIO OF VALUE OF STOCKS TO TOTAL ASSETS
 FOR INDIVIDUALS CLASSIFIED BY AGE AND SIZE OF TOTAL ASSETS, 1962
 (percentage of total assets)

Total assets owned by individuals	Age of Individual						
	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	All ages
Less than \$15,000	6.2	1.4	0.6	1.1	1.8	1.3	1.4
\$15,000 - 30,000	4.9	2.0	2.8	1.8	6.7	5.2	3.6
30,000 - 60,000	11.2	19.8	6.1	10.3	6.9	12.2	9.6
60,000 - 100,000	62.1	80.2	13.1	14.3	31.3	14.1	20.9
100,000 - 200,000	14.5	36.9	29.5	27.9	24.5	33.2	27.8
200,000 - 500,000	21.7	13.4	28.5	43.4	32.8	61.7	43.9
500,000 - 1,000,000	63.8	74.0	11.2	40.7	64.2	47.5	46.4
Over \$1,000,000	---	3.8	78.5	74.2	66.3	69.6	63.9
ALL INDIVIDUALS	16.2	9.7	15.9	23.5	26.4	32.5	23.7

Source: Tables V -13 to V - 19.

TABLE V - 8
 RATIO OF VALUE OF TRADED STOCKS TO TOTAL STOCKS OWNED BY
 INDIVIDUALS CLASSIFIED BY AGE AND TOTAL ASSETS, 1962

(percentages of total stocks)

<u>Total assets owned by individual</u>	<u>Age of individual</u>						<u>All Ages</u>
	<u>Under 25</u>	<u>25 to 34</u>	<u>35 to 44</u>	<u>45 to 54</u>	<u>55 to 64</u>	<u>Over 64</u>	
Less than \$15,000	100.0	94.2	98.3	99.9	82.6	99.9	94.7
\$15,000 - 30,000	94.5	71.3	69.4	68.7	90.7	92.1	83.1
30,000 - 60,000	96.2	10.0	34.4	86.8	88.2	84.2	66.7
60,000 - 100,000	73.3	100.0	38.3	89.3	94.6	100.0	89.8
100,000 - 200,000	100.0	11.9	23.3	67.2	84.7	64.2	58.1
200,000 - 500,000	99.8	14.3	41.2	35.0	75.8	93.5	73.6
500,000 - 1,000,000	100.0	2.3	65.5	21.7	45.8	71.1	53.1
Over \$1,000,000	--	75.5	21.7	23.9	53.5	59.0	42.1
ALL INDIVIDUALS	95.2	42.7	30.0	38.4	66.7	75.4	57.9

Source: Tables V-13 to V-19.

4. DISTRIBUTION OF OTHER ASSETS

Estimates of the different components of wealth owned by individuals in different age and asset classes are shown in Tables V-13 through V-18. (A summary table showing the components of wealth for individuals in all age classes combined is presented in Table V-19.) These tables provide substantial detail on the composition of wealth in different age and asset classes.

The relative importance of liquid assets and investments in real estate and household durables is shown in Tables V-9 and V-10. As these tables indicate, the importance of both types of assets is highest for individuals with small amounts of wealth. As Table V-9 indicates, the combined importance of cash and bonds is particularly high for individuals over 64 compared with individuals in all wealth classes combined in different age classes. In addition, the importance of liquid assets is enhanced in higher wealth classes by the importance in such classes of investments in state and local bonds, which because of their tax-exempt status are attractive to individuals whose marginal tax rate is higher than that of the marginal investor in the state and local bond market. State and local bonds are a significant fraction of liquid assets for individuals with more than \$500,000 in total assets.

The relative importance of real property, shown in the tabulations presented in Table V-10, is particularly high in low wealth classes. As wealth increases, the relative importance of real property declines. A similar decline in the relative importance of real property (though not a precipitous) may be observed as the age of the individual increases.

TABLE V - 9
 RELATIVE IMPORTANCE OF CASH AND BONDS AMONG ASSET HOLDINGS FOR
 INDIVIDUALS CLASSIFIED BY AGE AND TOTAL ASSETS, 1962

(percentages of total assets)

<u>Total assets owned by individual</u>	<u>Age of individual</u>						<u>All ages</u>
	<u>Under 25</u>	<u>25 to 34</u>	<u>35 to 44</u>	<u>45 to 54</u>	<u>55 to 64</u>	<u>Over 64</u>	
Less than \$15,000	26.0	11.0	13.6	13.7	18.6	25.1	17.0
\$15,000 - 30,000	3.4	2.9	4.4	9.1	17.5	19.7	10.6
30,000 - 60,000	3.5	5.1	8.1	11.1	15.0	25.8	13.8
60,000 - 100,000	5.8	0.9	4.4	11.1	15.8	15.5	12.4
100,000 - 200,000	29.9	2.1	7.5	5.9	12.0	23.6	11.7
200,000 - 500,000	2.5	1.4	6.8	5.0	4.8	9.0	6.4
500,000 - 1,000,000	0.2	1.9	0.4	3.5	5.4	13.6	7.3
Over \$1,000,000	--	1.0	3.1	2.9	9.5	13.0	7.2
ALL INDIVIDUALS	19.1	4.6	7.0	8.6	12.9	17.6	11.3

Source: Tables V-12 to V-18.

TABLE V - 10

RELATIVE IMPORTANCE OF REAL PROPERTY AMONG ASSET HOLDINGS
OF INDIVIDUALS CLASSIFIED BY AGE AND TOTAL ASSETS, 1962

(percentages of total assets)

Total assets owned by individual	Age of individual						All Ages
	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	
Less than \$15,000	5.5	61.1	59.2	71.6	57.2	56.5	49.2
\$15,000 - 30,000	77.8	78.4	80.2	71.0	59.6	53.1	68.9
30,000 - 60,000	0.8	60.9	52.3	49.3	50.7	43.9	50.1
60,000 - 100,000	8.7	14.0	59.5	39.5	35.4	32.8	38.4
100,000 - 200,000	—	53.2	41.7	40.3	27.8	24.1	33.1
200,000 - 500,000	—	15.7	35.8	26.4	12.6	11.7	17.4
500,000 - 1,000,000	3.2	7.1	4.2	24.6	16.9	22.0	17.5
Over \$1,000,000	—	1.1	4.5	11.3	9.6	8.9	8.4
ALL INDIVIDUALS	15.5	50.2	51.1	46.7	35.8	31.0	37.2

Source: Tables V-12 to V-18.

Among other assets, the distribution of unincorporated business asset is particularly interesting. The relative importance of these assets in different age and wealth classes is shown in Table V-11. Such assets are of particularly large relative importance for wealth holders with assets between \$30,000 and \$500,000, almost without regard for the age of the wealth holder. As a result, the relative importance of unincorporated business assets for all individuals in an age class is almost entirely unaffected by age in the top four age classes. (In the bottom two age classes, the paucity of individuals with wealth above \$60,000 dominates the result.) Over all individuals, the relative importance of unincorporated business assets is approximately 5 percent for individuals with assets of less than \$30,000 or assets of greater than \$500,000 and is approximately between 15 and 20 percent for individuals with assets between \$30,000 and \$500,000.

The estimates shown for the relative importance of most other variables are relatively low and deserve little comment. The one exception consists of the high values shown for the relative importance of equity in life insurance in the low wealth classes, a phenomenon which may in part be due to an overstatement of the ratio of life insurance equity to life insurance face value for individuals in the bottom age classes. The relative importance of bequests as a source of wealth is shown by the relative importance of estates in probate compared to total assets for individuals in higher wealth classes who are less than 35 years old.

TABLE V - 11

RELATIVE IMPORTANCE OF EQUITY IN UNINCORPORATED BUSINESS
 AMONG ASSET HOLDINGS FOR INDIVIDUALS CLASSIFIED BY AGE
 AND TOTAL ASSETS, 1962

(percentages of total assets)

<u>Total assets owned by individual</u>	<u>Age of individual</u>						<u>All ages</u>
	<u>Under 25</u>	<u>25 to 34</u>	<u>35 to 44</u>	<u>45 to 54</u>	<u>55 to 64</u>	<u>Over 64</u>	
Less than \$15,000	21.2	6.4	8.4	1.2	7.3	2.5	5.8
\$15,000 - 30,000	9.3	7.3	3.5	7.4	7.5	15.3	7.9
30,000 - 60,000	22.5	2.9	23.1	15.8	17.2	11.5	15.8
60,000 - 100,000	5.2	—	11.6	24.9	7.2	30.8	19.1
100,000 - 200,000	55.5	—	11.7	4.3	20.0	14.4	14.5
200,000 - 500,000	45.0	—	20.1	16.9	35.9	8.1	18.7
500,000 - 1,000,000	3.2	—	0.5	26.3	1.3	4.1	6.0
Over \$1,000,000	—	—	0.5	4.5	4.9	3.9	3.5
ALL INDIVIDUALS	21.7	4.2	10.4	10.2	13.2	10.8	10.8

Source: Tables V-13 to V-19.

5. ASSET-HOLDING PATTERN FOR INDEPENDENT INDIVIDUALS LESS THAN
25 YEARS OLD

In the preceding analysis, all individuals less than 25 years old have been aggregated together. In this section, individuals in this age group who are heads of households or living in independent establishments are segregated out and examined separately. Such individuals account for 7.5 million individuals out of the 57.3 million individuals included in the under-25 age group. (Most of the remaining 49.8 million individuals are dependent children.)

Estimated asset-holdings for such individuals are presented in Table V-12. By comparing the estimates shown in this table with the results of previous analyses reported above, it can be seen that independent individuals under 25 years of age are much more like individuals in higher age groups than they are like dependent children in the pattern of their asset holdings. Of particular interest is the almost complete absence of investments in common stocks and in equity interests in unincorporated businesses. It may be consequently assumed that the magnitude of investments in such assets shown earlier is the result of distribution of such equities to dependent children by parents in order to avoid estate taxes and to reduce current personal income taxes on income from the business. Since *de facto* control of such equity interests would in most such instances continue to reside in the parents, the figures presented on the distribution of asset ownership by age class present a biased estimate of the distribution of the control of wealth by age class.

Further data on independent individuals less than 25 years old are presented in Table V-20.

TABLE V - 12

ESTIMATED ASSET-HOLDINGS FOR INDIVIDUALS LESS THAN 25 YEARS OLD
IN INDEPENDENT HOUSEHOLDS, 1962

Asset class of individual.	Total assets owned by individuals in class (billions of dollars)	Number of individuals (millions)	Relative importance of			
			Cash and bonds (percentages of total assets)	Corporate equities	Unincorporated businesses	Real property
Less than \$15,000	5.7	7.3	11.9	0.7	0.5	52.9
\$15,000 - 30,000	3.1	0.2	2.7	1.7	2.3	88.1
30,000 - 60,000	0.6	—	0.4	—	—	1.3
60,000 - 100,000	0.1	—	0.6	17.9	13.2	68.3
100,000 - 200,000	—	—	—	—	—	—
200,000 - 500,000	—	—	—	—	—	—
500,000 - 1,000,000	—	—	—	—	—	—
Over \$1,000,000	—	—	—	—	—	—
ALL INDIVIDUALS	9.5	7.5	8.0	1.2	1.2	61.1

Source: Individual responses to 1963 Survey of Financial Characteristics of Consumer.

COMPONENTS OF WEALTH FOR
All individuals less than 25 years old,
CLASSIFIED BY WEALTH
(millions of dollars)

Table V-13

	WEALTH BELOW 15	CLASSES 15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000	TOTAL
CHECKING ACCOUNTS	218.21	33.40	2.72	12.14	0.00	0.79	0.00	0.00	267.26
SAVINGS DEPOSITS	2967.52	77.95	7.33	2.33	347.73	7.03	0.69	0.00	3410.58
CREDIT BROKERAGEACT.	0.00	5.35	0.03	0.16	2.83	1.29	0.00	0.00	5.67
TOTAL CASH	3185.73	116.70	10.08	14.64	350.56	9.11	0.69	0.00	3687.51
FEDERAL SAVING BONDS	730.64	2.50	0.00	22.79	9.61	0.00	0.00	0.00	765.53
OTHER FD. SECURITIES	0.00	0.00	28.08	0.00	125.19	6.23	0.00	0.00	159.51
STATE + LOCAL BONDS	0.00	0.00	0.00	12.64	43.57	0.00	0.00	0.00	56.21
CORP. + FORGN. BONDS	0.00	0.00	0.00	0.03	250.99	0.00	5.06	0.00	256.08
TOTAL BONDS	730.64	2.50	28.08	35.46	429.36	6.23	5.06	0.00	1237.33
TRADED STYCK	577.78	161.77	114.92	390.18	377.34	130.91	1322.70	0.00	3075.60
CLOSELY HFLD STOCK	0.00	9.35	0.00	142.15	0.00	0.00	0.00	0.00	151.50
STOCK, TYPE UNAVAIL.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INVESTMENT CLUBS	0.00	0.00	4.58	0.00	0.00	0.27	0.00	0.00	4.86
TOTAL STOCKS	577.78	171.12	119.50	532.33	377.34	131.19	1322.70	0.00	3231.96
MORTGAGES AND NOTES	95.55	8.60	0.00	0.00	0.00	0.00	0.00	0.00	104.15
EQUITY LIFE INSUR.	5268.08	141.23	18.31	0.02	2.33	0.00	0.00	0.00	5529.97
ANNUITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUST ASSETS	631.73	0.00	36.19	155.51	0.00	186.09	284.37	0.00	1293.89
NONCORP. BUS. ASSETS	3186.54	328.34	240.49	44.57	1448.72	272.27	67.21	0.00	5588.15
TOTAL OTHER FIN.	9281.90	478.17	295.00	200.10	1451.05	458.37	351.58	0.00	12516.16
PRINCIPAL RESIDENCE	0.00	2363.83	0.00	67.27	0.00	0.00	0.00	0.00	2431.10
OTHER REAL ESTATE	134.46	232.37	0.00	0.00	0.00	0.00	67.29	0.00	434.12
HOUSEHOLD GOODS	968.14	137.89	8.11	7.21	0.00	0.00	0.00	0.00	1121.34
TOTAL REAL PROP.	833.68	2734.09	8.11	74.48	0.00	0.00	67.29	0.00	3986.56
PROFIT SHARING PLANS	19.59	12.74	0.00	0.00	0.00	0.00	0.00	0.00	32.33
RETIREMENT PLANS	146.67	0.00	0.45	0.00	0.00	0.00	0.00	0.00	147.11
ESTATES IN PRORATE	0.00	0.00	608.23	0.00	0.00	0.00	325.61	0.00	933.84
TOTAL MISC ASSET	166.25	12.74	608.68	0.00	0.00	0.00	325.61	0.00	1113.29
TOTAL ASSETS	15044.90	3515.32	1069.45	857.00	2608.31	604.89	2072.93	0.00	25772.81

COMPONENTS OF WEALTH FOR
INDIVIDUALS aged 25 to 34,
CLASSIFIED BY WEALTH
(millions of dollars)

Table V-14

	WEALTH CLASSES									TOTAL
	BELOW 15	15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000		
CHECKING ACCOUNTS	731.57	273.80	274.07	28.96	2.56	17.38	21.77	3.82	1353.93	
SAVINGS DEPOSITS	2145.26	829.74	839.96	7.95	11.02	80.23	12.02	0.72	3926.89	
CREDIT BROKERAGEACT.	0.00	0.02	0.00	0.00	0.03	11.89	0.00	26.44	38.37	
TOTAL CASH	2876.83	1103.56	1114.03	36.90	13.61	109.50	33.79	30.98	5319.20	
FEDERAL SAVING BONDS	640.94	94.68	84.26	0.01	7.62	7.62	10.86	0.27	846.26	
OTHER FD. SECURITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	89.88	89.88	
STATE & LOCAL BONDS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	130.77	130.77	
CORP. & FOREIGN BONDS	63.05	0.00	4.61	0.00	5.08	0.00	0.00	0.74	73.49	
TOTAL BONDS	704.00	94.68	88.87	0.01	12.70	7.62	10.86	221.67	1140.40	
TRADED STOCK	440.57	577.51	466.88	3303.72	56.02	156.51	39.21	724.08	5764.50	
CLOSELY HELD STOCK	0.01	226.64	4197.26	0.00	409.53	938.68	1688.52	234.64	7695.28	
STOCK, TYPE UNAVAIL.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	
INVESTMENT CLUBS	27.27	6.30	0.00	0.00	3.75	0.00	0.00	0.00	37.32	
TOTAL STOCKS	467.85	810.45	4664.14	3303.72	469.30	1095.19	1727.73	958.88	13497.26	
MORTGAGES AND NOTES	85.38	565.20	381.53	69.45	5.03	21.06	59.70	15.56	1202.91	
EQUITY LIFE INSUR.	5443.57	2941.89	1551.87	131.34	34.62	55.95	17.52	9.11	10185.87	
ANNUITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TRUST ASSETS	49.10	0.00	436.66	0.00	0.00	717.70	317.66	23709.86	25230.99	
NONCORP. BUS. ASSETS	2101.37	3025.35	671.37	0.00	0.12	0.00	-0.00	0.00	5818.22	
TOTAL OTHER FIN.	7679.42	6532.46	3061.43	200.79	39.76	794.72	394.87	23734.53	42437.98	
PRINCIPAL RESIDENCE	13386.40	28485.08	11854.36	212.88	202.11	562.99	156.18	252.37	55112.37	
OTHER REAL ESTATE	370.44	1184.14	1307.68	221.59	461.36	681.32	0.00	29.15	4255.68	
HOUSEHOLD GOODS	6164.09	2687.17	1149.17	141.08	13.30	37.73	10.42	4.00	10206.96	
TOTAL REAL PROP.	19920.93	32356.40	14311.21	575.55	676.77	1282.05	166.60	285.52	69575.02	
PROFIT SHARING PLANS	149.46	84.59	38.53	0.00	48.62	18.29	0.00	0.81	340.30	
RETIREMENT PLANS	793.29	290.78	234.61	0.00	11.24	0.00	0.00	0.00	1329.92	
ESTATES IN PROBATE	3.24	0.00	0.00	0.00	0.00	4865.92	0.00	75.13	4944.30	
TOTAL MISC ASSET	945.99	375.37	273.14	0.00	59.86	4884.21	0.00	75.94	6614.52	
TOTAL ASSETS	32595.02	41272.92	23512.82	4116.97	1272.00	8173.29	2333.85	25307.52	138584.38	

Notes and sources: as in Table V-13

Table V-15

COMPONENTS OF WEALTH FOR
INDIVIDUALS AGED 35-44
CLASSIFIED BY WEALTH
(millions of dollars)

	WEALTH BELOW 15	CLASSES 15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000	TOTAL
CHECKING ACCOUNTS	1013.83	620.96	760.07	331.32	475.60	179.47	21.15	66.80	3469.20
SAVINGS DEPOSITS	4692.28	1744.57	2992.37	597.22	2299.44	719.72	11.38	27.67	13084.64
CREDIT BROKERAGEACT.	0.00	0.00	98.71	2.94	0.66	0.97	0.00	1.24	104.53
TOTAL CASH	5706.11	2365.52	3851.14	931.48	2775.71	900.16	32.53	95.71	16658.36
FEDERAL SAVING BONDS	1370.05	317.89	384.66	22.42	156.50	45.68	2.50	5.50	2305.21
OTHER FD. SECURITIES	0.00	50.35	67.73	0.00	25.67	20.68	7.47	136.22	308.13
STATE + LOCAL BONDS	0.00	0.00	0.00	0.00	26.91	57.71	13.08	515.11	612.81
CORP. + MUN. BONDS	6.77	29.38	140.39	2.19	15.93	7.43	8.29	19.01	229.39
TOTAL BONDS	1376.83	397.62	592.78	24.61	225.03	131.49	31.34	675.83	3455.54
TRADED STOCK	306.47	1228.16	1168.89	1078.50	2756.20	1786.76	1148.45	4230.87	13704.31
CLOSELY HELD STOCK	5.21	539.62	2062.79	1670.82	9025.45	2492.90	604.44	15221.50	31623.74
STOCK, TYPE UNAVAIL.	0.00	0.64	146.88	48.54	34.98	51.02	0.00	0.00	282.05
INVESTMENT CLUBS	0.00	0.00	19.50	18.27	0.00	3.49	0.00	0.66	41.92
TOTAL STOCKS	311.68	1768.41	3398.06	2816.13	11817.63	4334.18	1752.90	19453.03	45652.02
MORTGAGES AND NOTES	844.31	389.50	1106.77	1201.07	1715.48	384.93	47.59	222.05	5511.70
EQUITY LIFE INSUR.	5507.48	3124.47	2976.85	1038.67	938.42	351.49	88.71	83.10	14109.18
ANNUITIES	12.92	35.33	1.38	3.44	201.92	0.00	0.00	0.00	254.99
TRUST ASSETS	268.61	42.47	155.89	21.96	282.91	550.62	12745.51	2922.63	16590.60
NONCORP. BUS. ASSETS	4354.64	2160.43	12804.78	2500.56	4665.06	3057.58	77.83	134.35	29755.23
TOTAL OTHER FIN.	10787.96	5752.20	17045.67	4765.70	7803.78	4344.62	12959.64	3362.13	67021.70
PRINCIPAL RESIDENCE	23043.36	44413.06	21967.62	7305.44	7675.01	2015.20	189.21	573.03	107181.92
OTHER REAL ESTATE	1055.91	1835.99	4469.19	4846.73	8389.99	3209.69	306.06	498.93	24612.48
HOUSEHOLD GOODS	6686.54	3707.34	2517.65	653.70	640.45	208.73	155.01	52.67	14622.09
TOTAL REAL PROP.	30785.81	49956.39	28954.46	12805.87	16705.44	5433.61	650.28	1124.63	146416.48
PROFIT SHARING PLANS	261.48	681.94	691.18	2.49	195.92	35.36	115.65	21.57	2005.58
RETIREMENT PLANS	2535.82	1290.20	828.81	183.04	63.22	5.92	21.31	49.34	4977.65
ESTATES IN PROBATE	27.23	41.09	0.83	1.88	456.21	1.83	24.96	0.00	554.03
TOTAL MISC ASSET	2824.53	2013.23	1520.82	187.40	715.35	43.12	161.92	70.90	7537.27
TOTAL ASSETS	51992.92	62253.37	55362.91	21531.19	40042.95	15187.18	15588.60	24782.24	286741.36

Notes and sources: as in Table V-13

COMPONENTS OF WEALTH FOR
INDIVIDUALS Aged 45 to 54,
CLASSIFIED BY WEALTH.
(millions of dollars)

Table V-16

	WEALTH BELOW 15	CLASSES 15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000	TOTAL
CHECKING ACCOUNTS	1322.32	950.58	997.95	334.53	309.98	448.62	117.06	202.72	4683.76
SAVINGS DEPOSITS	6489.42	4732.21	4971.15	1726.86	852.50	623.57	221.59	417.90	20035.19
CREDIT BROKERAGEACT.	0.00	0.00	287.79	0.00	1.85	7.92	0.11	36.34	334.00
TOTAL CASH	7811.74	5682.79	6256.88	2061.38	1164.33	1080.10	338.76	656.97	25052.95
FEDERAL SAVING BONDS	832.10	1122.17	1205.43	966.64	151.52	256.45	24.42	2.07	4560.80
OTHER FD. SECURITIFS	0.00	0.00	0.00	0.00	1.83	8.23	2.04	90.61	102.72
STATE + LOCAL BONDS	0.00	0.00	0.00	36.20	42.36	82.37	162.38	667.72	991.04
CORP. + FORGN BONDS	48.64	0.00	156.28	243.16	3.48	152.37	10.26	458.61	1072.80
TOTAL BONDS	880.74	1122.17	1361.71	1246.00	199.19	499.43	199.11	1219.01	6727.35
TRADED STOCK	707.25	915.19	6104.57	3811.44	4371.12	4836.16	1328.71	11261.80	33336.24
CLOSELY HELD STOCK	0.00	415.48	817.35	431.12	2023.10	8877.26	4806.28	35770.91	53141.50
STOCK, TYPE UNAVAIL.	0.00	0.00	0.00	0.00	109.15	93.63	0.00	0.00	202.78
INVESTMENT CLUBS	0.82	0.96	109.28	27.51	3.45	2.77	0.31	0.26	145.37
TOTAL STOCKS	708.07	1331.63	7031.21	4270.07	6506.81	13809.82	6135.30	47032.97	86825.88
MORTGAGES AND NOTES	207.56	1541.70	1902.72	799.10	3310.43	1343.91	100.48	1458.91	10664.81
EQUITY LIFE INSUR.	4980.57	3419.02	2717.06	880.05	864.91	784.56	191.42	277.20	14124.80
ANNUITIES	28.63	82.21	38.20	2.48	0.00	0.00	0.00	11.49	163.00
TRUST ASSETS	93.96	10.16	383.56	152.33	0.00	18.36	315.77	1682.34	2650.47
NONCORP. BUS. ASSETS	741.85	5542.70	10814.53	7410.08	996.96	5386.87	3959.08	2855.01	37707.09
TOTAL OTHER FIN.	6062.57	10595.78	15856.08	9244.03	5172.31	7533.71	4566.74	6284.95	65316.17
PRINCIPAL RESIDENCE	37999.42	42344.00	25247.92	7063.04	5630.51	3751.50	1028.07	1006.89	124071.36
OTHER REAL ESTATE	1384.54	6519.09	5358.80	3915.87	3127.72	2616.86	2636.26	5270.67	30829.81
HOUSEHOLD GOODS	5959.60	4476.16	3128.83	774.26	653.01	2032.06	50.01	870.01	17883.94
TOTAL REAL PRUP.	45343.56	53279.25	33735.55	11753.17	9411.24	8400.43	3714.34	7147.57	172785.11
PROFIT SHARING PLANS	444.18	411.64	623.24	200.84	200.81	106.61	52.47	111.28	2151.07
RETIREMENT PLANS	2005.59	2670.58	1495.32	982.52	701.84	366.77	41.15	30.22	8293.99
ESTATES IN PROBATE	34.39	0.00	2121.85	0.00	7.12	0.00	33.42	878.08	3074.86
TOTAL MISC ASSET	2484.16	3082.22	4240.41	1183.36	909.77	473.38	127.04	1019.58	13519.92
TOTAL ASSETS	63290.85	75093.84	68481.84	29758.02	23363.65	31796.87	15081.30	63361.03	370227.38

Notes and Sources: as in Table V-13

COMPONENTS OF WEALTH FOR
INDIVIDUALS AGED 55 TO 64,
CLASSIFIED BY WEALTH
(millions of dollars)

Table V-17

	WEALTH CLASSES								
	BELOW 15	15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000	TOTAL
CHECKING ACCOUNTS	1630.24	768.75	1166.41	585.82	1023.50	417.49	280.26	530.75	6403.23
SAVINGS DEPOSITS	6103.02	6113.38	7691.49	3222.31	3482.13	834.66	563.22	667.54	28677.74
CREDIT BROKERAGEACT.	0.00	0.26	0.00	0.10		51.88	3.63	20.83	77.41
TOTAL CASH	7733.27	6882.39	8857.90	3808.22	4506.34	1304.02	847.12	1219.12	35158.38
FEDERAL SAVING BONDS	1184.07	1752.25	3114.07	1445.74	1034.43	565.81	178.61	126.19	9401.17
OTHER FU. SECURITIES	5.46	51.13	119.54	1.81	94.58	28.61	11.09	839.88	1152.09
STATE + LOCAL BONDS	0.00	0.00	0.00	475.40	35.12	42.46	323.27	3192.58	4068.83
CORP. + FOFIN. BONDS	16.55	879.62	14.06	258.96	87.90	202.75	127.43	355.97	1943.23
TOTAL BONDS	1206.08	2682.99	3247.66	2181.91	1252.03	839.63	640.40	4514.61	16565.32
TRADED STOCK	734.22	3298.49	4896.77	11143.40	9977.98	11131.92	8153.40	21255.28	70591.47
CLOSELY HELD STOCK	152.18	1.09	654.57	537.94	1797.02	3373.84	9590.50	18501.47	34608.60
STOCK, TYPE UNAVAIL.	0.00	336.87	0.00	92.21	4.48	187.96	32.01	0.00	653.53
INVESTMENT CLUBS	2.22	0.00	0.54	1.64	0.00	0.62	41.64	2.78	49.45
TOTAL STOCKS	888.63	3636.45	5551.88	11775.19	11779.47	14694.35	17817.55	39759.53	105903.05
MORTGAGES AND NOTES	510.60	186.59	3394.65	1243.98	2693.80	4987.95	1162.29	1183.53	15363.41
EQUITY LIFE INSUR.	5806.46	3423.44	2970.23	1430.81	2482.23	753.68	866.49	626.61	18379.95
ANNUITIES	0.00	101.03	130.08	86.20	77.04	22.98	2.41	12.37	432.10
TRUST ASSETS	50.53	22.28	846.73	0.00	842.19	146.32	135.54	3144.97	5188.56
NONCORP. BUS. ASSETS	3492.02	4092.73	13851.88	2714.30	9616.86	16073.37	363.35	2918.35	53122.86
TOTAL OTHER FIN.	9859.61	7826.08	21213.57	5475.29	15712.12	21984.30	2530.08	7885.84	92486.88
PRINCIPAL RESIDENCE	23238.79	28844.78	25958.76	8261.94	5651.13	2251.81	2388.57	1541.20	98136.98
OTHER REAL ESTATE	1171.61	1483.41	12625.26	4321.31	6965.31	2897.05	2149.85	3980.33	35594.13
HOUSEHOLD GOODS	3072.89	2173.21	2211.60	752.56	747.20	487.34	140.48	256.48	9841.76
TOTAL REAL PROP.	27483.30	32501.40	40795.61	13335.81	13363.65	5636.20	4678.90	5778.01	143572.86
PROFIT SHARING PLANS	195.93	154.39	138.67	300.80	687.71	64.76	389.75	176.23	2108.25
RETIREMENT PLANS	665.52	796.66	575.99	648.73	466.67	38.37	310.52	141.63	3644.09
ESTATES IN PROBATE	10.92	25.01	86.73	142.62	272.92	263.54	542.88	530.89	1875.50
TOTAL MISC ASSET	872.37	976.07	801.39	1092.15	1427.30	366.67	1243.15	848.75	7627.84
TOTAL ASSETS	48043.24	54505.38	80468.01	37668.58	48040.90	44825.17	27757.19	60005.86	401314.32

Notes and Sources: as in Table V-13.

COMPONENTS OF WEALTH FOR
INDIVIDUALS Over 64 Years Old,
CLASSIFIED BY WEALTH.
(millions of dollars)

Table V-18

	WEALTH CLASSES									TOTAL
	BELOW 15	15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000		
CHECKING ACCOUNTS	1572.08	1188.98	513.57	404.39	859.12	1297.47	723.53	931.75	7490.89	
SAVINGS DEPOSITS	8547.51	7015.50	8779.57	4777.20	3334.91	1896.69	1017.45	260.04	35628.87	
CREDIT BROKERAGEACT.	0.00	0.00	0.00	0.00	0.32	9.56	0.25	2.23	12.35	
TOTAL CASH	10119.58	8204.48	9293.14	5181.59	4194.35	3203.73	1741.22	1194.01	43132.10	
FEDERAL SAVING BONDS	1532.93	1661.77	2472.11	1593.30	630.46	265.81	355.35	160.13	6671.87	
OTHER FD. SECURITIES	0.00	0.00	0.00	116.27	223.75	745.49	810.60	3039.86	4535.98	
STATE + LOCAL BONDS	0.00	0.00	139.42	81.39	7.77	734.55	2245.22	3622.77	6831.12	
CORP. + FORGN. BONDS	0.00	0.00	1331.69	81.45	0.00	217.17	14.43	638.30	2283.04	
TOTAL BONDS	1532.93	1661.77	3943.22	1872.41	861.98	1963.02	3425.61	7461.06	22722.01	
TRADED STOCK	623.05	2377.38	5280.01	6412.23	4560.55	32842.31	12901.16	26892.10	91888.78	
CLOSELY HELD STOCK	0.00	204.48	991.02	0.00	2540.30	2271.34	3911.59	17526.06	27444.79	
STOCK, TYPE UNAVAIL.	0.00	0.00	0.00	0.00	0.00	0.00	1334.59	1157.55	2492.14	
INVESTMENT CLUBS	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	
TOTAL STOCKS	623.88	2581.87	6271.03	6412.23	7100.85	35113.65	18147.33	45575.71	121826.55	
MORTGAGES AND NOTES	1101.02	521.56	1066.18	1676.03	191.89	2372.79	3252.70	1033.71	11215.89	
EQUITY LIFE INSUR.	5393.34	2678.87	1878.65	865.50	547.63	1588.54	1486.20	623.34	15062.07	
ANNUITIES	43.79	70.13	0.00	0.00	51.64	10.61	0.00	56.57	232.75	
TRUST ASSETS	0.00	0.00	0.00	455.99	200.90	1205.37	76.69	972.24	2511.19	
NONCORP. BUS. ASSETS	1158.62	7615.21	5930.67	13968.57	3066.63	4599.70	1574.87	2553.73	40437.99	
TOTAL OTHER FIN.	7696.77	10885.77	8845.51	16966.08	4058.69	9777.01	6390.46	5239.58	69859.88	
PRINCIPAL RESIDENCE	22414.81	22721.99	15500.67	7214.69	3377.56	3301.17	3107.96	1342.19	76581.05	
OTHER REAL ESTATE	2355.66	2593.99	6315.98	7096.64	1565.70	3162.76	5068.86	4367.20	32526.81	
HOUSEHOLD GOODS	1421.33	1163.91	704.27	589.85	199.49	186.78	215.08	112.51	4593.22	
TOTAL REAL PROP.	26191.80	26479.89	22520.92	14901.19	5142.75	6650.71	8391.90	5821.90	116101.07	
PROFIT SHARING PLANS	9.95	5.99	0.00	0.00	0.00	93.95	6.37	179.73	295.99	
RETIREMENT PLANS	157.93	60.13	400.43	82.91	0.00	123.76	47.05	42.41	914.62	
ESTATES IN PROBATE	0.00	0.00	25.49	0.00	0.00	15.57	52.55	0.00	93.61	
TOTAL MISC ASSET	167.88	66.12	425.92	82.91	0.00	233.27	105.98	222.14	1304.22	
TOTAL ASSETS	46332.86	49879.91	51299.75	45416.41	21358.62	56941.39	38202.51	65514.41	374945.83	

Notes and Sources: as in Table V-13.

COMPONENTS OF WEALTH FOR
INDIVIDUALS CLASSIFIED BY WEALTH
(millions of dollars)

Table V-19

	WEALTH CLASSES										
	BELW 15	15 TO 30	30 TO 60	60- 100	100-200	200-500	500-1000	OVR 1000	TOTAL		
CHECKING ACCOUNTS	6488.25	3836.47	3714.80	1697.15	2670.77	2361.22	1163.78	1735.84	23668.27		
SAVINGS DEPOSITS	30945.01	20513.35	25291.85	10333.86	10327.73	4161.89	1826.35	1373.87	104763.91		
CREDIT BROKERAGEACT	0.00	5.63	386.52	3.20	6.40	83.51	3.99	87.08	576.33		
TOTAL CASH	37433.26	24355.44	29383.17	12034.22	13304.90	6606.62	2994.11	3196.79	129008.51		
FEDERAL SAVING BONDS	6290.75	4951.25	7260.52	4050.90	1990.15	1141.38	571.72	294.16	26550.84		
OTHER FD. SECURITIES	5.46	101.48	215.35	118.08	471.04	809.23	831.22	4196.45	6748.31		
STATE + LOCAL BONDS	0.00	0.00	139.42	605.63	155.73	917.08	2743.95	8128.95	12690.78		
CORP + FORGN. BONDS	135.02	909.00	1647.02	585.79	363.38	579.72	165.47	1472.63	5858.03		
TOTAL BONDS	6431.22	5961.73	9262.32	5360.41	2980.30	3447.42	4312.37	14092.19	51847.95		
TRADED STOCK	3389.34	8558.51	18032.04	26139.47	22099.21	50884.57	24893.64	64364.13	218360.90		
CLOSELY HELD STOCK	157.40	1396.67	8723.00	2782.03	15796.39	17954.02	20601.32	87254.57	154665.40		
STOCK, TYPE UNAVAIL.	0.00	337.50	145.88	140.75	148.60	332.61	1366.60	1157.71	3630.65		
INVESTMENT CLUBS	31.16	7.26	133.90	47.43	7.20	7.16	41.96	3.69	279.76		
TOTAL STOCKS	3577.90	10299.94	27035.81	29109.67	38051.40	69178.37	46903.52	152780.11	376936.71		
MORTGAGES AND NOTES	2844.42	3213.16	7851.85	4989.63	7916.63	9110.64	4622.77	3913.77	44462.85		
EQUITY LIFE INSUR.	32509.51	15728.92	12132.98	4346.38	4870.14	3534.22	2650.33	1619.36	77391.64		
ANNUITIES	85.34	288.70	169.66	92.12	330.60	33.59	2.41	80.42	1082.84		
TRUST ASSETS	1093.93	74.91	1859.03	785.79	1326.00	2824.48	13875.53	32432.04	54271.70		
NONCORP. BUS. ASSETS	15035.04	22764.77	44303.73	26638.07	19794.35	29389.80	6042.35	8461.44	172429.54		
TOTAL OTHER FIN.	51508.23	42070.46	66317.24	36851.99	34237.71	44892.73	27193.38	46507.03	344638.77		
PRINCIPAL RESIDENCE	120082.77	169172.74	100529.33	30125.26	22536.32	11882.67	6870.00	4715.68	465714.78		
OTHER REAL ESTATE	6472.62	13848.99	30076.91	20402.15	20510.08	12567.68	10228.32	14146.27	128553.03		
HOUSEHOLD GOODS	24272.60	14285.67	9719.63	2918.66	2253.44	2952.64	570.99	1295.68	58269.31		
TOTAL REAL PROP.	150827.99	197307.41	140325.87	53446.07	45299.84	27402.99	17669.32	20157.63	652437.11		
PROFIT SHARING PLANS	1080.58	1351.30	1491.62	504.13	1133.06	318.97	564.24	489.61	6933.52		
RETIREMENT PLANS	6304.82	5108.36	3535.61	1897.19	1242.97	534.82	420.03	263.60	19307.39		
ESTATES IN PROBATE	75.78	66.10	2843.13	144.50	736.25	5146.86	979.42	1484.10	11476.14		
TOTAL MISC ASSET	7461.18	6525.76	7870.36	2545.82	3112.28	6000.65	1963.69	2237.32	37717.05		
TOTAL ASSETS	257299.79	286520.73	280194.77	139348.17	136666.43	157528.78	101036.38	238971.05	1597586.09		

Notes and Sources: as in Table V-13.

Components of Wealth for
Independent Individuals
Classified by Wealth
(\$ millions)

Table V-20
Less Than 25 Years Old

	Wealth Below 15	Classes 15-30	30- 60	60- 100	100- 200-	200- 500	500- 1000	Over 1000	Total
Checking Accounts	163.36	33.19	2.56	0.64	0.00	0.00	0.00	0.00	199.75
Savings Deposits	370.14	51.35	0.00	0.00	0.00	0.00	0.00	0.00	421.49
Credit Brokerage Act.	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.64
Total Cash	533.49	84.54	2.56	1.28	0.00	0.00	0.00	0.00	621.87
Federal Savings Bonds	140.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.56
Other Fed. Securities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
State & Local Bonds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corp. & Foreign Bonds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Bonds	140.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.56
Traded Stock	40.53	53.12	0.00	19.46	0.00	0.00	0.00	0.00	113.10
Closely Held Stock	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stock, Type Unavall.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Investment Clubs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Stocks	40.53	53.12	0.00	19.46	0.00	0.00	0.00	0.00	113.10
Mortgages and Notes	0.81	8.60	0.00	0.00	0.00	0.00	0.00	0.00	9.41
Equity Life Ins.	1501.98	139.79	14.11	0.02	0.00	0.00	0.00	0.00	1655.89
Annuities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trust Assets	383.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	383.56
Noncorp. Bus. Assets	29.85	70.31	0.00	14.42	0.00	0.00	0.00	0.00	114.58
Total Other Fin.	1916.20	218.70	14.11	14.43	0.00	0.00	0.00	0.00	2163.44
Principal Residence	1231.94	2363.83	0.00	67.27	0.00	0.00	0.00	0.00	3663.04
Other Real Estate	134.46	232.37	0.00	0.00	0.00	0.00	0.00	0.00	366.83
Household Goods	1638.23	137.89	8.11	7.21	0.00	0.00	0.00	0.00	1791.43
Total Real Property	3004.63	2734.09	8.11	74.48	0.00	0.00	0.00	0.00	5821.31
Profit Sharing Plans	0.00	12.74	0.00	0.00	0.00	0.00	12.00	0.00	12.74
Retirement Plans	44.38	0.00	0.41	0.00	0.00	0.00	0.00	0.00	44.78
Estates in Probate	0.00	0.00	608.23	0.00	0.00	0.00	0.00	0.00	608.23
Total Misc. Asset	44.38	12.74	608.64	0.00	0.00	0.00	0.00	0.00	665.76
TOTAL ASSETS	5679.78	3103.19	633.42	109.01	0.00	0.00	0.00	0.00	9525.41

Source: Individual responses to 1963 Federal Reserve Board Survey of the Financial Characteristics of Consumers

APPENDIX VI

ESTIMATES OF THE MARKET VALUE OF THE OUTSTANDING CORPORATE STOCK OF ALL DOMESTIC CORPORATIONS

(By Peter Eilbott, Queens College)

1. INTRODUCTION

This Appendix discusses the procedure for estimating the market value of all outstanding stock (both common and preferred) of domestic corporations; that is, companies incorporated in the United States. Two sets of data are derived. One represents the value of all outstanding stock, including shares held by other corporations. Included in this total, unavoidably, are the shares of some companies which are 100 per cent owned by other companies, even though these wholly owned subsidiaries should really be excluded from the compilations. The other set of data represents the value of all outstanding stock exclusive of intercorporate holdings, including 100 per cent owned subsidiaries.

Shares of nonprofit corporations are excluded from the totals, as are shares issued by investment companies (defined as all companies registered under the Investment Company Act of 1940). The market value of the outstanding shares of investment companies listed on exchanges is included in the totals for the exchanges, however; and the market value of the outstanding shares of unlisted investment companies is included in the value of privately held stock, though the value of all of these shares is excluded from the overall totals.

(411)

Table VI-1

The Market Value of the Outstanding Stock of Domestic Corporations (All Values Year-End in Billions of Dollars)

	(1)	(2)	(3)	(4)
	Companies listed on the New York Stock Exchange	Companies listed on the American Exchange	Companies listed on other Exchanges	Companies Traded over-the Counter
1952	118.2	12.5	3.1	28.0
1953	115.3	11.3	2.8	27.3
1954	166.1	16.4	3.6	38.0
1955	203.6	20.1	4.0	45.0
1956	214.5	23.0	3.8	46.0
1957	192.1	19.3	3.1	44.0
1958	271.8	24.1	4.3	59.0
1959	302.6	19.1	4.2	66.0
1960	302.1	18.0	4.1	69.1
1961	381.7	25.4	5.3	105.8
1962	339.9	17.7	4.0	90.1
1963	404.2	18.9	4.3	98.8
1964	465.7	19.9	4.3	120.8
1965	528.5	21.3	4.7	137.3
1966	474.2	19.4	4.0	131.4
1967	595.4	32.5	4.0	172.0
1968	680.1	49.6	5.1	220.7

(5)	(6)	(7)	(8)	(9)
Open-End Investment Companies	Investment Companies Registered With the SEC	Privately Held Companies	All domestic Corporations (1+2+3+4+5-6+7)	All Domestic Corporations Exclusive of Inter Corporate Holdings
3.9	6.5	66.2	225.4	180.8
4.1	6.8	65.5	219.7	177.3
6.1	10.2	78.0	298.0	246.4
7.8	12.9	84.7	352.3	290.3
9.0	14.4	69.5	351.4	291.0
8.7	12.8	59.1	313.5	262.4
13.2	18.8	95.1	448.7	372.4
15.8	22.5	113.9	499.1	417.7
17.0	24.8	109.3	494.8	416.6
22.8	32.0	149.8	658.8	553.4
21.3	32.1	123.3	564.2	470.5
25.2	38.1	185.0	698.3	595.0
29.1	43.4	195.8	792.2	673.4
35.2	49.8	216.3	893.5	757.7
34.8	48.8	196.2	811.2	689.5
44.7	64.1	250.3	1034.8	879.6
52.7	75.9	297.1	1229.4	1045.0

2. THE MARKET VALUE OF ALL OUTSTANDING STOCK

Table VI-1 shows the estimated market-value totals and their components. Briefly, the procedure used to derive the estimates involves the summation of the following values, which are obtained separately; the resulting totals are then adjusted to eliminate the shares of investment companies.

(1) The value of the shares of all domestic corporations listed on United States Stock Exchanges.

(2) The value of the shares of all domestic corporations traded over-the-counter, derived basically from SEC data.

(3) The value of the shares of all privately held domestic corporations. The data are obtained by estimating total dividend payments of companies not listed on exchanges or traded over-the-counter; estimated dividends are then blown up on the basis of yield data derived on a sample basis.

What follows is a detailed description of the estimating procedure and the sources from which the estimates were derived.

a. Listed Stock

(1) The Value of the Shares of Domestic Companies Listed on the New York Stock Exchange. Data obtained from the exchange.

(2) The Value of the Shares of Domestic Companies Listed on the American Stock Exchange. Data obtained from the exchange, except in the years 1952 through 1955, when the market value of domestic listed companies was not broken out separately. It was assumed that in these four years, domestic companies accounted for 74 per cent of the market value of all listed stock on the ASE (the average percentage throughout the later 1950's and most of the 1960's).

(3) The Value of the Shares of Domestic Companies Listed on Other United States Stock Exchanges. Data obtained from the Annual Reports of the SEC: they refer only to companies not also listed on another exchange. The SEC broke out the market value of foreign companies listed on other exchanges only after 1959. It was assumed that in previous years the market value of foreign companies accounted for 0.3 per cent of the value of all stock listed on other exchanges (the average percentage in the years 1960 through 1963).

b. Stock Traded Over the Counter

For the years 1952 through 1963, except for 1953, the SEC in its Annual Reports published a year end market value figure for large over-the-counter (OTC) companies. That is, it estimated the market value of all issues (common and preferred) of those companies traded OTC which had more than 300 shareholders of record. Included in the total were industrial companies, banks, insurance companies, public utilities, and real estate and other financial companies. Excluded from the total were stocks admitted to listed or unlisted trading privileges on stock exchanges, Canadian and other foreign companies, and investment companies. About 3,500 companies were included in the SEC total in 1952, and the number increased to 4,200 by 1963. The OTC market value data derived here represent the SEC totals in the years between 1952 and 1963, except for 1953. The 1953 figure was obtained by interpolating between the 1952 and 1954 SEC data on the

basis of the changes in the National Quotation Bureau 35 industrial stock index during the two years.

No SEC data are available after 1963, since the tabulations were then discontinued. A 1964 figure was obtained from the New York Stock Exchange Census of Shareowners,¹ which provides an estimate of the market value of the outstanding stock of 1,550 large OTC companies at the end of 1964. The NYSE total was adjusted upward on the basis of the relationship between the 1961 SEC figure and the 1962 NYSE Census figure² (giving an estimate of the market value of the outstanding stock of about 1,400 large OTC companies at the end of 1961). That is, the 1961 SEC total was 4 per cent larger than the 1961 NYSE total; therefore, the 1964 NYSE market-value estimate was increased by 4 per cent.

Data for 1964 through 1969 were obtained on the basis of changes in the NQB industrial index. Moody's bank stock index, and Moody's two insurance stock indexes (life, and fire and casualty) during these years. For the period 1957 through 1963, in which the SEC reported not only a total OTC value, but also broke it down into three components (banks, insurance companies, and industrials and all other), each year's values were projected to the end of the following year in two ways:

(1) The total market-value estimate was projected on the basis of the percentage change in the NQB index.

(2) The three components of the total were projected on the basis of the change in the relevant index, and the projections were then summed. The average percentage change in the insurance sector was obtained by weighting the two insurance indexes on the basis of market values in the two sectors. These values were obtained by blowing up IRS data on the amount of dividends paid by life insurance stock companies and by other insurance companies on the basis of Moody's data on yields of life insurance companies and fire and casualty companies.³ This procedure assumes that OTC issues (as well as issues with more than 300 shareholders of record) accounted for the same proportion of the total outstanding stock of both types of insurance company.

The projected totals came close to the actual SEC (or adjusted NYSE) value in most cases: 9 of the 14 projections were within 5 per cent of the actual value; and 13 of the 14 were within 8 per cent of the reported total. The results were slightly better using three indexes instead of one, though the differences were small. In 8 of the 14 cases, the projected values were smaller than the actual values, and errors of understatement were larger than errors of overstatement. The slight downward bias resulting from use of the indexes presumably reflects the fact that entries to the OTC universe are more important than departures. Moreover, there is the possibility that companies not included in the indexes grew more rapidly than those covered by it.

Since the component projection method is more logical—and also performed slightly better—it was employed to project market values for 1964 through 1969. (While an overall 1964 OTC value was avail-

¹ *Shareownership USA: The 1965 Census of Shareowners*, New York Stock Exchange, N.Y.

² *The 17 Million: The 1962 Census of Shareowners*, New York Stock Exchange, N.Y.

³ Between 1966 and 1969, when no IRS data were available, it was assumed that the market value of life insurance companies was 50 per cent greater than that of fire and casualty companies (on the basis of the relationship in previous years).

able from the NYSE, no industry data were reported. Therefore, the 1963 SEC industry totals were projected by the index method, and the resulting values were adjusted upwards so that their sum equalled the overall OTC value derived from the NYSE.) A value for the end of 1969, which can be compared with the projections, will be available sometime in 1970 from the 1970 NYSE Census of Shareowners.

Since the SEC data were based on issues of from 3,500 to 4,200 companies, OTC market values will be underestimated. In 1961, according to the SEC, about 14,000 domestic companies were quoted at one time or another in the OTC sheets.⁴ By 1969, it was estimated that 40,000 companies in all had their prices quoted in the OTC markets at some time during the year.⁵ The understatement of OTC values is probably not serious, since the public companies excluded from SEC coverage are likely to have been small. In addition, the exclusion of these companies has only a minimal effect on the estimates of the total market value of all outstanding stock, since it is likely to be compensated by an overstatement of the value of privately held stock.

c. Investment Companies

To eliminate the market value of investment companies from the total estimated value of all outstanding stock, the value of open end companies which are members of the Investment Company Institute is added to the value of all other stock (listed, OTC, and privately held), and the value of all investment companies registered with the SEC is then subtracted from the resulting total. Investment companies which are registered with the SEC, but which are not ICI members, are either listed on exchanges, and therefore included in the exchange market-value totals (these are primarily closed ends), or they are included in the estimates of the value of privately held stock. ICI members, on the other hand, while registered with the SEC, are neither listed nor in the privately held total.

Year end data on the market value of ICI members are obtained from the ICI. Data on the market values of investment companies registered with the SEC, as of June 30, are obtained from the SEC Annual Reports. These data are adjusted to year end totals by interpolating between June 30 values for ICI members. For example, the value of ICI open ends increased by 15.8 per cent between June 30, 1962 and December 31, 1962, and by 28.8 per cent between June 30, 1962 and June 30, 1963; the value of investment companies registered with the SEC increased by 31.9 per cent between June 30, 1962 and June 30, 1963. Therefore, the value of investment companies registered with the SEC is assumed to have increased by $15.8/28.8 \times 31.9$ per cent between June 30, 1962 and December 31, 1962.

⁴ Report of the Special Study of Securities Markets of the SEC, Part VII, p. 721, Washington, D.C., 1963.

⁵ Information obtained from the Research Department of the New York Stock Exchange.

For the years 1952 through 1954, in which June 30 data were not available from the ICI, year end market values of investment companies registered with the SEC were obtained by extrapolating the 1955 year end SEC total (obtained by the method discussed in the previous paragraph) backward on the basis of the year end to year end changes in the value of ICI open ends.

d. Privately Held Companies

The market value of privately held companies (all domestic corporations which are not listed, not traded OTC, and not members of the ICI)⁶ is derived by blowing up their estimated total dividend payments on the basis of yield data obtained primarily from a sample of ASE stocks. Dividend payments are obtained by subtracting total dividends paid by non privately held companies from total dividends paid by all U.S. corporations. The errors contained in the resulting market-value totals are discussed following the explanation of the procedure.

(1) *Total dividends paid by all U.S. corporations.*—Data obtained from the IRS Statistics of Income, Corporation Tax Returns. Dividends paid include distributions in cash and other assets—but not in their own stock—by all U.S. corporations. Liquidating dividends and capital gains distributions are included in the data.

Minus (2) Dividends paid by domestic corporations listed on the NYSE.—Data obtained from the exchange. They represent total cash distributions, including liquidating dividends and capital gains distributions. Before 1966, the exchange reported the amount of dividends paid by all listed companies, as well as dividend payments by listed foreign companies; the amount of dividends paid by domestic companies could therefore be obtained directly. Dividend payments by foreign listed companies have not been reported since 1965, though the market value of these companies is reported. Since there was relatively little difference, in most years before 1965, between the yield on all listed stock and the yield on foreign listed stock, dividend payments by foreign companies after 1965 were estimated by applying the yield on all listed stock to the average yearly market value of listed foreign stock.

Minus (3) Dividends paid by domestic corporations listed on the ASE and on other exchanges.—No dividend data are reported by these exchanges; dividend payments were, therefore, estimated on a sample basis. For each year between 1952 and 1968, the percentage of ASE stocks which were dividend-paying, as well as the average yield on dividend-paying stocks, was estimated on the basis of a sample of

⁶ As previously indicated, the total value of privately held companies unavoidably includes the value of some wholly owned subsidiaries, though these companies are eliminated when a total market-value figure, net of intercorporate holdings, is derived.

about one-hundred stocks. The high and low prices for the year, as well as the amount of dividends paid (if any), were determined for each of these stocks every year. Foreign issues and issues of investment companies were excluded from the sample.

About 25 per cent of the stocks in the sample were non-dividend-payers in 1952, and the percentage increased fairly steadily to over 50 per cent by 1968. Non-dividend-paying stocks were concentrated in the lower price ranges; therefore, a weighting procedure was used to determine what percentage of the total *market value* of all ASE stocks they accounted for. Each year's sample was broken up into different average-price categories: \$0-\$10, \$10-\$20, and so on; for example, a stock whose high price for the year was \$37, and whose low price was \$18, fell into the \$20-\$30 category. The number of non-dividend-paying stocks in each price category was multiplied by the average price in that category, the total summed, and the sum expressed as a percentage of the sum of the total number of stocks in each price category multiplied by the average price in that category. On the basis of this weighting procedure, the percentage of the total market value of all ASE stocks accounted for by non-dividend-paying stocks increased from about 10 per cent in 1952 to about 44 per cent in 1968.⁷

The increase apparently reflects the fact that a substantial number of old, established companies, which tended to be dividend-payers, were listed on the ASE in the 1940's and early 1950's. Many of these companies have since been listed on the NYSE. Their place has been taken, for the most part, by smaller and newer companies, which concentrate on growth and tend to follow a policy of retaining all earnings.

The average yield on each dividend-paying stock was obtained by dividing its yearly dividend payment by the average of its high and low price for the year. The weighting procedure previously employed was then used to determine the average yield for all dividend-paying stocks; that is, the average yield of dividend-paying stocks in the various price categories was weighted on the basis of the number of such stocks and the average price in each of the categories. The data indicate that average yields of dividend-paying stocks on the ASE correspond fairly closely to average yields of dividend-paying stocks listed on the NYSE, and to those contained in the NQB index, during the period 1952-1968 (though the percentage of stocks which were non-dividend-payers was much higher than on the NYSE).

The average market value of domestic stocks listed on the ASE and on other exchanges was then derived by averaging the market values at the beginning and end of each year. For example, the market value

⁷ This weighting procedure is accurate only if the higher-priced stocks have as many shares outstanding as the lower-priced ones. This seemed to be a reasonable assumption, on the basis of a small sample of stocks that was checked in one year, but there was not enough time to engage in a more thorough verification.

of domestic stocks listed on the ASE and on other exchanges was \$26.8 billion at the end of 1956 and \$22.4 billion at the end of 1957; the average market value during 1957 was, therefore, assumed to be \$24.6 billion. Each year's average market-value was then multiplied by the percentage of market value estimated to be dividend-paying, and the resultant total multiplied by the average yield on dividend-paying stocks in order to obtain the estimates of dividend payments by stocks listed on the ASE and on other exchanges.

The data, as shown in Table VI-2, indicate an increase in dividend payments through 1956, followed by a decline through 1967. This pattern is explained by the fact that the rise in market values between 1952 and 1956 overcame the effect of falling yields. Between 1956 and 1967, the continued fall in yields, combined with relative stability in market values, resulted in a decline in estimated dividend-payments. The failure of market values to rise after 1956 (until 1967) must have been the result of the same factor which apparently caused non-dividend payers to increase in importance—the replacement of older, well-established companies by newer and smaller ones.

Minus (4) Dividends paid by industrial companies traded OTC.—In 1952, and between 1957 and 1963, as previously indicated, the SEC broke down its OTC total, and an estimate of the market value of industrial stocks was, therefore, available. From 1963 on, market-value estimates were obtained (as discussed in the explanation of the derivation of an over-all OTC figure) by using the NQB index for extrapolation. Between 1952 and 1957, market-value estimates were obtained by interpolation, using the NQB index. The average market-value of OTC industrial stocks each year was then derived, adopting the same procedure employed for ASE stocks (the average of two year-end values).

Table VI-2

Estimated Dividends, American Stock Exchange and Other Exchanges

	(1)	(2)	(3)	(4)
	^a Yield (in per cent)	Percent of Market Value Dividend-Paying	Average Market Value in Year (amounts in \$ millions)	Dividends (1X2X3)
1952	6.0	90.0	15,480	836
1953	5.9	87.7	14,830	767
1954	5.1	90.2	17,050	784
1955	4.7	89.7	22,430	945
1956	4.6	88.5	25,840	1052
1957	4.7	86.6	24,610	1002
1958	4.1	84.4	25,400	879
1959	3.8	74.1	25,830	727
1960	4.3	67.4	22,700	658
1961	3.4	70.0	26,350	627
1962	4.2	65.3	26,200	718
1963	3.6	73.3	22,450	592
1964	3.5	74.0	23,700	614
1965	3.3	69.8	25,100	578
1966	3.2	66.7	24,650	526
1967	2.6	63.5	29,900	495
1968	2.4	55.6	45,580	608

^a Dividend Paying Stocks. SOURCE: See data description.

Each year's average market-value was then multiplied by the percentage of market value estimated to be dividend-paying, using the percentages obtained from the ASE sample (on the assumption that the OTC markets have been characterized by the same trend towards smaller, growth-oriented companies in recent years). The resulting dividend-paying, market-value totals were then multiplied by average-yield values, obtained from a combination of the yield on ASE stocks and the yield on stocks contained in the NQB index, to obtain estimated dividend payments of OTC industrial companies,⁸ as shown in Table VI-3.

⁸ The NQB computes a quarterly yield on the stocks in its index, and these were averaged each year to obtain yearly data. The yields conform closely, throughout the whole period, to the yields of stocks contained in the Dow Jones Industrial index. The market value of the 35 stocks in the NQB index represented about 7 per cent of the total estimated market value of all OTC industrial stocks (including public utilities) in 1967. In 1950, according to Leffer (G. Leffer, *The Stock Market*, Ronald Press, N.Y., 1951), the 35 stocks accounted for about one-sixth of the market value of all OTC industrial stocks (excluding utilities). On the strength of these two bits of information, the ASE and NQB yields each year were weighted on a 90-10 basis, on the assumption that there tends to be some correspondence in quality between ASE stocks and those OTC stocks not included in the NQB index. Since, in most years, there was relatively little difference between the ASE and NQB yields (the ASE yields were generally slightly higher), the particular weights selected would in most cases make very little difference.

Table VI-3

Estimated Dividends, Over the Counter Industrial Stocks

	(1)	(2)	(3)	(4)	(5)
	Yield on 35 Stocks in NYSE index ^a (in percent	Weighted Yield ASE and NYSE Stocks (in percent) ^b	Percent of Market Value Dividend Paying	Average Market Value in Year (\$Billions)	Dividends (\$Millions) (2X3X4)
1952	5.80	6.00	90.0	16.0 ^c	864
1953	5.75	5.90	87.7	15.5	802
1954	5.00	5.10	90.2	18.4	845
1955	4.35	4.60	89.7	24.0	995
1956	4.60	4.60	88.5	26.9	1095
1957	5.25	4.75	86.6	25.7	1057
1958	5.00	4.20	84.4	28.2	1001
1959	3.50	3.75	74.1	34.6	960
1960	3.55	4.20	67.4	37.8	1070
1961	3.00	3.35	70.0	48.2	1130
1962	3.25	4.10	65.3	51.6	1380
1963	3.20	3.55	73.3	46.2	1202
1964	2.85	3.45	74.0	54.9	1402
1965	2.80	3.25	69.8	72.5	1644
1966	3.15	3.20	66.7	81.5	1740
1967	2.50	2.60	63.5	102.6	1694
1968	1.90	2.35	55.6	138.2	1804

^a Average of 5 quarterly figures, periods ending January 1 through following January 1. Quarterly data are derived from price data at the end of each quarter and from dividends paid during that quarter.

^b Yield on dividend-paying stocks

^c End of year value.

SOURCE: See data description.

Minus (5) Dividends paid by banks and insurance companies.—Data obtained from IRS Statistics of Income, Corporation Income Tax Returns. According to the 1959 SEC Annual Report, the 700 banks included in the SEC OTC total accounted for about 75 percent of the assets of all U.S. banks at the end of 1958. At the end of 1968, the 700 largest banks in the country also accounted for about 75 percent of the total assets of all U.S. banks. A few of these banks are now listed, while almost none were in 1958; therefore, the banks which are now traded OTC probably account for less than 75 percent of the assets of all U.S. banks. Nevertheless, as an approximation, 75 percent of the dividends paid each year by all U.S. banks are subtracted. This introduces an error into the residual (because of the listed banks), which is discussed below.

According to the 1958 SEC Annual Report, the 300 insurance companies included in the SEC OTC total had a market value of \$11.5 billion at the end of 1957; while 17 insurance companies, with a market value of about \$1.6 billion, were then listed on exchanges. There are probably very few privately held insurance companies, and their market value is likely to be very small. Data in Moody's and in the New York State Insurance Reports show that the 150 largest fire and casualty companies write over 95 percent of the premiums written by all fire and casualty companies. According to Moody's, the 150 largest life insurance companies have over 95 percent of the assets of all life insurance companies. (Many of these are not stock companies, but there is no reason to assume that the largest stock companies do not also account for the great bulk of all stock company assets.) As an approximation, 85 percent of the dividends paid by all U.S. insurance companies are subtracted each year; it is implicitly assumed that the remainder represents dividends paid by listed insurance companies and has already been subtracted, and that the privately held total includes no insurance companies.

Minus (6) Capital gains distributions.—Total dividends paid by U.S. corporations, as reported by the IRS, include capital gains distributions; these must be subtracted to arrive at a true dividend residual. The totals subtracted here are those reported by the ICI for its member funds. Total capital gains distributions reported in the National Income Supplement in its reconciliation of IRS dividends with National Income dividends are not subtracted; the data include capital gains distributions of listed closed-end funds, and these payments had, for the most part, already been removed when NYSE dividends were subtracted.

Minus (7) Dividend payments, open-end mutual funds.—Total reported by the ICI. Dividend payments by closed-end funds are not subtracted, since the NYSE dividend total includes payments by listed closed-ends.

Equals (8) residual.—Dividends paid by privately held companies. This residual was blown up on the basis of the yield data employed for OTC industrials; that is, the weighted average of ASE and NQB yields. The use of these yield data represents an attempt to treat privately held companies in the same fashion as publicly traded ones. IRS data on the value of privately held stock appearing in estates

are not used in the calculations.⁹ The IRS tends to value this stock either in terms of book value or, when it tries to determine market value, it apparently uses very conservative price-earnings ratios.

The market value totals thus derived were increased by 25 per cent to take account of non-dividend-paying companies; that is, it was assumed that non-dividend-payers accounted for 20 per cent of total market value in the privately held sector. The use of this percentage is based on two assumptions. First, that a larger percentage of privately held companies than of publicly traded ones is likely to be non-dividend-paying. Second, that privately held companies have not been characterized by the same trend toward a sharp increase in the percentage of non-dividend-payers which has characterized companies listed on the ASE (and, probably, those traded OTC) since the late 1950's. The market value of privately held companies is tied, by and large, to book values for estate and other purposes (though it is treated differently in this analysis); therefore, these companies would not have quite the same incentive as publicly traded ones to retain all of their earnings and to generate a rapid growth of profits, thereby raising the price of their stock and creating capital gains. Consequently, it is arbitrarily assumed that non-dividend-payers accounted for a higher percentage of companies in the privately held sector than in the publicly traded one in the early 1950's, but that the percentage has not increased since.

The resulting market value data are yearly averages. They are converted to year-end totals on the basis of the relationship each year between the year-end and the average value of the NYSE composite index. In the years 1966 through 1968, it was assumed that the market value of privately held stock accounted for the same percentage of the total market value of all outstanding stock that it accounted for in 1965.

Following are the major problems connected with the estimates of the market value of privately held stock (aside from the assumption that 20 per cent of the companies are non-dividend-payers).

(1) Errors in the size of the residual:

(a) OTC market values are understated because of the limited coverage of the SEC (and NYSE) data. As a result, dividend payments by OTC industrial stocks are understated, the amounts deducted from total dividend payments by U.S. corporations are too small, while the residuals are too large. The market value of all outstanding stock is thereby not affected materially, since the resulting overstatement of the value of privately held stock is likely to offset the understatement of OTC market values. The offsetting errors may not cancel exactly, since the price dividend ratios used to obtain privately held market values may differ from price dividend ratios in the OTC industrial sector.

(b) 75 per cent of the dividends paid by all U.S. banks have been subtracted in arriving at a residual, since banks traded OTC accounted for 75 per cent of the assets of all banks in 1958. Several large banks listed in the 1960's; therefore, it seems likely that the percentage of total dividends accounted for by OTC banks gradually declined during the decade. Consequently, the amounts sub-

⁹ Internal Revenue Service, 1965 Statistics of Income, *Fiduciary, Gift, and Estate Tax Returns*, Washington, D.C., 1967.

tracted in recent years as dividend payments by OTC banks are too large, and the residuals, therefore, too small.

(c) 85 per cent of the dividends paid by all U.S. insurance companies have been subtracted in arriving at a residual. The remaining dividends were assumed to represent payments by listed insurance companies, which had already been subtracted. If listed insurance companies increased in importance during the 1960's, the amounts subtracted as dividend payments by OTC insurance companies are too large, and the residuals are too small.

(d) Total dividends paid by all U.S. corporations include liquidating dividends. Liquidating dividends paid by NYSE companies have been deducted, but not those paid by other listed, or OTC, companies. Therefore, too little is being deducted, and the residuals are too large. (This is probably a very small item.)

(e) Total dividends paid by all U.S. corporations include capital gains distributions. Capital gains distributions by investment companies listed on the NYSE, and by open end companies which are members of the ICI, have been deducted, but not those paid by other investment companies. Therefore, too little is being deducted, and the residuals are too large.

(f) It was assumed that non-dividend-payers accounted for the same percentage of both OTC industrial stocks and ASE stocks. If this assumption is not valid, the amount of dividends paid by OTC industrial companies is not estimated correctly, and, depending on the direction of the error, the residuals are either too large or too small.

Items (a), (d), and (e) probably outweigh in importance items (b) and (c); with no knowledge of the direction of error in item (f), it seems likely that the residual is too large. The major source of error is probably item (a), and there is likely to be an offsetting error in the OTC market value estimates. Therefore, the estimates of the total market value of all outstanding stock are unlikely to be seriously in error due to mistakes in calculating the size of the residual representing dividends paid by privately held companies, unless there is a significant difference between the percentage of non-dividend-payers among OTC industrial stocks and among ASE stocks.

(2) Estimates of the market value of privately held companies in a *particular year* may be subject to a fairly sizeable error. The total for any year depends crucially not only on the size of the dividend residual, but also on the yield value employed to blow up the residual. If a figure of 3.5 per cent is used, and a more reasonable figure would have been 4 per cent, the market value total would be overstated by one seventh. Consequently, if the yield data derived from the sample of ASE stocks were not representative, a particular year's estimate of the value of privately held stock may be considerably off in relation to totals for either the preceding year or the succeeding year. For example, the decline from 1955 to 1956, and the very rapid increases from both 1957 to 1958, and 1962 to 1963, seem unreasonable. For the period 1952-1968 as a whole, the yield data seem reasonable. Therefore, if it is appropriate to use these data for privately held stock, the market value totals over the whole period should be reasonably satisfactory, despite shortcomings in any particular year's figure.

(3) The estimates of the market value of privately held companies include the value of open end investment companies which are not members of the ICI, non-listed closed ends, and other types of investment companies, since these companies' dividend payments are in the dividend residual. The value of these companies is not included in the total market value of all stocks, since they are registered with the SEC, and the value of all registered companies has been subtracted in arriving at an over all total. In the same way, listed closed ends are in the NYSE and in the ASE totals, though they are not in the over all market value total.

(4) The privately held total includes wholly owned subsidiaries filing separate tax returns. This includes companies which could file consolidated returns since they are owned 80 per cent or more by another company (95 per cent before 1954), but which choose to file separate returns. It also includes companies which are completely, or largely, owned by other companies—for example, in the oil industry—but whose ownership is so divided that no one company owns as much as 80 per cent of the subsidiary; in this situation, the subsidiary must file a separate return. Dividends paid by subsidiaries filing separate returns are included in total dividends paid by all U.S. corporations and are, therefore, included in the dividend residual, unless the subsidiaries have sufficient public ownership to be listed or traded OTC.

If privately held stock is to be defined as stock in companies which are publicly held but are not listed or traded OTC, subsidiaries which have little or no public ownership should really be excluded, since they are, for all intents and purposes, part of their parent companies. In the absence of data on the importance of these subsidiaries, there seems to be no way to eliminate them. As discussed below, there has been an increase in the extent of consolidated filing, so subsidiaries should account for a smaller percentage of the privately held total than they previously did. In any case, though, these subsidiaries are not included in the estimated market value of all outstanding stock net of intercorporate holdings.

There is a slight downward trend in the percentage of market value accounted for by privately held companies (considering the period as a whole, and ignoring individual years, where there may be considerable error), but the change is small. Privately held stock accounted for about 27 per cent of the total value of all outstanding stock in 1952–1955 (before deducting intercorporate holdings), and about 24 per cent in 1962–1965. Had there been no increase in consolidated filings (there was a sharp increase in 1964 and 1965), the decline would have been even smaller. This is a surprising finding, considering the fairly large number of companies which turned to public ownership after 1958. It is probably explained, in part, by the limited coverage of the SEC OTC data, which resulted in an increasing understatement of OTC values and a correspondingly increasing overstatement of the value of privately held stock (while leaving the total market value figure for all outstanding stock basically unaffected).

e. Intercorporate Holdings

The total market value of all outstanding stock was reduced each year by the ratio of dividends received by domestic companies from domestic companies to total dividend payments by domestic companies

in that year. In computing these ratios, total dividends and capital gains distributions of mutual funds were subtracted from total domestic corporate dividend payments, and dividend income of mutual funds was subtracted from dividend receipts of domestic companies. (The dividend receipts data do not include capital gains income of mutual funds.) This adjustment permits the exclusion of stock held by mutual funds from intercorporate holdings. Data on the dividend income of mutual funds were unavailable; their dividend payouts were used as a proxy (since the funds are required to distribute almost all of their dividend income). In 1966 through 1968, intercorporate holdings were assumed to account for the same percentage of total outstanding stock that they accounted for in the years 1963-1965.

Dividends Paid and Received by U.S. Corporations
(In Millions)

	Dividends Paid			Dividends Received			Ratio of Dividends Received to Dividends Paid (in %)
	All U.S. Corporations (a)	Investment Companies (a)	All U.S. Corporations Except Investment Companies (a)	All U.S. Corporations (b)	Investment Companies (b)	All U.S. Corporations Except Investment Companies (b)	
1952	11,262	280	10,982	2,350	175	2,175	19.8
1953	11,601	280	11,321	2,389	200	2,189	19.3
1954	11,913	380	11,533	2,332	225	2,107	18.3
1955	13,592	533	13,059	2,572	268	2,304	17.6
1956	14,498	665	13,833	2,688	315	2,373	17.2
1957	14,914	695	14,219	2,681	365	2,316	16.3
1958	14,951	725	14,226	2,829	412	2,417	17.0
1959	16,242	942	15,300	2,948	460	2,488	16.3
1960	17,193	980	16,213	3,084	520	2,564	15.8
1961	18,038	1,135	16,903	3,276	565	2,711	16.0
1962	19,555	1,158	18,407	3,645	595	3,050	16.6
1963	21,105	1,152	19,943	3,592	630	2,962	14.8
1964	23,205	1,355	21,950	4,022	740	3,282	15.0
1965	25,997	1,845	24,152	4,521	845	3,676	15.2

(a) Includes capital gains distributions.

(b) Excludes capital gains income. Investment companies' dividend payouts are used as a proxy for their dividend receipts.

Source: IRC, Moody's.

The data, as shown in Table VI-4, indicate that the ratio of dividends received to dividends paid declined from a level of about 20 per cent in 1952 to a level of about 15 per cent in 1963-1965. This decline is surprising, considering the extent to which companies have acquired stock in other companies over the last 15 to 20 years. The decline is probably explained, in large part, by an increase in consolidated filings. In 1952, corporations filing consolidated returns accounted for 10 per cent of all corporate assets and 17 per cent of all dividend payments.¹⁰ In 1965 they accounted for 25 per cent of all assets, and 41 per cent of all dividend payments.¹¹ While some of the increase may simply reflect mergers which have occurred during the period (if two previously independent companies merge, they may then file consolidated returns), a large part of the increase probably reflects the fact that subsidiaries which previously filed separate returns are now filing consolidated ones. There were significant changes in the tax laws affecting consolidated returns in both 1954 and 1964; in these two cases, especially in 1964, there was a sharp increase in the number of consolidated returns filed immediately after the law was changed. What has apparently happened, therefore, is that some subsidiaries which used to be in the intercorporate total are no longer recorded as such.

f. Treasury Stock

The market value of stock listed on the NYSE and the ASE includes Treasury stock (shares held in corporate treasuries for stock options, acquisitions, conversions of convertible debentures, and so forth). While the SEC Annual Reports made no specific statements on the subject, it seems likely that the OTC market value data also included the value of Treasury stock. If stockholdings of the household sector are to be derived as a residual after subtracting all other ownership groups' holdings from the total value of outstanding stock (including Treasury stock), the residual will then be too large. A quick check of a few companies in one year indicated that Treasury stock was insignificant for large companies, but accounted for as much as 10 per cent to 20 per cent of the total number of outstanding shares of smaller companies.

¹⁰ Internal Revenue Service, 1952 Statistics of Income, *Corporation Income Tax Returns*, p. 74.

¹¹ Internal Revenue Service, 1965 Statistics of Income, *Corporation Income Tax Returns*, p. 201.

3. SOURCES OF ERROR IN THE ESTIMATES

Most sources of error in the estimates of the market value of all outstanding stock have already been discussed in the description of the derivation of the market value of privately held stock: errors in the size of the dividend residual, errors arising from the assumption that 20 per cent of privately held companies are non-dividend-payers, and errors arising from the use of the yield data derived from the sample of ASE stocks. There is one additional source of error, arising from a situation the reverse of that caused by the filing of separate tax returns by wholly owned subsidiaries.

A company could be 90 per cent, or even 99 per cent, owned by another company, and file a consolidated return with its parent, while still having enough shareholders to be listed on an exchange, or, more probably, to be traded OTC. The total market value of the stock of such a company would be included in the value of listed or OTC stock, but no deduction would be made for that fraction of the company's shares held by its parent corporation, since the IRS would not record either its dividend payments or the dividends received by the parent company from its subsidiary. Western Electric is an example of such a company. Having attained 300 shareholders of record, it was first included in the OTC universe of the SEC in 1960. However, since the company filed a consolidated return with AT & T, that fraction of its shares and market value owned by AT & T (over 98 per cent) would not be subtracted in arriving at an estimate of intercorporate holdings.

Under such circumstances, the value of intercorporate holdings is understated, and the market value of all outstanding stock net of intercorporate holdings is overstated. There are not likely to be very many companies which file consolidated returns, but which have a sufficient number of shareholders to be listed or traded OTC; however, there are probably several large companies in this category (including the above mentioned Western Electric and other subsidiaries of AT & T), and they might account for several billion dollars in market value.

4. MARKET VALUES BY INDUSTRY

Table VI-5 shows the industrial distribution of the market value of all outstanding stock. The following procedure was used to obtain these estimates; limitations of the procedure are discussed following the explanation.

Table VI-5

Market Values, by Industry, of the
Outstanding Stock of Domestic
Corporations (\$Billions, Year-End Values)

Industry	1952	1953	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Aircraft	1.6	1.9	4.7*	3.2*	4.6*	4.5	4.4	4.8*	5.7	6.4	8.5	14.7
Amusement	1.8	1.3	1.7*	1.5*	2.4*	1.8	2.4	3.0	2.3	3.1	3.8	4.8
Auto	11.3*	9.8*	20.6*	15.3*	22.6*	27.3*	20.6*	28.7*	27.1*	36.2*	43.7*	47.5
Building Trade	1.4	1.3	3.0	2.9*	4.5	4.7	4.8*	6.0*	4.8	5.2	5.6*	6.8
Chemical	24.6	24.7	42.2	38.3	53.0	67.0	62.1	72.9	77.6	90.3	111.0	96.1
Electrical Equipment	9.6	10.0	16.3	15.7	22.9	41.6	41.3	52.0	39.8	49.3	50.4	65.5
Financial (Including Investment Companies)	34.6	32.9	46.2	54.3	72.8	89.0	92.9	140.8	111.8	135.8	148.3	190.2
Food Products	9.7	11.5	11.0	11.3	16.8	17.0	22.7	30.3	25.1	28.3	32.8	38.0
Leather	.6	.5	.6	.5	.8	.9	.9	.9	.9	1.4	1.7	2.1
Machinery & Metals	9.4	9.6	16.2	13.3	17.4	27.1	26.4	30.1	22.8	24.8*	29.7*	42.7*
Mining	4.1	3.5	9.5	5.9	9.9	10.4	8.4	9.9	7.6	8.7	9.6	12.2
Office Equipment	2.7	2.8	8.0	9.5	13.9	6.3	8.8	17.5	12.3	23.1	23.7	46.1
Paper & Publishing	8.6	9.7	16.8	15.0	20.9	20.5	19.1	22.6	17.3	20.6	28.4	31.3
Petroleum & Natural Gas	34.9	33.6	61.2	46.3	65.0	53.9	53.0	64.8	69.4	95.3	86.7	95.9
Railroads & Railroad Equipment	8.3	7.2	8.6	5.9	9.0	8.9	7.6	9.2	8.7	10.8	12.6	14.4
Real Estate	4.7	4.1	5.2	3.5	7.5	10.2	7.9	10.7	8.6	17.3	16.6	19.8
Retail Trade	11.4	12.1	12.5	12.4	19.8	22.4	22.6	35.3	27.4	32.2	48.9	47.8
Rubber	1.9	1.8	3.9	3.7	5.1	7.8	4.5	6.1	4.5	5.4	6.1	6.7
Shipbuilding	.9	.9	1.9	1.6	1.6	.8	1.2	1.1	1.5	1.4	1.8	2.0
Steel and Iron	8.0	7.3	17.4	11.5	18.8	20.9	15.8	20.5	13.8	17.8	22.7	25.9
Textile	4.5	3.8	3.7	2.5	4.5	5.1	4.1	6.4	5.8	7.3	11.9	12.9
Tobacco	2.0	2.0	2.1	2.3	3.2	3.6	4.6	7.7	4.2	4.6	4.7	5.4
Utilities	31.4	31.1	47.3	44.6	63.8	68.8	82.1	107.9	96.1	109.9	124.6	111.5
Total	228.0	223.4	360.6	321.0	460.8	520.5	518.2	689.2	595.1	735.2	833.8	940.3

* New York Stock Exchange Market Value only

Dividend data by industry for domestic stocks listed on the New York Stock Exchange (encompassing only dividends paid on common stock) were obtained from the exchange. Dividend data for all domestic corporations (representing payments on both common and preferred stock) were obtained from IRS Statistics of Income, and were placed on a basis comparable to that of the NYSE.¹² That is, the IRS does not necessarily assign industrial subgroups to the same industries to which they are assigned by the NYSE. Since dividend data by industrial subgroups were available only from the IRS, the IRS industry categories were brought into conformity with those of the NYSE. Table VI-6 shows the IRS industrial subgroups contained within each NYSE industry.

¹² Dividend data for industrial subgroups were not available from the IRS in 1954 or 1955; therefore, industry totals were not derived in these two years. A small percentage of IRS dividends (less than 8 per cent in most years) were not classified by industry; these dividends were contained in an "all other" category or they represented payments by industrial subgroups for which the appropriate NYSE industry could not be determined. Similarly, before 1959, a small percentage of NYSE dividends (less than 2 per cent) were not classified by industry; these dividends were contained in an "all other" category or in a category labeled simply "U.S. companies abroad."

Table VI - 6

NYSE Industry	IRS Industrial Subgroups Contained in this Industry
Aircraft	Aircraft and parts; air transportation
Amusement	Motion pictures; amusement, except motion pictures
Automotive	Motor vehicles and equipment; urban, suburban, and interurban transport; trucking and warehousing; other motor vehicle transportation
Building trade	Construction
Chemical	Chemical and allied products; stone, clay, and glass products
Electrical equipment	Electrical machinery and equipment; scientific instruments, photographic equipment, watches
Financial	Finance; insurance; lessors of real property
Food products	Food and kindred products; beverages
Leather	Leather
Machinery and metals	Fabricated metal products; machinery, except transportation and electrical (excluding office equipment and, before 1959, agricultural machinery)
Mining	Mining and quarrying (excluding crude petroleum and natural gas production)
Office equipment	Office equipment; furniture and fixtures
Paper and publishing	Paper and allied products; printing and publishing; lumber and wood products
Petroleum and natural gas	Crude petroleum and natural gas; petroleum and coal products
Railroad and railroad equipment	Railroad transportation; railroad equipment
Real Estate	Real estate, except lessors of real property other than buildings
Retail trade	Retail trade
Rubber	Rubber products
Shipbuilding	Ship and boat building; water transportation
Steel and iron	Primary metal industries
Textile	Textile and mill products; apparel manufacture
Tobacco	Tobacco
Utilities	Communications; electric and gas; other public utilities

NYSE dividends were then subtracted from IRS dividends in order to obtain estimates of the industrial distribution of non-NYSE dividends.¹³ Market value/dividend ratios by industry were then derived for companies listed on the NYSE, using year-end data on industry market values for common stocks. These ratios were applied to the estimates of non-NYSE dividend payments by industry in order to obtain preliminary estimates of the industrial distribution of the market value of stocks not listed on the NYSE.

These data were then adjusted each year by applying the following ratio (from that year's data) to each industry total:

$$\left. \begin{array}{l} \text{The total market value} \\ \text{of all outstanding stock} \\ \text{minus} \\ \text{The market value of all} \\ \text{NYSE stock} \end{array} \right\} \begin{array}{l} \text{The sum of the preliminary} \\ \text{estimates of the market val-} \\ \text{ues of non-NYSE industries} \end{array}$$

In these calculations, the total market value of all outstanding stock includes the value of investment companies, since the dividend totals for the financial industry include dividends paid by investment companies. Similarly, the value of investment companies is included in the value of NYSE stock.

This procedure, in a very rough way, adjusts for the fact that price-dividend ratios may not be the same for both NYSE and non-NYSE stocks. It also adjusts, again in a rough way, for the exclusion of IRS dividends in the "all other" category, as discussed below.

The adjusted estimates of the market values, by industry, of the outstanding corporate stock of non-NYSE companies are added to the NYSE industry market value totals (including both common and preferred stock) in order to obtain the final estimates of the market value of all outstanding corporate stock by industry (including investment companies).¹⁴

Following are the limitations of the procedure employed here:

(a) The NYSE and the IRS may not always assign particular companies to the same industry, since the NYSE does not necessarily follow the Standard Industrial Classification. As a result, there may be a lack of comparability between the IRS industry data and the NYSE industry area. A similar problem arises when the IRS, but not the NYSE, transfers a company from one industry one year to another industry the following year.

(b) The IRS may on occasion transfer industry subgroups between industries. The year to year comparability of the IRS industry classifications would have to be examined in order to obtain more accurate industry totals.

¹³ The farm machinery industry was excluded in these calculations. Dividend data for the industry were available from the IRS and the NYSE only through 1958; after 1958, the industry's dividends were included in the machinery and metals category. Totals for the service industry (as reported by the NYSE after 1958) were also excluded, since the comparable IRS industry could not be determined.

¹⁴ Because of a few minor adjustments and discrepancies, the sum of the adjusted industry totals is less than the market value of all outstanding stock (including investment companies) throughout the whole period. For example, in one or two cases every year, reported dividend payments by NYSE companies in specific industries exceeded total dividend payments by that industry as reported by the IRS. Market value data for these industries represent only reported NYSE market values. Also, NYSE market values for the "all other" farm machinery, services, and "U.S. companies abroad" industries are excluded from the over-all market value totals in the procedure followed here.

(c) The IRS data include both common and preferred dividends, while the NYSE data include only common dividends. Since the industrial distribution of common and preferred dividends is likely to differ, an error of unknown magnitude is introduced into the results.

(d) As previously indicated, a small percentage of IRS dividends were in an "all other" category or were in industrial categories for which the comparable NYSE industries could not be determined. However, NYSE listed companies which are in these various categories do end up in some industry in the NYSE classification. The procedure used here assumes that the industrial division of the companies contained in these IRS categories corresponds to the industrial division of the preliminary estimates of the market value of non-NYSE companies.

5. COMPARISON WITH OTHER ESTIMATES

The over-all market value totals derived here are generally smaller, by 10 percent or less, than the totals reported by the SEC for the 1950's. The discrepancy between the two series reflects, in part, the inclusion, in the SEC data, of the amount of foreign stock outstanding in the U.S. Only a small portion of the difference, however, can be accounted for by this factor. The values derived here become larger than the SEC totals in 1961, and the differences between the two series become steadily more pronounced after 1964. By the end of 1968, the discrepancy amounts to \$283 billion, or 37 percent of the SEC total. The basic reason for the growing discrepancy in the 1960's is the differential price behavior of stocks listed on the NYSE, the ASE, and those traded OTC. The SEC data are obtained by extrapolating a 1960 benchmark figure on the basis of changes in Standard and Poor's 500 stock-price index, which includes only stocks listed on the NYSE. However, OTC prices started increasing more rapidly than NYSE prices after 1960, while ASE prices started increasing more rapidly after 1966. Therefore, the use of a price index based solely on NYSE price changes creates a constantly increasing divergency (at least, throughout a good part of the 1960's) from actual market values.

The series derived here is also somewhat smaller than the Federal Reserve Board series in the 1950's; the values are closer to the FRB totals than to the SEC totals in 1952-1955, and further apart between 1956 and 1960. The series becomes larger than the Federal Reserve Series in 1963 and remains larger through 1968, but the values are much closer to the FRB totals than to those of the SEC. The Federal Reserve Board data are apparently derived by applying a constant multiplier to the total value of listed stock (that is, it is assumed that the value of OTC and privately held stock increased in proportion to the increase in the value of listed stock). Even though OTC prices increased more rapidly than prices of listed stock during the 1960's, the discrepancy between the two series was apparently kept relatively small by new listings; that is, the increase in the number of companies listed on exchanges in the 1960's caused listed market values to rise considerably more rapidly than the rise shown by exchange price indexes.

The total derived here for 1960 is about \$25 billion, or 5 per cent larger than the estimate derived by Crockett and Friend¹⁵ (after the two estimates are placed on a comparable basis, since these authors included the value of investment companies as well as the value of foreign stock outstanding in the U.S. in their total, and used middle of the year, rather than year end, values). The difference is completely in the OTC and privately held sector, as might be expected. It does not seem to be due to the fact that they estimated OTC market values through a dividend residual method, instead of using the SEC data. A small part of the difference is due to two minor errors made by Crockett and Friend. First, in obtaining a dividend residual to estimate the value of unlisted stock, they subtracted total dividend payments by listed companies from total dividends paid by U.S. corporations. This subtracts too much, since dividend payments by listed companies include payments by Canadian listed companies to their non-U.S. stockholders, though these amounts are not included in total dividend payments of all U.S. corporations. The subtraction of payments by Canadian listed companies to their U.S. stockholders is compensated for by Crockett and Friend when they add total dividend payments by foreign companies to their U.S. stockholders to total dividends paid by U.S. companies, in arriving at their dividend residual. Their second error is the subtraction of total capital gains distributions from total U.S. dividend payments in arriving at a dividend residual. Since dividend payments reported by the NYSE include capital gains distributions, there is double counting; and, again, too much is deducted. As a result of these two errors, their dividend residual is too small by about 5 per cent, and they underestimate market values by about \$5 billion.

By far the major part of the difference between the two estimates can be attributed to the treatment of non-dividend-paying stock, since Crockett and Friend use almost the same yield figure employed in this analysis to blow up their 1960 dividend residual. They estimated that 9 per cent of the market value of OTC stock (except banks and insurance companies) was non-dividend-paying, and used this percentage for both OTC industrial stock and for privately held stock. Their estimate was based on a sample of 300 OTC companies drawn from the National Stock Summary.

In this analysis, a 20 per cent figure was used for the privately held sector; use of a 9 per cent figure would reduce the estimate of the value of privately held stock by about \$12 billion. In addition, in estimating dividends paid by OTC industrial companies, it was assumed here that 33 per cent of the market value of these companies was non-dividend-paying in 1960 (based on the ASE sample). Use of a 9 per cent figure would increase estimated OTC dividend payments by \$370 million. This would reduce the size of the dividend residual by 11 per cent, and reduce the estimate of the value of privately held stock by another \$9 billion.

Consequently, not only is the particular yield figure employed in estimating the market value of privately held stock important, so

¹⁵ Jean Crockett and Irwin Friend, "Characteristics of Stock Ownership," American Statistical Association, 1963 Proceedings of the Business and Economic Statistics Division, pp. 146-168.

also is the assumption about the magnitude of non-dividend-payers. This affects the privately held total directly, and affects it indirectly by influencing the size of the dividend residual.

6. SUGGESTIONS FOR FURTHER RESEARCH

a. Estimates of the Value of Privately Held Stock

These estimates could be improved in two ways. First, OTC industrial stocks could be sampled each year to determine the importance of non-dividend-paying companies. This would improve the estimates of the amount of dividends paid by OTC companies, and would improve the accuracy of the dividend residual. Second, unpublished IRS data could be examined, if possible, to determine whether they provide any information on the number of privately held companies paying dividends.

b. Estimates of the Value of Intercorporate Holdings

These estimates could be improved if additional information about wholly owned subsidiaries were available from the IRS; that is, dissemination of information about the number and importance of subsidiaries which had filed separate returns in the previous year but were now filing consolidated returns, for each of the years covered by the analysis. The data show a sharp increase in the importance of corporations filing consolidated returns. Presumably, though, only part of this increase reflects a change in corporate filing practices; a part must reflect new corporate acquisitions during the period. If the two components could be separated, the data on intercorporate holdings could be placed on a fairly consistent basis.

c. Estimates of the Value of Treasury Stock

Estimates of the value of Treasury stock could be obtained by sampling listed and OTC companies in selected years during the period covered by the analysis.

d. Estimates of the Total Value of Outstanding Corporate Stock

As indicated earlier, an error is introduced into the estimates because of wholly owned subsidiaries which file consolidated tax returns, but which have a sufficient number of shareholders to be listed on an exchange, or to be traded OTC. Some attempt could be made to determine the number and importance of those companies which fall into this category.

APPENDIX VII

THE MEASUREMENT OF FOREIGN HOLDINGS AND TRANSACTIONS IN U.S. CORPORATE STOCK

(By Lewis Lippner, Board of Governors of the Federal Reserve System)

The largest variety and most comprehensive collection of data pertaining to portfolio investment is compiled by the U.S. Treasury Department in conjunction with the Federal Reserve System. Primary statistics on the principal types of data and the principal countries or areas involved in these capital transactions are published monthly in the *Treasury Bulletin*, and to a lesser extent in the *Federal Reserve Bulletin*. Pursuant to executive order and various administrative regulations, securities brokers and dealers, banks, and other non-banking financial institutions (i.e., insurance companies, funds, etc.) are directed to report their international security transactions monthly to the Federal Reserve Banks. "The existing regulations require that all U.S. residents report transactions in long-term securities with foreigners whether made in their own behalf or on behalf of their customers provided the total of purchases or sales is greater than a monthly average of \$100,000 in the six months ending with the reporting date."¹ The S-form data are then consolidated and published by the Treasury. This is the raw material from which the Commerce Department's Office of Business Economics ultimately produces lines 34-36 and line 52 of the U.S. Balance of Payments (adjustments to S-form data are discussed below.)

In general data on foreign purchases or sales of securities² are reported on the basis of the foreign country or geographic area in which the records of the reporting institutions show the transactor to be domiciled. Transactors are likely to be financial institutions acting as agents for the actual purchaser. Because reporting institutions are not expected to go beyond the addresses shown on their records they may not be aware of the actual country of domicile of their client. Thus a beneficiary may not be domiciled in the same country as the transacting agent, and geographical classification cannot in all certainty be said to reflect the amounts actually purchased by investors purported to be domiciled in a particular country or area. The year-to-year variations in a country's purchases, however, can probably be assumed to reflect the general trend of purchases in each geographical region with the notable exceptions of transactions reported by agents lo-

¹ Report of review committee for balance of payments statistics to the Bureau of the Budget, *Balance of Payments Statistics Review & Appraisal*, April 1965, p. 77.

² Foreign purchases or sales of foreign securities should be equal to U.S. sales or purchases of foreign securities, respectively.

cated in Switzerland, the Bahamas, and Bermuda.³ Dealings in securities in these countries overwhelmingly represent the interest of clients living elsewhere.

In addition to problems related to the geographical distribution of securities purchases and sales are omissions in the data caused by the failure of transacting agents to file the appropriate reports. Most Treasury Department reporting forms are filed by banks, securities brokers and dealers, and major insurance companies. However, the growth of other financial intermediaries in recent years suggests that laxity in report filing may not be uncommon. Many U.S. investment funds, pension funds or educational institutions may invest directly in foreign assets. Furthermore, transactions in foreign securities by individual U.S. citizens, especially those living abroad, are often made through foreign channels and hence go unrecorded.⁴ The actual size of such omissions is not known, nor is there any rough indication of their magnitude. Current O.B.E. estimates of U.S. holdings of foreign securities are calculated by adding the annual flows reported to the Treasury Department with various adjustments to the benchmark statistics established by a census taken during World War II. Obviously, the accumulation of even small omissions in any direction over this twenty-year period could affect the totals quite significantly.

Estimation of foreign transactions in U.S. securities present similar problems although omissions may well be smaller in this case. Until several years ago, foreign citizens purchasing or selling U.S. securities did so almost exclusively through American banks or brokers who were subject to strict reporting requirements. Omissions still occurred, however, when the transaction was executed by a U.S. financial intermediary and the sales agent was unaware that the beneficiary was a foreign resident. Prior to the mid-1960's, the reported annual flow of foreign investments in U.S. corporate securities was relatively small and the absolute magnitude of possible omissions was probably correspondingly small. The record growth of foreign investment companies dealing largely or in some cases exclusively in U.S. securities increases the possibility of omissions inasmuch as these firms are not subject to reporting requirements required of U.S. transacting agents.

Some types of security purchases are by nature inherently difficult to classify. Total long-term portfolio capital movements are entered in the balance of payments as collected by the Treasury Department apart from adjustments made for reclassification of items that are actually direct investments.

To facilitate explanation of these adjustments, assume an American company with a Canadian affiliate desires to purchase Canadian securities. This simple purchase can be accomplished in several different ways. It can be carried out as an investment of parent company funds, in which case the transfer is actually a portfolio investment. Or, the same firm can purchase the same securities as an investment of the foreign branch. In this second case, the acquisition is not to be regarded as an international transaction at all, but is a domestic Cana-

³ See Fred Ruckdeschel, "Prospects for Foreign Purchases of U.S. Stocks," unpublished Federal Reserve study, July 1969.

⁴ *Balance of Payments Statistics*.

dian investment by a Canadian company. If the same investment is effected through the use of funds transferred from the home office to the foreign branch, the purchase should properly be considered a direct investment by the U.S. based parent firm. In many instances the U.S. parent company may have reported the capital transfer in the third case as a direct investment while the foreign subsidiary reports the same transaction as a portfolio investment. To avoid this double counting the O.B.E. finds it necessary to deduct this transfer of funds from the portfolio investment amount in the *Treasury Bulletin*.

The Treasury's reporting system only covers cash trading. But let us now assume a foreign based company purchases shares of an American enterprise by means of a stock transfer. This assignment of stock was made in lieu of a cash disbursement and will be reported by the U.S. company as a foreign direct investment provided the foreign company acquires more than 10 per cent of the voting stock of the American firm. If the foreign company purchases less than 10 per cent of voting equity it is assumed that the firm will not be participating in decisions affecting the management of the domestic company and the acquisition will be considered a portfolio investment. Thus in the latter case an offsetting entry must be made by the balance of payments division (BPD) to remove this transaction from those direct investment already recorded and add it to those portfolio investments previously reported by the Treasury Department. Lastly, let us assume that a foreign owned U.S. subsidiary floats a new stock issue in the United States. If the foreign firm decides to exercise its rights in the new issue the issue should appear both in the Treasury's portfolio investment report and in the BPD's Foreign Direct Investment Report. The entry must be dropped from portfolio investment to avoid double counting. These represent the most common adjustments performed by the Commerce Department to eliminate items properly considered direct investments in balance of payments terms from the capital movements data compiled by the U.S. Treasury.⁵ To illustrate the extraordinary magnitude of adjustments in some years, the BPD found it necessary, in 1968, to exclude the purchase of \$210 million by Royal Dutch Shell Company, Ltd. of stock newly issued by its U.S. subsidiary—the purchase was treated as a direct investment.⁶ This is not meant to imply that individual adjustments commonly run into hundreds of millions of dollars. Actually, over the period 1952-66 total adjustments of data for most foreign stock purchases by the U.S. averaged only slightly more than \$20 million per year and adjustments to figures generated for net purchases by foreigners of U.S. stocks averaged less than \$15 million per year.

⁵ Examples of adjustments are the product of conversations the author has had with Russel Scholl of the Commerce Department's Office of Business Economics.

⁶ U.S. BPD: Second Quarter 1969, *Survey of Current Business*, September 1969, U.S. Department of Commerce.