

Household Spending:

How Strong Will It Be? *By Dan M. Bechter and Jack L. Rutner*

Spending by households has played a key role in the current economic expansion. Not since the post-World War II boom in the private sector has such a large share of national output gone for personal consumption. The contribution of households to recent economic growth is even more significant when their investments in homes are counted along with their purchases of goods and services. Since the trough of the recession in early 1975, both categories of household spending have absorbed more than two-thirds of the country's production, as compared with less than two-thirds in the 11 preceding years. Because of its relatively large size, the household sector will continue to be a prime determinant of the rate at which the economy grows in the months ahead!

This article provides some insight into the probable strength of real household spending as the economy enters its fourth year of recovery. It is suggested here that durable goods and **housing**—historically the most volatile components of household purchases—will provide a

key to the strength of household spending in 1978. Although expenditures on new homes and durable goods make up only one-fifth of total household purchases, weaker growth of these components in 1978 would indicate that total household spending is also likely to grow more slowly. However, even if real spending by households on durables and homes does not grow at all, total household purchases are still expected to grow moderately in 1978 because the other components of household expenditures are likely to grow at about the 5 per cent rate projected for real disposable personal income.

THE HOUSEHOLD IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS

The product side of the national income and product accounts (NIPA) focuses on the sources of final demand (the buyers of goods and services produced) during a calendar year or quarter (Table 1, left column). The logic is that one can measure the value of a period's production by tallying up expenditures on it. Domestic buyers of the nation's output are classified as either consumers, businesses, or government. Their respective NIPA expenditures are defined as personal consumption, gross private domestic investment, and government purchases. Foreign buyers of U.S. goods

¹ This article is concerned with the economic stimulus arising from personal expenditures—what people spend on themselves and their families. Data on such expenditures and financial flows make up the preponderant proportion of statistics on the household sector, which also include transactions involving personal trusts and nonprofit organizations serving individuals.

Table 1
THE HOUSEHOLD IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS, 1976
(In Billions of Dollars)

<u>Product</u>		<u>Income</u>	
Gross National Product	\$1,707	Gross National Income	\$1,707
Personal Consumption Expenditures		Capital Consumption	179
Durable Goods	1,094	Indirect Business Taxes	163
Nondurable Goods	159	National Income	1,364
Services	443	Rental Income and Net Interest	112
Government Purchases	492	Corporate Profits	128
Gross Private Domestic Investment	361	Proprietors' Income	88
Fixed Investment	243	Compensation of Employees	1,036
Nonresidential	230		
Residential	162	Addenda:	
Household*	68	Personal (Household) Income	1,383
Nonhousehold	59	Rental Income and Net Interest	112
Changes in Business Inventories	9	Corporate Dividends	36
Exports	13	Proprietors' Income	88
Imports	163	Compensation of Employees <i>Less</i>	
	-155	Social Security Taxes	912
		Transfer Payments to	
		Persons, and Consumer	
		and Government Interest	235
Addenda:			
Household Expenditures	1,153	Personal (Household) Income	1,383
Personal Consumption	1,094	Disposable Personal Income	1,186
Residential Construction*	59	Personal Taxes	197

The household component of residential fixed investment is an estimate of the amount of investment in housing during the year by owners who occupy the new homes they buy or the existing homes they improve. The figure used here is the flow-of-funds estimate of residential investment by the household sector (\$57.6 billion in 1976), plus the flow-of-funds estimate of farm investment in residential construction (\$1.0 billion in 1976).

SOURCES: U.S. Department of Commerce and Board of Governors of the Federal Reserve System.

and services are all grouped under a fourth category—exports.

Two adjustments need to be made to the total of these categories because their sum does not quite equal total production in a particular period. The reason is that some goods purchased domestically during a particular period can be imports or could have been produced in earlier periods. Hence, in the first adjustment, the value of imports is subtracted from total purchases by subtracting it from

exports. In the second adjustment, the change in business inventories is added to investment, thereby taking account of the difference between current production that remains unsold and past production that is sold currently.

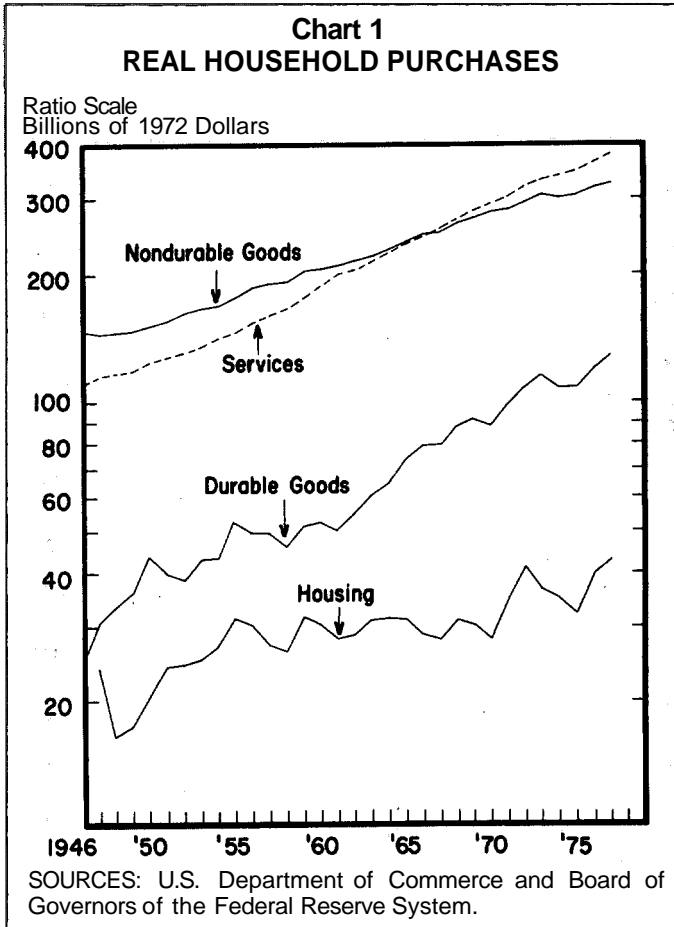
Household expenditures are included in both the personal consumption category and the gross private domestic investment category (Table 1, left column) of gross national product (GNP). As consumers, households make all

personal consumption expenditures and, as "businesses," households invest by buying new homes for their own use, as well as by improving the homes they own and occupy? Household income is derived from several sources identified on the income side of the NIP accounts (Table 1, right column), and is termed here personal income. Disposable personal income, or personal income minus personal taxes, is a measure of the household's ability to buy goods and services.

A GENERATION OF HOUSEHOLD PURCHASES

Changes in the growth rates of total household purchases during the past 30 years generally have resulted from recessions. As Chart 1 shows, real household expenditures on **durables** and housing generally reflect swings in economic activity. During recessions, real household purchases of nondurable goods and services usually do not decline because items such as food and rent are not postponable. However, purchases of new durable goods and homes are more easily postponed because households can continue to use existing stocks. During a recovery, individuals purchase the homes, cars, appliances, furniture, and other items deferred during the recession. This "acceleration" in **house-**

² Treating household expenditures that add to the nation's housing stock as investment, **while** treating all other household purchases **as** consumption, is one of the arbitrary characteristics of the NIP accounts. Ideally, perhaps, household expenditures on all durable goods, including housing, should be counted as investment. The using up of these goods (their depreciation) could then be considered part of **consumption**. This is the approach taken in the Federal Reserve Board's flow-of-funds accounts, which also go a step further than the NIP accounts by providing a measure of the household sector's **investment** in **residential construction**.



hold purchases diminishes, however, once stocks of durable goods and homes reach "desired levels."

As indicated, households purchase new durable goods and homes in order to bring their stocks of these assets more closely into line with levels they desire. Thus, the study of patterns in these purchases properly falls into the category of "stock adjustment" analysis. A stock adjustment model which fits the expenditure data fairly well assumes that purchases during any period are proportional to the difference between the actual stock and the desired stock. The following sections use this approach to determine how rapidly household

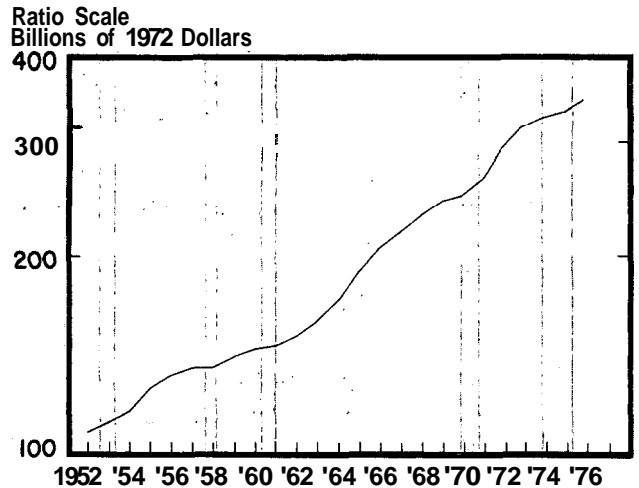
purchases will grow in the year ahead. Accordingly, attention is given in the following sections to developing quantitative estimates of actual and desired stocks of durable goods and housing.

Household Durables and the Stock-Adjustment Model

The value of the actual stock of consumer durables is a one-figure, dollar measure of the many kinds of durable goods owned by households. New goods can be valued at market prices. The values of used durables, however, are usually less than their original prices because of depreciation. If prices of used durables were readily available, as well as information on the number, types, and ages of used durables households actually own, the current value of the stock could be calculated. Such an approach can be followed for automobiles, using data on registrations and used-car prices by model, year, and make. Data on quantities and prices of other used consumer durables, however, are much less detailed.

The actual stock of household durables can be approximated by assuming the value of the stock increases by the amount of expenditures on new durables and decreases by some constant rate of depreciation on the stock of the previous period. New durable goods purchased during a particular period, such as a calendar quarter, are assumed to have been owned, on average, for one-half of that period, so a case can be made for depreciating them at one-half the full period rate. However, since a new durable good suffers sudden depreciation following its sale, a full period's rate of depreciation, the same as that applied to used durables, is applied to new durables. A slightly refined version of this method resulted in the data used in Chart 2. The annual rate of depreciation

Chart 2
STOCK OF CONSUMER DURABLES



SOURCE: Board of Governors of the Federal Reserve System.

NOTE: Shaded areas represent business cycle contractions as defined by the National Bureau of Economic Research; unshaded areas represent expansions.

assumed is about 29 per cent; constant dollar figures are used to remove the distortions caused by inflation?

The desired stock of durables cannot be measured directly. However, the stock of durable goods households want to hold can be assumed to depend upon household income. Specifically, it is assumed that households want to consume more goods, including durable goods, as their incomes increase?

Differences between actual and desired stocks can be assumed to average out to zero over long periods. This assumption allows using the long-term relationship of the actual stock of consumer durables to

³ The 29 per cent rate of depreciation in the real value of consumer durables is the rate used in the SSRC-MIT-PENN Quarterly Econometric Model of the U.S. Economy. It is believed this rate reflects market prices of used consumer durables.

⁴ This point was further developed by Dan M. Bechter in "Consumer Demand for Durable Goods," *Monthly Review*, Federal Reserve Bank of Kansas City, November 1974, p. 6, footnote 4.

Table 2
HOUSEHOLD PURCHASES OF DURABLE
GOODS, THE STOCK OF HOUSEHOLD
DURABLE GOODS, AND THEIR RATES
OF GROWTH
1970-76

	Billions of Constant 1972 Dollars		Per Cent	
	Stock at End of Year	Purchases During Year	Rate of Growth of Stock	Rate of Growth of Purchases
	(1)	(2)	(3)	(4)
1970	258.9	88.9	3.2*	-3.3*
1971	273.0	98.1	5.4	10.3
1972	294.5	111.3	7.9	13.5
1973	318.6	121.8	8.2	9.4
1974	328.9	112.5	3.2	-7.6
1975	334.0	112.7	1.6	0.2
1976	352.3	127.5	5.5	13.1
1977 est.	372.0	137.5	5.6	7.8
1978 forecast	396.5	145.0	6.6	5.5

*The 1969 values required to compute these percentage changes for 1970 are \$250.8 billion for the stock of household durables, and \$91.9 billion for purchases of household durables.

SOURCE: Federal Reserve Bank of Kansas City version of the SSRC-MIT-PENN Quarterly Econometric Model of the U.S. Economy.

income as an approximation of the relationship of the desired stock of durables to income. The long-term relationship can then be used to estimate short-term adjustments in the desired stock, given changes in real income. For example, if the actual stock of consumer durables has trended upward about 2 percentage points faster annually than household income, it may be inferred that, if income grows 5 per cent in the next year, the desired stock of durables will grow 7 per cent.

Before proceeding, it should be emphasized that the rate of growth of the stock of consumer durables differs from the rate of growth of additions to the stock of consumer durables (Table 2).

This article seeks insights into the probable strength of the latter—that is, into the rate of growth of household purchases of durable goods, which are additions to the stock of consumer durables. Such insights can be gained by noting discrepancies between rates of growth of the actual and the desired stocks. It should be kept in mind, though, that small changes in the rate of growth of the actual stock of durable goods may be associated with very large changes in the rate of growth of household purchases of durable goods. The past few years provide ample evidence of the lack of a simple correspondence between these rates of growth:

The data in Table 2 suggest that the large rate of growth of household purchases of durable goods in 1976 was primarily due to the recession-depressed level of purchases in 1974 and 1975. Whatever the reason for the 1976 rate of growth of household purchases of durable goods, sustaining that rate was required if the economy was to get the same boost from this source of demand in 1977. Judging from the first 3 quarters of data for 1977 and monthly data since, the rate of growth of household purchases of new durables is estimated to have been only 7.8 per cent in 1977, as compared with 13.1 per cent in 1976. The reason for the slower growth rate in 1977 can be understood, and the strength of household durables demand in 1978 can be forecast, by referring to the behavior of the desired stock of household durables.

As indicated earlier, the desired stock of household durables can be assumed to depend upon disposable income. This dependence is further assumed to be measured by the relationship of the actual stock of household durables to disposable income over long periods of time. Over the 1961-73 period, the actual stock in real terms grew about 1.6

percentage points faster than real disposable income?

From 1972 through 1976, real disposable income grew at an average annual rate of 2.7 per cent. Based on the relationship for the 1961-73 period, an annual rate of growth in the desired stock of 4.3 per cent ($2.7 + 1.6$) from 1972 to 1976 could justifiably be postulated. In fact, the actual real stock of durables rose at an average annual rate of 4.6 per cent over this period, suggesting that, for the 1972-76 period as a whole, actual and desired stocks grew about the same amount. This does not necessarily mean that actual and desired stocks were equal by the end of 1976. But it does imply that the discrepancies between the two that arose in individual years between 1972 and 1976 were reduced by the end of the period.

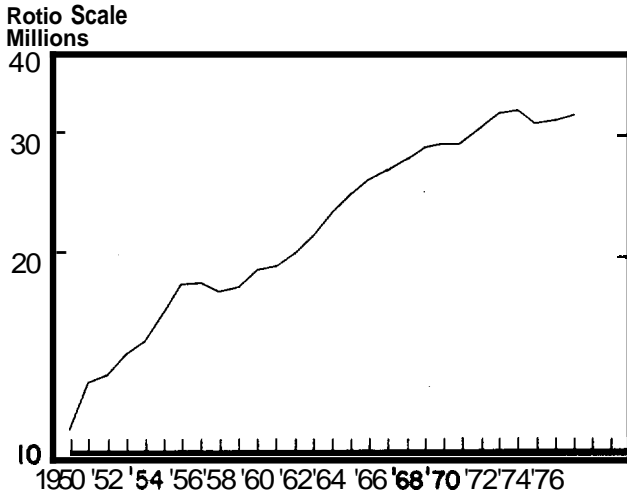
The slower growth rate of purchases of consumer durables in 1977 can now be better explained. During 1976, real disposable income rose 3.8 per cent, while the actual stock of durables rose 5.5 per cent, slightly more than the estimated increase in the desired stock of 5.4 per cent. But, as shown in Table 2, this 5.5 per cent increase in the stock was associated with a 13.1 per cent increase in purchases. Now, suppose real disposable income grew at a rate of about 4 per cent in 1977, which seems likely from preliminary data. Then the growth in the actual stock of durables necessary to maintain the relationship of actual and desired stocks would have to have been about 5.6 per cent—slightly more than the growth of the stock in 1976. A 5.6 per

⁵ The best candidate for explaining the "extra" 1.6 percentage points of growth is the declining relative price of durable goods. Between 1961 and 1973, the price index of consumer durable goods rose 26 per cent, as compared with a 37 per cent increase in the price index of nondurable goods, and a 63 per cent increase in that of services.

cent increase in the stock of consumer durables from the end of 1976 to the end of 1977 is equivalent to a net dollar increase of \$19.7 billion, from \$352.3 to \$372.0 billion (Table 2, column 1). This net increase of \$19.7 billion in the stock required a total of \$137.5 billion in purchases of new durables during 1977, of which \$117.8 billion offset depreciation. Thus, an increase of 7.8 per cent in purchases of new durables, from \$127.5 billion in 1976 to \$137.5 billion in 1977, kept the actual stock in line with the desired stock, given the estimated 4 per cent increase in real disposable income. The point to be emphasized is that a small increase in the rate of growth of the stock, from 5.5 per cent in 1976 to 5.6 per cent in 1977, was accompanied by a substantial decline in the rate of growth of new purchases, from 13.1 per cent in 1976 to 7.8 per cent in 1977.

In 1978, the rate of growth of real disposable income will again be the key to the strength of household spending. If the 1978 growth in real disposable income is close to the consensus forecast value of 5 per cent, the desired stock will increase, according to the analysis above, by $5.0 + 1.6 = 6.6$ per cent. If the actual stock of durables grows as much as the desired stock, its value at yearend 1978 will be \$396.5 billion (Table 2, column 1). This would be an increase of \$24.5 billion from the yearend 1977 value of \$372 billion. An increase of \$24.5 billion in the stock of consumer durables during 1978 would require purchases of new durables totaling \$145 billion, which is the value shown forecasted in Table 2. However, the increase in the amount of purchases of new durable goods from \$137.5 billion in 1977 to \$145 billion in 1978 would be only 5.5 per cent, down from 7.8 per cent in 1977. Thus, the 1978 increase in new durables purchased by households is not likely to be sustained at the 1977 rate,

Chart 3
STOCK OF AUTOMOBILES
IN NEW CAR EQUIVALENT UNITS
(Annually as of July 1)



SOURCE: Wards Automotive Yearbooks.

which itself was much slower than the rate of increase in 1976.

Before leaving the consumer durables category of household purchases, a subsection on new car purchases is included in recognition of the importance of the automobile in consumer demand and because of the superior data available.

New Automobiles: Much of the sensitivity of consumer durables expenditures to economic fluctuations is due to ups and downs in new car purchases. If further growth in new car sales is in prospect, the chances for sustaining the rate of increase of household spending are enhanced.

Household purchases of new cars are also a good example of the stock-adjustment process. Chart 3 graphs the stock of cars in new car equivalents over time. As was true of the stock of consumer durables—which was measured net of depreciation—the stock of new car

equivalents measures a net stock in new car equivalents which differ from ordinary units by an amount of depreciation. The gross stock, in contrast, is simply an unadjusted count of cars on the road. This gross stock (not charted) stood at 36 million in 1950 and had risen to nearly 100 million by 1977.

The net stock of autos could also be calculated in dollar value by using market prices for new and used cars, or by applying rates of depreciation to the original price of autos in operation. The new car equivalent method used to generate the stock for Chart 3 is much easier. A new car, regardless of value, is counted as one unit. The new car equivalent value of any other car in use is assumed to be 75 per cent of its new car equivalent value the year before—a double declining-balance method of depreciation. That is, after one year of use, a car counts as 0.75 units in new car equivalents, after two years it counts as $0.75 \times 0.75 = 0.5625$ units, etc.

The desired stock of autos can be estimated by the same approach used for estimating the desired stock of all consumer durables. Between 1966 and 1973, the actual stock of autos (Chart 3) grew on the average about three-fourths as fast as did real disposable personal income over that period⁶. If the annual growth in the desired stock of autos can be taken to be three-fourths of the annual rate of growth of real household income, the desired stock fell about 1½ per cent in 1974, rose about 2 per cent in both 1975 and 1976, and then rose by another 3 per cent in 1977.

If the desired stock did indeed follow the path just indicated, then its decline of

⁶ A somewhat shorter period is used here for autos than was used for all durables because the relationship between the average rate of growth of the auto stock and that of income seems to have changed since 1965.

Table 3
THE STOCK OF AUTOMOBILES AND NEW CAR SALES IN THE
UNITED STATES: UNITS AND PERCENTAGE CHANGES, 1973-78

Year	Stock of Passenger Cars in Thousands of New Car Equiva- lent Units as of July 1	Percentage Change in Stock of Cars	Retail Sales of New Passenger Cars in Thousands of Units, Year Ending June 30	Percentage Change in New Car Sales
	(1)	(2)	(3)	(4)
1973	32,800	-	11,739	-
1974	33,000	0.6	9,913	-15.6
1975	31,700	-3.9	8,322	-16.0
1976	32,000	0.9	9,714	16.7
1977	33,100	3.4	10,753	10.7
1978 forecast	34,300	3.6	11,160	3.8

1.5 per cent in 1974, as compared with an increase in the actual stock of 0.6 per cent, suggests that households were, at that time, overstocked with autos. A possible explanation for actual stocks rising in the face of a decline in desired stocks is that households did not expect their real disposable incomes to decline; and, only after income declined did the buildup of the auto stock seem too large. Finding themselves burdened with an excess stock of automobiles, households cut their new car purchases to a level below that of depreciation on the existing stock. Thus, by mid-1975, the actual stock of autos (in new car equivalents) had been reduced by 6 per cent from mid-1974. This reduction was more than enough to bring the actual stock into line with what might normally be estimated to be the desired stock. At that time, however, households most likely did not consider this large reduction to be an overcorrection, because of the added uncertainties associated then with energy availabilities.

As of mid-1977, the actual stock of autos is estimated to have been about 1 per cent above its 1973 value in new car equivalents, although real disposable income was 6.6 per cent above its

mid-1973 level. Unless households no longer wanted as large a stock relative to income as they desired in 1973, the actual stock must be considered to have been well below the desired stock in mid-1977. If, for simplification, the actual and desired stocks are taken to have been equal in 1973, then the actual stock in mid-1977 was about 4 per cent below the desired level, assuming the desired stock grows at three-fourths the rate of increase of real disposable income.

The above analysis does not prove that the actual stock is below the desired stock, but there is no evidence of overstocking of autos currently. The likelihood that the actual stock is not now greater than the desired stock, together with continued expected growth in real disposable income, suggests that the year ending June 30, 1978, will be another good year for new car sales, as far as level of sales is concerned. But the rate of growth in new car sales is likely to decline again in 1978 as it did in 1977 (Table 3). The forecast value for the stock of automobiles on July 1, 1978 (bottom row, column 1 of Table 3), was derived by assuming households will maintain the July 1, 1977, relationship of the actual stock to their desired stock. To do so, the

actual stock would have to grow at three-fourths the 5 per cent rate of growth forecast for real disposable income. This growth of 3.6 per cent in the stock of cars is calculated to require 11,160,000 new cars in 1978.⁷

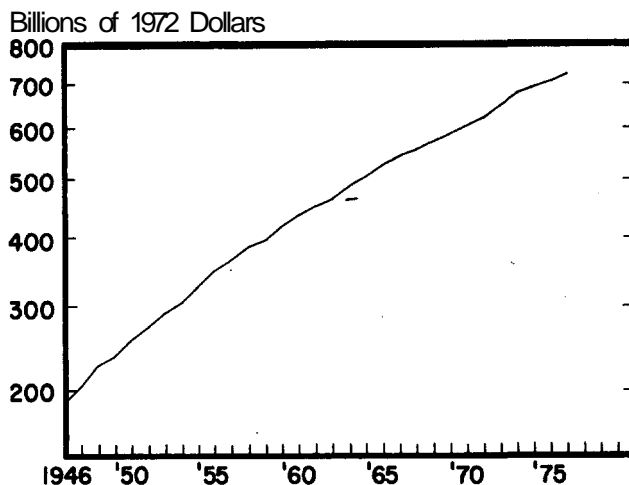
Owner-Occupied Housing

Homes last much longer than other household purchases. The slow rate of depreciation of the nation's stock of housing has been more than offset by gross investment in residential construction in every year since the end of World War II. To put it another way, the value of the net stock of housing in the United States has grown year after year for 30 years. But the rate of growth of this stock has been uneven because of the dramatic cycles in homebuilding. Stock adjustment analysis again proves useful in explaining the boom-to-bust behavior of residential construction, and therefore, in addressing the questions of the sustainability of that portion of residential construction activity attributable to household purchases.

Chart 4 shows a declining rate of increase in the real value of the net stock of owner-occupied housing during most of the past generation, although there was some acceleration during the 1971-73 housing boom. From 1966 to 1972, the net value of owner-occupied housing increased at an average annual rate of 3.2 per cent—virtually the same as the average annual rate of increase of real

⁷ New car sales of 11,160,000 between July 1, 1977, and June 30, 1978, would add an estimated 3,200,000 autos to the new car equivalent stock, according to the analysis in this article. The net addition to the stock is substantially less than new car sales because it will take 8,275,000 new cars just to offset the depreciation (25 per cent of 33,100,000) on the used cars from the 1977 stock that are still in use, plus 1,655,000 new cars to offset the losses, in new car equivalents, of automobiles retired from use for various reasons (estimated at 5 per cent of stock).

Chart 4
REAL NET STOCK OF
OWNER-OCCUPIED HOUSES



SOURCE: Department of Commerce.

disposable personal income over the same period. This relationship argues for using the annual rate of growth of real disposable income for the annual rate of increase in the desired stock of owner-occupied housing.

Real disposable personal income in 1976 was 11 per cent above its level in 1972. According to the assumed relationship between income and the desired stock of housing, the desired stock of housing at yearend 1976 was 11 per cent above its 1972 yearend level. The actual stock of housing at yearend 1976, in fact, was also 11 per cent above its 1972 level. These equal percentage increases in actual and desired stocks indicate that little, if any, gap remained between the absolute amounts of the two by the end of 1976, which would, other things equal, point to a decline in the rate of growth of household investment in housing in 1977.

Real household spending on housing is estimated to have grown 19.2 per cent in

Table 4
THE NET STOCK OF OWNER-OCCUPIED HOUSING, AND GROSS INVESTMENT BY HOUSEHOLDS IN RESIDENTIAL CONSTRUCTION, IN BILLIONS OF 1972 DOLLARS AND ANNUAL PERCENTAGE CHANGES 1972-78

Year	Stock	Per Cent Change	Investment	Per Cent Change
1972	\$655.7	—	\$41.3	—
1973	681.9	4.0	41.2	— 0.0
1974	697.8	2.3	35.7	—13.3
1975	709.3	1.6	33.0	— 7.6
1976	727.6	2.6	41.1	24.5
1977 est.	754.0	3.8	49.0	19.2
1978 forecast	784.0	4.0	53.0	10.0

Source of Actual Values: Department of Commerce.
Estimated and Forecast Values: See text.

1977, as compared with 24.5 per cent in 1976 (Table 4, column 4). The estimated \$49 billion households invested in homes in 1977 increased their stock of housing by 3.8 per cent, from \$727.6 billion to \$754 billion in 1972 dollars. Thus, only about half of the \$49 billion in residential construction for households took the form of an increase in stock, with the other half, or about 3 per cent of the previous year's stock, going to offset depreciation and other capital consumption of housing.

If real disposable income grows at a 5 per cent rate or more in 1978, it is conceivable that the rate of growth of household spending on housing could be maintained near its average for the past 2 years (about 22 per cent). A 5 per cent increase in real disposable income in 1978 would, according to the preceding analysis, increase the desired stock of housing by 5 per cent, to \$792 billion as of yearend 1978. This 5 per cent increase in the stock would require \$60 billion in gross investment in housing by

households in 1978 (\$22 billion in replacement + \$38 billion net increase). But there are several reasons for expecting the actual stock of homes to grow by less than 5 per cent in 1978 and, therefore, for forecasting a rate of increase of household spending on housing substantially less than 22 per cent, which is what an increase from \$49 to \$60 billion would mean.

Table 4 shows the stock of owner-occupied housing forecast to increase 4 per cent in 1978, which implies a 10 per cent increase in household investment in residential construction. (As indicated in the last row of Table 4, an increase of \$30 billion in net stock is estimated to require \$53 billion in gross investment by households.) While a 4 per cent increase in the actual stock is less than the 5 per cent increase forecast for the desired stock, this discrepancy is not a theoretical inconsistency. Households cannot always bring actual stocks in line with desired stocks quickly, as is the case when supply does not adjust immediately to demand. Such constraints would appear to apply to single-family homebuilding, and industry operating at peak rates in 1977. (A special factor constraining homebuilding in 1978 in some regions is a limit on natural gas hookups.) In 1973, for example, the third year of the previous housing boom, real disposable income rose 6.7 per cent while the housing stock rose but 4 per cent. Finally, during the current surge in homebuilding from 1975 to 1977, the net stock of owner-occupied housing has grown a total of 6.3 per cent, as compared with an 8 per cent increase in real disposable income. These considerations suggest a leveling of the rate of growth of the housing stock in 1978, which would mean a slowing in the rate of growth of household spending on residential construction.

Household Debt

Stocks of household durables and housing are assets that have their liability counterparts in types of household debt. Households often borrow on instalment plans to buy durable goods, and as the stock of household durables has grown, so has the amount of consumer instalment credit outstanding. Similarly, home mortgage debt owed by households has increased along with the stock of owner-occupied housing. Quite understandably, therefore, the prospects for sustaining household spending are closely related to the prospects for sustaining growth in household debt.

In real terms, both major classes of household debt have grown at diminishing rates since 1946. The outstanding amount of real consumer instalment debt grew at an average annual rate of 16.8 per cent between 1947 and 1956, 7.4 per cent between 1956 and 1965, and 4.3 per cent between 1965 and 1974. Real home mortgage debt has a similar history of growth in the postwar period. From 1947 to 1956, the amount of real mortgage debt households owed on their homes grew at an average annual rate of 12.7 per cent—dropping to 7.6 per cent in the 1956-66 decade, and then to a 3.4 per cent annual average from 1966 to 1976.

Interest payments are the primary burden of debt on households. As a ratio to disposable personal income, non-mortgage interest payments by consumers to business peaked at 2.4 per cent in 1965-66, and have stayed slightly below that percentage since. Although interest rates on some types of instalment loans have increased during the past 10 years, this has evidently been offset by a shift in the mix to less expensive types of instalment credit. The fact that non-mortgage interest payments have remained such a stable proportion of

household income suggests that, in the absence of a decline in interest rates, growth in consumer instalment debt will be held close to growth in household income.

Lack of data makes it difficult to assess the degree of strain from mortgage interest payments now felt by households relative to earlier periods. One estimate indicates that interest payments on home mortgage debt now require two and one-half times the share of disposable income required 20 years ago, and one and a half times the share of 10 years ago? Thus, in terms of interest payments relative to household income, the burden of home mortgage debt, unlike that of instalment debt, has increased sharply. This trend has negative implications not only for the growth of mortgage debt and

⁸ Two estimates of home mortgage interest payments were made for each year. Only one interest rate, that of FHA mortgages in the secondary market, was used for each year. For the "low" estimate of mortgage interest, it was assumed that the amount of home mortgage debt outstanding was always financed or refinanced at the lowest possible rates in the period. Thus, during periods of declining interest rates, refinancing at the new rate is assumed; during periods of rising rates, only additions to the amount of mortgage debt outstanding are assumed to carry the higher interest charges. For the "high" estimate of mortgage interest payments, just the opposite assumption is made: during periods of rising interest rates, all outstanding home mortgages are assumed to carry the most recent rate; during periods of declining rates, only additions to mortgage debt carry the recent market rate. According to the high estimate, mortgage interest payments by households rose from 1.5 per cent of disposable income in 1956 to 2.3 per cent in 1966 and to 4.3 per cent in 1976. According to the low estimate, the respective percentages are 1.3, 2.2, and 3.1. For the point made in this article, the increase in the burden of home mortgage interest is what is relevant, and this shows up clearly in either the high or the low estimate, or in the average of the two, which is what is referred to in the text.

new home purchases, but also for growth in other household spending.

SUMMARY AND CONCLUSION

Most of the nation's output—close to 68 per cent currently—is bought by individuals for personal or family use. Thus, demand by the household sector will be the key determinant of how fast the economy will grow in the year ahead.

An examination of types of household purchases shows that expenditures on durable goods and homes change most over time. The reason for the volatility of these components is that such purchases can be postponed as households continue to use carryover stocks. Measures of the actual stocks of consumer durables and housing prove useful, therefore, along with estimates of desired levels of these stocks, in analyzing household consumption and investment behavior. On the basis of this analysis, the current stocks of household durables and homes appear now to be close to desired levels. Accordingly, the rates of growth of household purchases of new durable goods and household investment in residential construction are likely to be somewhat slower in the current year as compared with earlier in the recovery.

Household instalment debt and home mortgage debt have risen along with household stocks of durable goods and housing. The rates of increase in these classes of household debt have slowed over the years, and now appear constrained to something near the rate of growth of disposable personal income. The interest payments on instalment debt have remained a relatively constant share of household income for many years, suggesting an implicit ceiling that will tend to prevent further large increases in consumer spending in excess of income gains. The interest payments on home mortgage debt, however, have grown as a share of household income, and while no ceiling on this proportion is yet in evidence, it is clear that this rising cost of shelter will curb income available for other purchases.

The weight of the evidence in this article points to a moderate rate of increase of household spending during the current year. The implication of this analysis is that if the economy as a whole is to achieve a real growth rate in the vicinity of 4½ to 5 per cent, which is the consensus forecast, sufficiently large increases in spending must occur in some of the other major sectors, such as in government purchases and business fixed investment.