their housing because of tax considerations. During inflationary periods, nominal incomes tend to rise, pushing individuals into higher tax brackets. The progressive nature of the U.S. tax system and the fact that interest deductions are concentrated in the early years of a mortgage may provide an incentive to sell and assume a new mortgage to maximize the tax-sheltering feature of housing. This is particularly true for individuals who have experienced substantial income growth, resulting in a significant decline in the portion of income allocated to housing expenditures.

The differential impact of housing price inflation also is evidenced by changes in the composition of participants in the home buying market. In one study of homes financed by savings and loans, first-time buyers accounted for 36 percent of all home purchasers in 1977, but this percentage declined to 17 percent in 1979. Although rising housing prices have a differential impact at the down-payment stage, this is not necessarily the case in financing the balance of the purchase price unless the down-payment reduces a large portion of his accumulated equity to the down payment, thereby reducing the amount financed by a mortgage loan. As mortgage interest rates rise, the proportion of the total payment devoted to interest over the life of the loan also rises (see table 2).

To assess the impact of rising housing prices and interest rates on housing sales, the proportion of sales allocated to housing is considered on a yearly basis, using that year's median sales price of a new home, median household income, average mortgage interest rate, average down payment, and average loan maturity. By using the loan terms in effect for a specific year, it can be seen that the monthly payment burden has increased faster than income. Today's home buyer must allocate a substantially larger portion of current income to housing expenditures than was the case five years ago. In 1979, the median-income family purchasing a median-priced home allocated 27.1 percent of annual income to housing expenditures, compared with 16.4 percent in 1970 (see table 1). Moreover, these figures do not take into account the corresponding increases in property taxes, insurance premiums, and maintenance costs.

On the other hand, the tax advantages of home ownership also have been excluded, although, as noted earlier, these may be a significant factor in the decision to purchase a home.

Conclusion
In summary, home ownership costs have increased substantially in the past three years, both as a result of inflation and the increase in mortgage interest rates. Although innovative financing techniques and the increase in two-wage-earner families have overcome the barriers to home ownership to some extent, they are unlikely to put housing within the reach of many potential first-time buyers. Single-family housing proved to be an excellent investment in the 1970s, when low real interest rates and accelerating inflation increased the demand for single-family housing. In the past three years, however, regulatory changes have integrated the mortgage markets with the capital markets, increasing the volatility and cost of mortgage credit. With the growing importance of variable-rate mortgage loans, home buyers also will face greater uncertainty with respect to their monthly housing expenditures.

At the same time, government incentives to encourage investment in the nation's industrial labor market are likely to reduce the attractiveness of housing as an investment. Given these factors, the climb of housing prices will likely be restrained in the 1980s.

NOTE: No issues of the Economic Commentary were published in October.

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Table 2 Fixed-Rate, Level-Payment Mortgages at Various Interest Rates

<table>
<thead>
<tr>
<th>Rate, percent</th>
<th>Monthly payment (principal and interest, annual*)</th>
<th>Total interest, payment, dollarst</th>
<th>Interest as percent of total</th>
<th>Total paid, dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>366.88</td>
<td>82,080</td>
<td>62</td>
<td>132,080</td>
</tr>
<tr>
<td>10</td>
<td>438.79</td>
<td>107,965</td>
<td>68</td>
<td>176,965</td>
</tr>
<tr>
<td>12</td>
<td>514.31</td>
<td>135,150</td>
<td>73</td>
<td>210,150</td>
</tr>
<tr>
<td>14</td>
<td>592.44</td>
<td>163,280</td>
<td>77</td>
<td>228,280</td>
</tr>
<tr>
<td>16</td>
<td>672.36</td>
<td>192,060</td>
<td>79</td>
<td>251,060</td>
</tr>
<tr>
<td>18</td>
<td>763.54</td>
<td>221,275</td>
<td>82</td>
<td>273,275</td>
</tr>
<tr>
<td>20</td>
<td>835.51</td>
<td>250,785</td>
<td>83</td>
<td>300,785</td>
</tr>
</tbody>
</table>

a. Excludes property taxes and insurance premiums.
b. Assumes mortgage is held to maturity.

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Economic Commentary

Current Perspectives on Home Ownership

by Judy Z. Menich

Between 1970 and 1979, the median sales price of an existing single-family home rose roughly 170 percent, while the general price level increased 113 percent. The number of housing units also increased substantially: 17.8 million housing units were produced during the 1970s, or 24 percent more than in the previous decade. As the 1970s advanced, the role of housing shifted from primarily a consumption item to an investment item, a role that was further enhanced by declines in real after-tax returns on such financial assets as stocks, bonds, and savings accounts.

Since late 1979, housing prices, adjusted for inflation, actually have declined. Moreover, the trend toward larger homes has reversed: the average size of a new house, which peaked in 1976 at 1650 square feet, has been decreasing since. Today's new

home buyers are faced with paying more money for less living space, although the price per square foot has declined somewhat since 1979. This Economic Commentary examines the underlying causes of the rapid escalation and subsequent deceleration in home prices, focusing on the economic developments that were the major stimulus to home ownership in the 1970s.

Inflation and Housing Prices

Historically, an increase in the general price level has been accompanied by a proportionate increase in housing prices; from 1960 until the mid-1960s, housing prices advanced at roughly the same rate as the overall inflation rate. During this same period, median family income grew at a faster rate than house prices; as a result, housing was a larger percentage of income. Since late 1979, however, housing prices, adjusted for inflation, actually have declined. Moreover, the trend toward larger homes has reversed: the average size of a new house, which peaked in 1976 at 1650 square feet, has been decreasing since.

Judy Menich is an economic analyst with the Federal Reserve Bank of Cleveland. Menich is an economic analyst with the Federal Reserve Bank of Cleveland. She has published numerous articles and papers on the economy and financial markets. Menich is an economic analyst with the Federal Reserve Bank of Cleveland. She has published numerous articles and papers on the economy and financial markets.

November 2, 1981

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faster rate than overall prices. During the 1970s, however, housing prices increased at a substantially faster rate than the prices of other goods. Between 1971 and 1975, existing home prices increased at an average annual rate of 9 percent; between 1976 and 1980, they increased 12 percent annually.7 Existing home prices experienced their largest year-on-year gain between 1976 and 1977 (14.4 percent), but increased by only 11.7 percent from 1979 to 1980. The slowdown in the appreciation of home values since mid-1980 has been even more pronounced, with an increase of 6.8 percent in the 12 months ending in June 1981. The softening in housing markets illustrates the impact of escalating mortgage interest rates on housing demand.

The demand for housing is affected by many factors, including population, household formations, income changes, and the desire to hedge against inflation. The maturation of the postwar “baby boom” has provided some underlying demand for single-family housing, thereby contributing to rising prices.8 Although new households form faster than the increase in housing starts, many factors, including socioeconomic trends are adding to the demand. In particular, the rising divorce rate and growing tendency to postpone or forego marriage, have contributed to growing numbers of singles in the overall population. In 1979, 22.4 percent of all home buyers were single, compared with 17.0 percent in 1977. At the same time, increasing numbers of unions and single people are choosing to own.

Economic developments have been the major stimulus to home ownership, particularly 2. Moreover, these figures do not take into account the impact of compulsory financing schemes, which are tantamount to lowering prices.

3. The 25-44 age group, the prime buying age, saw its share of new home purchases grow from 29 percent in 1971 and 1975 and by 17 percent between 1971 and 1980, compared with population increase of 4.4 percent and 4.2 percent, respectively.

4. The real mortgage rate is calculated by subtracting the annual rate of inflation as measured by the implicit price deflator for personal consumption expenditures from the mortgage rate.

5. By comparison, owners of other assets, such as corporate equities, are taxed on any long-term capital gains received from the sale of stock, even though they have been held for a shorter period of time. The straight-line appreciation of home values since mid-1974, making home ownership relatively inexpensive. The introduction in mid-1978 of the six-month money-market certificate, with a near-market interest rate, enabled financial institutions to compete more effectively for deposits, thereby maintaining a stable flow of funds to the housing market.6 If financial institutions had to extend long-term fixed-rate mortgages, provided some underlying demand for single-family housing, thereby contributing to rising prices.8 Although new households form faster than the increase in housing starts, many factors, including socioeconomic trends are adding to the demand. In particular, the rising divorce rate and growing tendency to postpone or forego marriage, have contributed to growing numbers of singles in the overall population. In 1979, 22.4 percent of all home buyers were single, compared with 17.0 percent in 1977. At the same time, increasing numbers of unions and single people are choosing to own.

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