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BY THE COMPTROLLER GENERAL

RELEASED

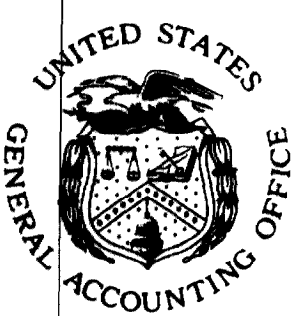
Report To The Chairman Committee On Appropriations House Of Representatives

OF THE UNITED STATES

Analysis Of Options For Aiding The Homebuilding And Forest Products Industries

Concern over the continuing economic recession and the downturn in the housing industry has prompted a wide variety of proposals to aid housing finance and homebuilding. Although none of these proposals is likely to bring about a long-lived recovery for housing unless overall interest rates decline, certain proposals could start up quickly and be more cost effective than others in providing some short-term relief.

GAO analyzed the causes of the current downturn in housing construction and compared a broad sample of homeownership and rental housing stimulus proposals. These were compared in terms of their feasibility, speed of implementation, impact on construction and employment, and cost effectiveness. GAO also prepared a special analysis of the problems of the forest products industry.



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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-207915

The Honorable Jamie L. Whitten
Chairman, Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

Your April 26, 1982, letter expressed concern about the continuing economic recession and identified the downturn in the housing industry and the effect that monetary and fiscal policies are having on interest rates as two areas vitally important to the Nation's economic health. You asked us to:

--Assess existing Federal policies relating to home construction and suggest ways in which the housing industry could be revived. You requested that we devote special emphasis to proposals which would aid the logging of timber and the lumber industry.

--Conduct a thorough analysis of the Nation's monetary and fiscal policies with suggestions for change. You wanted us to place special attention on the effect the Federal Reserve System's restrictive monetary policy is having, and will have, on present and future economic growth.

This report responds to the first part of your request and discusses the problems being experienced in both the home-building and forest products industries and possible means to revive both industries. A report on the Nation's monetary and fiscal policies is being furnished to you under separate cover.

As arranged with your office, unless you announce its contents earlier, we plan to distribute this report to other interested committees; the Director, Office of Management and Budget; the Secretaries of Housing and Urban Development, Agriculture, and the Treasury; the Chairman, Federal Home Loan Bank Board; and the Chairman, Board of Governors, Federal Reserve System, 30 days after the date of the report. Copies will also be made available to other interested parties.

Sincerely yours,

Charles A. Bowsher

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CHAIRMAN,
COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES

ANALYSIS OF OPTIONS FOR AIDING THE HOMEBUILDING AND FOREST PRODUCTS INDUSTRIES

D I G E S T

The homebuilding industry is currently in the midst of its deepest and most prolonged downturn since World War II. Housing starts, which peaked most recently in 1978 at just over 2 million units, fell to the 1.1 million mark in 1981, with projections for 1982 running even lower. Because homebuilding is an important sector of the Nation's economy, related industries, such as forest products, have been severely affected.

Concerned about this downturn, the Chairman, House Committee on Appropriations, requested that GAO assess existing Federal policies relating to home construction and suggest ways in which the Nation's homebuilding industry could be revived. He asked that GAO place special emphasis on proposals which would aid the logging of timber and the lumber industry. GAO sought to define the problem, identify its causes, and analyze alternatives.

GAO concluded that the problems of the industry stem primarily from the accelerating inflation of the 1970's and the high real interest rates which have accompanied efforts to reduce that inflation. Quite recently there has been a modest decline in mortgage interest rates. It is too early to tell whether this decline will continue or if rates will again increase as predicted by some economists.

A variety of housing stimulus proposals has been advanced. To analyze them, GAO used econometric models and consulted with many industry and academic experts. GAO concluded that some of the proposals could have a limited positive effect on homebuilding and the economy, but only at substantial cost.

The chairman also asked that GAO conduct a second study, addressing the overall condition of the economy, with special attention to the role of monetary policy. That is the subject of a separate report which is being issued simultaneously. (GAO/PAD-82-45).

ECONOMIC FACTORS AFFECTING HOMEBUILDING DOWNTURN

Inflation in the United States over the past 15 years or so, in combination with strong demographic demand for housing, the tax advantages of homeownership, and low real interest rates (the mortgage rate less inflation), has been largely responsible for rising home prices. The median price of a new home rose from $23,400 in 1970 to $68,900 in 1981, almost a 200 percent increase. Prices for existing homes have increased similarly. (See p. 15.)

Housing was recognized as a good investment and inflation hedge throughout most of the 1970's, largely because it rose in value faster than inflation and because real housing costs, after considering tax deductions and home appreciation, were really quite low. In 1980 and 1981, however, interest rates exceeded the rate of inflation, which in turn exceeded the growth in housing values. This reversal, which means a huge increase in the real cost of owning a home, coupled with increasing downpayment requirements, higher unemployment, and economic uncertainty, has greatly reduced housing demand. (See pp. 15-21.)

Inflation and high interest rates have also been largely responsible for forcing changes in the financial environment in which housing is bought and sold. New deposit innovations, financing instruments, and other institutional arrangements have evolved over the years, resulting in a more elastic supply of mortgage finance but at higher mortgage rates, relative to other interest rates, than in the past. Although traditional mortgage lenders are experiencing weakened financial positions, GAO concluded that the mortgage finance system could readily supply the funds needed to finance a revival in homebuilding. However, consumers remain resistant to many of the new mortgage instruments being offered and an acceptable method of balancing risk between lenders and borrowers has not been found. (See p. 21 and ch. 6.)

GENERAL CONCLUSIONS

The homebuilding industry has been subject to wide fluctuations in activity throughout the period since World War II. These cycles have been directly related to conditions in the

credit markets. The present decline is more severe than earlier ones, but its nature and many of its causes are similar. Homebuying depends on credit, and when real interest rates are high, the housing industry suffers disproportionately. GAO's analysis and discussions with a wide range of housing experts showed that there are no "quick fixes" to the severe problems of the homebuilding industry. A substantial recovery in homebuilding will occur only when the economy as a whole is in a more healthy condition. The demand for housing (and thus homebuilding) will increase when interest rates decline substantially, provided it is accompanied by healthy levels of employment and growth in real personal incomes.

In the absence of a general and vigorous economic recovery, Federal programs aimed specifically at the homebuilding industry can have only modest ameliorative effects. Any such effects would be achieved at substantial budgetary cost.

If the Congress wishes to pursue housing stimulus proposals, it should bear in mind that some of the proposals now under consideration are more cost effective than others.

COMPARISON OF ALTERNATIVES: SINGLE-FAMILY HOUSING

An effective countercyclical stimulus must start quickly, provide its impact, and withdraw from the economy before a recovery is well underway. Rapid implementation is crucial. This implies using existing mechanisms and programs or analogous ones which are well understood by buyers and builders. A direct interest subsidy in the form of a discount on a Government-purchased loan or a self-implementing tax subsidy would probably be the fastest. A stimulus program must also result in a net addition to starts and employment, if it is to be effective. Substitution (the diversion of subsidy dollars to those who would have bought anyway) is likely to be substantial in any program, but this inefficiency can be reduced by focusing a program on groups who are less likely to be able to buy a new home without a subsidy. A direct interest subsidy for moderate income buyers of new homes constructed after the effective date of the program would probably yield the largest net increase in starts and employment per subsidy dollar. (See ch. 3.)

Of the homeownership stimulus proposals GAO evaluated, the fastest and most effective could boost housing starts and jobs in the second and third quarters of 1983, but only if they were implemented in October or November 1982. The most effective proposals, if funded at $3 billion, could increase total housing starts in 1983 between 100,000 and 188,000 units depending on the underlying health of the housing sector. (See pp. 31, 47, 48, and 61.)

GAO also concluded that:

--Direct interest rate subsidies which reduce payments more in the early years of homeownership could be expected to have the greatest effect on marginal home buyers. Thus, a subsidy which lowered the mortgage payment substantially in the first few years, but only slightly in later years, would be more effective than a proposal having the same total cost, but spread equally over the life of the mortgage. (See p. 60.)

--A tax credit for home buyers which applied only to units started after enactment is probably the next most effective proposal. But tax credits are somewhat more difficult to target than direct expenditures, and a greater proportion of the subsidy would go as a windfall to those who would have bought homes anyway. Also, costs would grow rapidly and uncontrollably unless the program were terminated promptly at the start of a housing recovery. Thus, if this approach is used, it should have a brief life and be accompanied by income limits. (See pp. 43 and 64.)

--A tax credit for mortgage interest income for financial institutions is unlikely to be effective as a short-term housing stimulus. Mortgage lenders have been under a severe profit squeeze and are unlikely to pass the tax savings on to consumers in lower interest rates. Also, pension funds, which can opt for other investments, do not pay taxes and would be reluctant to offer lower interest rates. This tax credit would also be slow to implement, and its costs would grow substantially over the years. (See pp. 43, 64, and 65.)

--Changes in legislation to encourage greater use of mortgage revenue bonds to fund home loans are unlikely to have substantial effects since

they would not increase bond sales substantially and much of the increase would go to substitution. The costs of providing subsidies through this mechanism are very high relative to the benefits homeowners receive. (See p. 62.)

--A zero downpayment Federal Housing Administration loan could help eliminate a particularly vexing homeownership barrier for first-time buyers. If this approach is used, there should be more stringent underwriting standards (lower debt-to-income ratios and stronger creditworthiness tests) to minimize insurance losses. (See p. 65.)

COMPARISON OF ALTERNATIVES: RENTAL HOUSING

Homeownership subsidies are likely to be much more stimulative in the short run than rental programs, but rental programs could probably be targeted to a more needy group and are more likely to help meet the Nation's long-term housing needs. The impact of rental subsidies could be strong, but unfamiliarity with their use in a countercyclical environment, the difficulty of predicting their impacts, and the longer lag times due to multifamily housing construction periods and Federal Housing Administration processing limit their ability to provide countercyclical stimulus. Implementing a large homeownership and a rental subsidy program simultaneously would have to be done cautiously because there could be large overlaps in the households targeted. GAO did, however, compare several proposals to show which might have the greatest potential. (See pp. 67, 81, and 82.)

Of the alternatives analyzed, an interest reduction loan subsidy, the relaxation of mortgage revenue bond regulations, and rental rehabilitation subsidies are probably capable of encouraging some residential development under the current high interest rate environment. This is because they provide subsidies sufficient to overcome cash flow problems. But mortgage revenue bonds are likely to be very expensive. An interest reduction loan program could be implemented relatively quickly by modifying the now unused section 236 interest subsidy program. (See pp. 78, 79, 82, and 84.)

A Government loan purchase program involving total recapture of the subsidy would not be viable because of the substantial risk it creates for investors. However, it could be modified to limit the recapture to some percentage of property appreciation and could use the existing Government National Mortgage Association loan purchase program. (See p. 76.)

REDUCED DEMAND AND OTHER PROBLEMS HAVE HURT THE FOREST PRODUCTS INDUSTRY

The U.S. forest products industry (softwood lumber and softwood plywood) has experienced a steep and steady decline in demand for its products since 1978--the last housing boom period. For example, lumber consumption declined 10.2 billion board feet, or 25 percent, between 1978 and 1981; further declines are projected for 1982. The prolonged downturn in homebuilding is the primary cause of reduced demand in the forest products industry. This problem has been exacerbated, however, by the increased U.S. market penetration of lumber imported from Canada and an overall reduction of wood volume used in residential construction.

Reduced demand has also led to less harvesting of timber on federally owned land, which reduces revenues for both Federal and local governments. Another industry problem is high-priced Federal timber under contract, which is now uneconomical to harvest because of the depressed market. In August 1982, legislation was introduced to extend or modify some of these contracts, which could only be enforced at the risk of driving the contractors into default. (See pp. 91 and 96.)

An industry coalition has indicated that it may seek a duty on lumber imports from Canada. While this approach might yield some short-term relief, it entails drawbacks. It could lead to trade repercussions from Canada and could also risk the loss of future supplies of Canadian lumber, which have traditionally been needed by U.S. homebuilders when the housing industry recovers to more normal levels of production. (See p. 101.)

The industry also believes that the potential exists for expanding exports of wood products.

GAO believes this should be seen primarily as a long-term goal, rather than as a solution to the immediate problem. (See p. 104.)

The obvious solution to the forest products industry's problem is increased housing production. GAO's econometric simulations for 1983 suggest that an increase of 200,000 total housing starts would result in a 4- to 5-percent increase in U.S. lumber and plywood production, nearly a 3-percent increase in industry employment in the U.S. West and South, and price increases of 7 to 8 percent. As indicated previously, however, a sustained recovery in housing production will depend on a more healthy overall economy. This is equally true of the forest products industry. (See pp. 97-100.)

AGENCY COMMENTS

The Departments of Agriculture, Housing and Urban Development, and the Treasury; Federal Home Loan Bank Board; and Federal Reserve Board were given the opportunity to review and comment on this report. Adjustments were made to the report based on comments GAO received in meetings with agency officials. The Department of Housing and Urban Development and the Federal Home Loan Bank Board also provided written comments. (See apps. IV and V, respectively.)

The Department of Housing and Urban Development pointed out that the administration is strictly opposed to any short-term stimulus to the housing industry. It considers the costs of the various proposed stimulus programs to greatly exceed their housing and employment benefits.

The Federal Home Loan Bank Board found the report to be a well-done summary and evaluation of alternative short-term stimulus programs. The Board believed that the report should have (1) stressed more the extent to which special stimulus programs would merely divert credit from other housing lending and (2) emphasized that changes in mortgage instruments and institutional arrangements cannot have much of a stimulus effect on housing demand because the results of such changes take longer than the short-run focus of the report.

Contents

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FIGURES

ABBREVIATIONS

BLS	Bureau of Labor Statistics
CPI	consumer price index
DRI	Data Resources, Incorporated
FAF	financial adjustment factor
FHA	Federal Housing Administration
FHLBB	Federal Home Loan Bank Board
FHLMC	Federal Home Loan Mortgage Corporation
FNMA	Federal National Mortgage Association
FORSIM	Forest Simulation
GAO	General Accounting Office
GEM	growing equity mortgage
GNMA	Government National Mortgage Association
GNP	gross national product
GPM	graduated payment mortgage
HBTC	home buyer tax credit
HUD	Department of Housing and Urban Development
IHA	individual housing account
IRA	individual retirement account
MITC	mortgage interest tax credit
MRB	mortgage revenue bond
OMB	Office of Management and Budget
RDA	Regional Data Associates
SFPM	standard fixed payment mortgage
TAMM	Timber Assessment Market Model
UDAG	Urban Development Action Grant
VA	Veterans Administration

GLOSSARY

Crowding out	A situation in the capital market where the increased credit used for one activity displaces the credit available for another activity.
Econometric model	A set of related equations used to analyze economic data through mathematical and statistical techniques. Such models are used for forecasting, estimating the likely quantitative impacts of alternative assumptions, and testing various propositions about the economy.
Endogenous variable	A variable whose value is determined by the specific model being utilized.
Exogenous variable	A variable that is determined outside the model.
Feedback	The process through which an econometric model solves for the values of selected dependent variables, given changes in other independent variables.
Graduated payment mortgage (GPM)	A type of mortgage with a gradual increase in payment amounts in the early years. During this time the payments are insufficient to cover the calculated interest. This unpaid interest is capitalized into the mortgage amount.
Growing equity mortgage (GEM)	A type of mortgage with monthly payments greater than those for a standard fixed payment mortgage (SFPM). This increase in payment is used to retire outstanding principal.
Interest rate buy-down	The act whereby a third party subsidizes the interest payments of a borrower either through periodic payments to the lender or through a lump-sum, up-front payment to the lender.
Macroeconomics	The study of the total or aggregate performance of the economy.

Multiplier principle	An explanation, propounded especially by Keynesian economists, as to the way in which an increase or a decrease in new capital formation can cause cumulative effects in the national income through consumer expenditures.
Negative cash flow	A situation in an investment where the yearly costs are greater than the yearly income, thus requiring money from outside the investment to maintain it.
Nominal interest rate	The stated rate found in a contract.
Real interest rate	The nominal interest rate minus the rate of inflation.
Recapture	The requirement that any subsidy received be repaid at some future point.
Recovery	A set of assumptions used in our analysis that assumes a moderately strong recovery for the economy, lower interest rates, and a robust housing industry in 1984.
Shallow subsidy	As used in this report, an interest rate buydown for 5 years or less. It is a relative concept which refers to the cost of competing subsidies expressed in present value terms.
Simulation	A form of forecasting (using econometric modeling) which generates a range of alternate projections based on differing assumptions about the future.
Stagflation	A set of assumptions used in our analysis which assumes continued high interest rates and continued low housing starts.
Substitution	As used in this report, a comparison of those who would have purchased a home without a stimulus program versus those who would purchase a home with such a program.
Temporal substitution	A concept that looks at whether a future buyer can be enticed by a subsidy program to buy today, rather than at some future time.
Tilt	A concept referring to a household's income stream and the percentage of the household's income spent on housing.

CHAPTER 1

INTRODUCTION

The homebuilding industry is in the fourth year of a deep recession. Construction starts in 1981 reached their lowest levels since 1946, with little relief in sight. Unemployment among construction workers accounts for one-tenth of the Nation's jobless total and is twice the national average. This is particularly disturbing since problems in the homebuilding industry affect other sectors of the economy. In particular, the housing recession has depressed the forest products industry, where production and employment have declined since 1978.

In an April 26, 1982, letter to us, the Chairman, House Committee on Appropriations, expressed concern over the Nation's continuing economic recession. The chairman stated that the protracted recession in the housing industry and the effect of monetary and fiscal policies on interest rates were of major importance to the Nation's economic health and requested us to conduct two comprehensive reviews dealing with these issues. The first review was to involve an assessment of existing Federal policies relating to home construction, including a discussion of alternatives for reviving the homebuilding and forest products industries. The second review was to be an analysis of the Nation's monetary and fiscal policies, including suggestions for change. This report contains the results of the first of these reviews. The other study, which is entitled "An Analysis of Fiscal and Monetary Policies" (GAO/PAD-82-45), is being issued simultaneously.

THE HOMEBUILDING INDUSTRY: A KEY TO THE NATION'S ECONOMY

The homebuilding industry is important to the Nation's overall economic well-being for several reasons. Residential construction is a major industry, usually accounting for 4 to 5 percent of the gross national product (GNP). Before the current recession, it provided employment for about 3 million workers. The level of homebuilding affects other industries, including lumber, masonry, steel, glass, and consumer durables. For example, softwood lumber used for residential construction declined from 18.5 billion board feet in 1978 to 9.4 billion board feet in 1981. At its peak, residential construction has consumed over 40 percent of the Nation's softwood lumber output. Finally, the homebuilding industry has tended to behave countercyclically--that is, to counterbalance the ups and downs of the economic cycle. Historically, the industry has often preceded the rest of the economy into both recessionary downturns and periods of growth.

Homebuilding has often behaved countercyclically because of its sensitivity to the cost and availability of credit, coupled with its size and effects on other economic sectors. During inflationary periods the demand for credit rises, driving up interest rates. This is often accompanied by restrictive monetary policy,

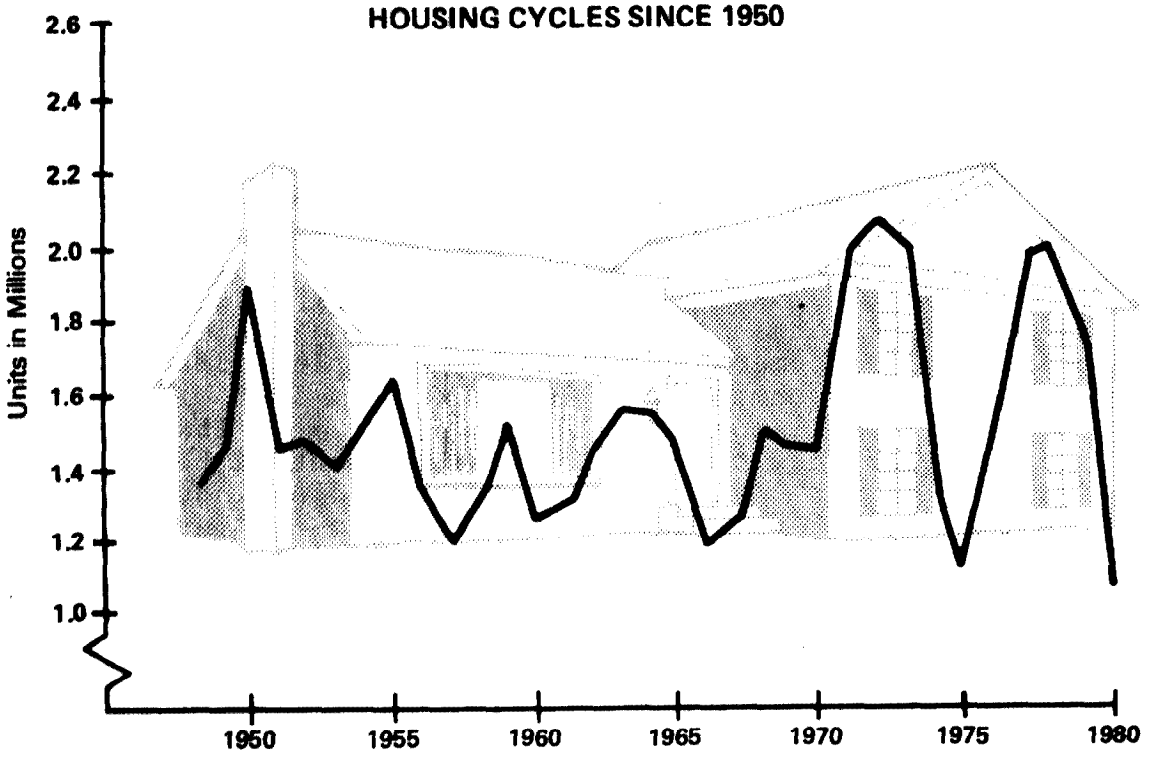
which is designed to reduce inflation by further tightening the availability of credit. Because both the homebuilder and home buyer rely heavily on credit, the result is a housing downturn which spreads to other sectors of the economy. The general economic downturn which follows usually has been accompanied by easier credit conditions and lowered interest rates. As this occurs, the housing industry revives rapidly and leads the way out of the recession. Although this pattern has been characteristic of previous recessions, financial deregulation and a variety of changes in the economy have led many people to doubt that the present homebuilding cycle will follow the historical pattern.

Current homebuilding cycle more severe than preceding ones

The present homebuilding cycle has been the longest in a series of peaks and troughs which have occurred since World War II. The average cycle has been about 4 years in length and has involved a decline from peak to trough of nearly 40 percent. The current cycle began in February 1975, reached its peak in June 1978, and has fallen by nearly 50 percent since then. Figure 1 shows the increasing cyclical instability of housing since 1950, particularly during the 1965-80 period.

FIGURE 1

HOUSING CYCLES SINCE 1950



Source: Data Resources, Inc.

In most cycles, a recession has led to a decline in credit demand and interest rates. However, in the current cycle interest rates have remained high despite the general economic recession. In addition, many other economic signs are different from those of past recessions. Real interest rates are higher, and the percentage of income spent on housing has risen considerably. Signs such as these cast doubt on the likelihood that homebuilding will lead the way out of the present recession. As figure 2 shows, the economic climate of the late 1970's has caused housing starts to fall and construction unemployment to rise.

The cost of cyclical instability

Cyclical instability in residential construction is costly. When housing production is expanding rapidly, new and inexperienced firms enter the field, new and unskilled workers are recruited, building materials and sites may temporarily be in short supply, and existing supplies increase in price. When housing production turns downward, workers are often discharged and unemployment rises. This, in turn, results in lost tax revenue and increased unemployment expenses.

Because of the cyclical variations in the housing industry, many construction firms are reluctant to invest more capital than absolutely necessary in training workers or in devising cheaper construction methods. In addition, the capital and managerial assets of builders are not fully employed a large part of the time. According to one study, Marion Clawson's "Shelter in America: An Interpretive Overview," 1/ homebuilding fluctuations may have cost the Nation an average of $20 to $25 billion annually since 1950. While such a figure is difficult to verify, it seems clear that government, industry, and individuals all pay a part of the cost of cyclical instability in the homebuilding industry.

FEDERAL POLICY HAS SHAPED THE HOMEBUILDING INDUSTRY

The Federal Government's involvement in housing programs began during the Great Depression of the 1930's. Over the succeeding years, the influence of Federal policies on the homebuilding industry grew to the point where a 1974 National Housing Policy Review report stated that "Today there is not a single significant aspect of the vast, diverse, and complex housing market that is not affected by governmental action in one form or another." 2/ The nature of Federal housing policy has changed during the 8 years

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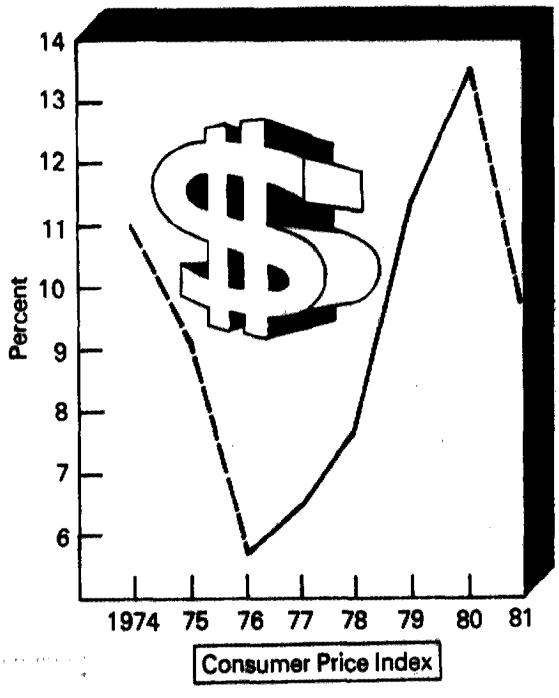
1/Marion Clawson, "Shelter in America: An Interpretive Overview" (Washington, D.C.: Resources for the Future, 1982).

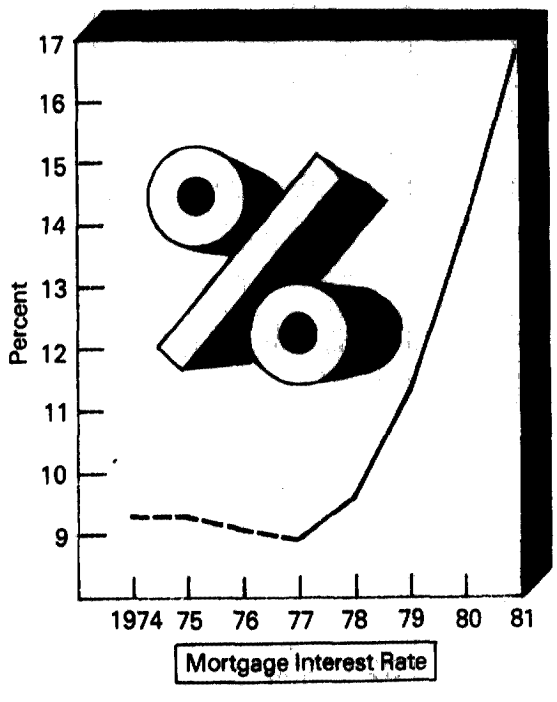
2/"Housing in the Seventies: A Report of the National Housing Policy Review," Department of Housing and Urban Development (Washington, D.C.: 1974), p. 1.

FIGURE 2

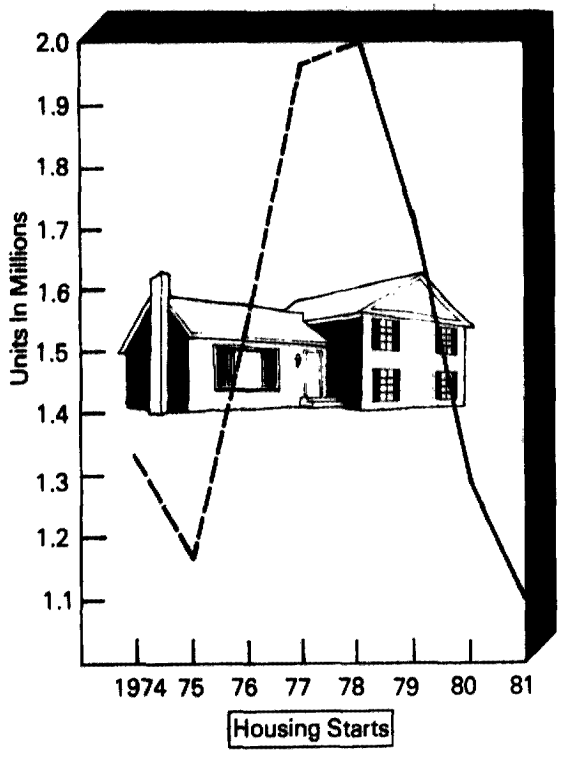
AS INFLATION INCREASED IN THE LATE 1970's...



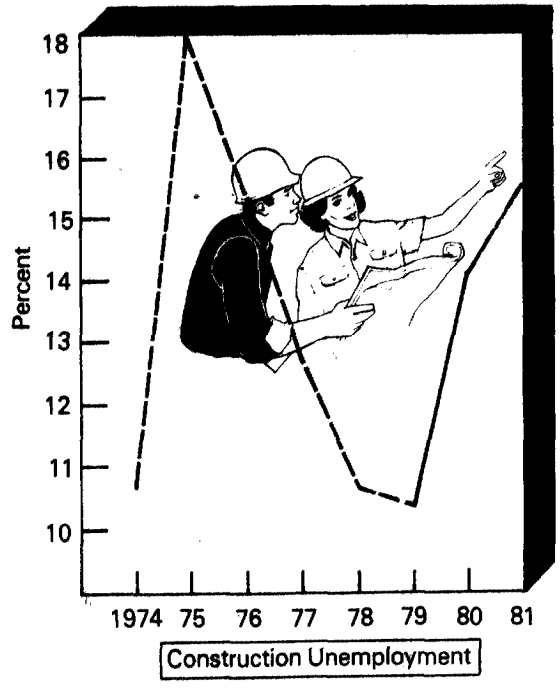
INTEREST RATES ROSE DRAMATICALLY...



CAUSING HOUSING STARTS TO FALL...



AND CONSTRUCTION UNEMPLOYMENT TO RISE.



Sources: Data obtained from the Bureau of the Census; Data Resources, Inc.; and the Bureau of Labor Statistics

following the National Housing Policy Review report, but the influence of the Federal Government on the homebuilding industry is still pervasive. For example, a recent Federal report estimated that in 1981 Government or Government-related agencies held $101 billion in mortgages (9 percent of all residential mortgages) and insured or guaranteed another $281 billion (24 percent of all mortgages). 1/

In response to the collapse of the housing industry in the 1930's, the Federal Government devised two major policies which are still in place. First, the Government decided to restructure the home financing system by creating institutions to provide mortgage insurance, insurance for banks and savings and loan associations, and a permanent secondary mortgage market. This restructuring resulted in the acceptance of long-term, low-downpayment, fully amortizing mortgages and the creation of a system to provide capital for the mortgage market. The second major policy to arise out of the Great Depression was the Federal Government's decision to subsidize housing for low-income families. This decision was first embodied in the public housing program authorized in 1937.

The seeds of Government involvement which were planted in the 1930's took root during the ensuing years. Numerous Federal programs germinated and grew to fruition as public acceptance of the Government's role in housing became entrenched. Construction of low- and moderate-income rental housing and owner-occupied dwellings received increasing support through a wide range of subsidy and tax incentive programs.

Several of the institutions created in the 1930's have continued to implement Federal housing policy. For example, the Federal Home Loan Bank Board (FHLBB), created in 1932, has for years helped provide guidance and an expanded source of credit to institutions which make long-term mortgage loans. The Federal Housing Administration (FHA), created in 1934 to insure long-term home mortgage loans for new construction, resale, and rehabilitation, has long provided a leadership role in addressing housing needs by insuring several types of mortgages and maintaining housing standards for properties with FHA-insured mortgages. The Federal National Mortgage Association (FNMA), created in 1938, has improved the flow of mortgage capital to areas of scarcity from areas of abundance by helping to provide a secondary mortgage market.

In 1949 major housing legislation provided a national goal which still endures today: "a decent home and suitable living environment for every American family." To help achieve this goal, additional Federal programs were created and the flow of Federal funds into housing was increased.

1/"The Report of the President's Commission on Housing," President's Commission on Housing (Washington, D.C.: 1982), p. 160.

The 1949 national housing goal has remained a source of direction for Federal policy. However, other economic and social concerns have also helped shape the Federal Government's programs and policies. For example, homebuilding has long been considered a stabilizing force in the economy. As a result, the Federal Government has taken special action to stimulate the housing industry for the purpose of providing employment and stimulating the economy during recession.

In 1968 the Congress decided that progress toward achieving the 1949 national goal was too slow. The resulting legislation established a production schedule for the construction or rehabilitation of 26 million housing units over the following decade. New Federal programs were set up to help meet the housing needs of low- and moderate-income families, including greater financial assistance for homeownership and rental housing. The number of housing units produced following the 1968 legislation rose by 65 percent over the 3-year period from 1970 to 1973.

The Federal Government has attempted to soften the fluctuations by stimulating the industry at low points in the cycle. For example, the Emergency Home Purchase Assistance Act of 1974 attempted to stabilize the housing market against cyclical downturns by increasing the supply of subsidized mortgage credit, thereby increasing new home sales. When we reviewed the program 4 years later, we concluded that it did result in additional housing starts and employment, but at considerable cost. In another instance, the Government attempted to stimulate housing and reduce builders' inventories under the Tax Reduction Act of 1975 by offering a tax credit of up to $2,000 for the purchase of a principal residence. However, a 1975 Department of Housing and Urban Development (HUD) study concluded that "The tax credit has had little impact on the sales of new one family houses." 1/ The debate over the success of this initiative still continues.

By the end of the 1970's, the major agencies involved in implementing the Federal programs included HUD; the Farmers Home Administration, Department of Agriculture; the Bureau of Indian Affairs, Department of the Interior; the Veterans Administration (VA); FHLBB; the Department of Defense; FNMA; and the Federal Home Loan Mortgage Corporation (FHLMC). These agencies administered the wide range of programs and activities related to providing mortgage insurance and guarantees, direct loans, grants, and other subsidies for the support of Federal housing policy.

1/Duane McGough, "Assessment of the Housing Market Impact of the Five Percent Tax Credit on New Home Purchases" (Washington, D.C.: HUD, 1975), p. 37.

CURRENT INITIATIVES

By the early 1980's the homebuilding industry was again in a recession. In one of its early initiatives, the Reagan administration began to reevaluate Federal housing policy through the President's Commission on Housing, established in June 1981. In its April 29, 1982, report the Commission concluded that emergency aid to the homebuilding industry would "* * * not yield prosperity for the economy as a whole or any significant sector of it." 1/ The Commission also made a series of recommendations for redefining Federal housing policy which, if adopted, would constitute a major change in the Federal approach to housing. Reliance on the workings of a deregulated housing market for solving housing problems would replace Federal intervention.

Additional recommendations more specifically aimed at helping the ailing industry have been set forth by a Cabinet-level Working Group on Housing Policy chaired by the Secretary of HUD. The working group was established to develop ways to assist the housing industry that would be consistent with the administration's economic recovery program. In general, the working group's recommendations were designed to provide relief for the housing industry without adding major subsidy programs or substantial direct expenditures.

In contrast to this noninterventionist approach, several proposals have been introduced in the Congress to provide a federally funded stimulus for the homebuilding industry. These proposals include incentives for home buyers, such as interest rate subsidies or tax credits for purchasers of new homes; incentives to increase the amount of money available for mortgages, such as tax exemptions for interest earned on deposits used for residential mortgages; and incentives to mortgage lenders, such as expanded FHA or VA mortgage insurance coverage. Many of these legislative proposals are included in the alternatives discussed in chapters 3 and 4.

OBJECTIVES, SCOPE, AND METHODOLOGY

As requested by the chairman, we reviewed existing Federal policies relating to home construction, with special emphasis on exploring alternatives for reviving the homebuilding and forest products industries. The objectives of our review were to

--explore the nature and extent of the problems facing the homebuilding and forest products industries,

--identify reasonable alternatives for providing short-term stimulus for the industries, and

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1/"The Report of the President's Commission on Housing," p. xviii.

--evaluate the advantages and disadvantages of each alternative.

Due to our limited time frame, we relied on information obtained from Government, industry, and academic sources without extensive verification of the information provided. However, these sources tended to corroborate each other's views on the problems affecting the industries and the possible solutions. In particular, we contracted with five housing experts--Patric Hendershott, George Sternlieb, Anthony Sulvetta, Craig Swan, and John Weicher--to assist us in our work and review drafts of the report.

During our review we considered our previous reports on homebuilding, forest products, and mortgage finance issues. Our review was performed in accordance with generally accepted Government audit standards. Most of the field work on this assignment was performed in Washington, D.C., and Portland, Oregon. However, we also contacted trade organizations, financial institutions, and university researchers throughout the country.

Work performed on homebuilding issues

We compiled an initial list of alternatives for providing short-term stimulus for the homebuilding industry through reviews of pertinent literature and discussions with housing experts from Government, industry, and academia. The groups and individuals contacted included HUD's Office of Policy Development and Research and Office of Housing, the Department of the Treasury's Office of Tax Analysis and Office of Special Studies, private interest groups such as the National Association of Home Builders and the National Association of Realtors, and several independent consultants from academia and the private sector. The parties interviewed represented a broad spectrum of knowledge of and opinions on housing questions.

After compiling the list of alternatives, we circulated it among Government and private experts to obtain their comments. The alternatives were generally described to avoid the idiosyncracies of some individual proposals. The groups which reviewed the list of alternatives included--but were not limited to--all of the same parties originally contacted in compiling the list. We then revised the proposals based on this input.

We evaluated the revised list of alternatives in three ways. First, we used the results of our past reviews and other pertinent literature to assess the advantages and disadvantages of each proposal. Since some of the proposals were similar to past Government stimulus measures, we reviewed available studies of the success of these proposals.

Second, we evaluated the proposals through three symposia we sponsored, one on the problems in the mortgage finance industry and

one each on the single- and multifamily housing proposals. The symposia participants included many of the foremost housing and finance authorities from Government, academia, and private industry. The symposia were organized around prepared papers and responses and included audience discussion. The topics covered included the background of the housing recession, the advantages and disadvantages of each proposal, and the possibility of alternatives to the proposals under discussion. (See app. II for a list of symposia participants and paper topics.)

Third, we contracted with three econometric modelers--Data Resources, Incorporated (DRI); James Alm and James R. Follain of Syracuse University; and Regional Data Associates (RDA)--to develop and perform simulation analyses for each of the proposals to determine their effectiveness in providing short-term stimulus to the homebuilding industry and their direct and indirect costs. We also contracted with William B. Brueggeman of Southern Methodist University to provide an analysis of each policy option to determine its relative effectiveness in making rental housing development financially feasible. These modelers were chosen because of their particular knowledge and experience in analying stimulus proposals. The results of the analyses are discussed in chapters 3 and 4. (See app. III for a detailed description of the methodology.)

Work performed on forest product issues

In meetings with the chairman and his representatives, we agreed to focus our review of the forest products sector on those products most closely related to residential construction. As a result, we limited our study to those products whose major end uses are affected by homebuilding activity--softwood lumber and softwood plywood. The term "forest products" is limited to this definition throughout the report.

Our review of the forest products industry involved an examination of pertinent literature, interviews with officials of the Department of Agriculture's Forest Service and Foreign Agricultural Service and the Office of Technology Assessment, and discussions with representatives of the lumber industry and related trade groups.

To project the future demand, supply, and employment impacts resulting from various proposals to aid the forest products industry, we contracted with DRI to simulate these results based on various assumptions. In addition, DRI provided an analysis of current and historical issues and trends in the forest products industry, and its data bases were used as the source of most statistical data in chapter 5. We also contracted with the Forest Service to simulate the effect on demand and supply when forest products exports are increased. The results of the simulation analyses are discussed in chapter 5. In all cases the simulations are used to compare the relative impacts and costs of the proposals and are not intended to predict future economic events.

Work performed on mortgage finance issues

A portion of our work focused specifically on the mortgage finance area. Information on this topic was gathered through the mortgage finance symposium; literature searches; analysis of "flow of funds" and statistical data from HUD and FHLBB; and discussions with mortgage finance experts from Government, industry, and academia. The results of our work in the mortgage finance area are noted briefly in chapter 2, where we describe some of the changes that have recently occurred in the financial environment, and described more fully in chapter 6, where we discuss the implications of mortgage financing on a revival in homebuilding.

CHAPTER 2

CRISIS IN THE HOMEBUILDING INDUSTRY: CAUSES AND IMPLICATIONS

In the years since 1949, the overall quality and quantity of America's housing have improved significantly. The average new house built in 1979 had twice the living space of that built in 1950. The fraction of American households living in substandard housing has declined, the proportion of households owning their homes has risen, and the total stock of housing has grown. Although Americans today are the best housed people in history, there are many who are concerned that conditions have changed such that the housing achievements of the past may be unattainable in the future.

This chapter describes the recent downturn in the homebuilding industry and identifies inflation and the interrelated problems of high housing prices and high real and nominal interest rates as the primary causes. It discusses briefly the related issues of housing demand, finance, and affordability. The chapter focuses primarily on problems in new homebuilding, but many of the same factors also affect the resale of existing housing. 1/

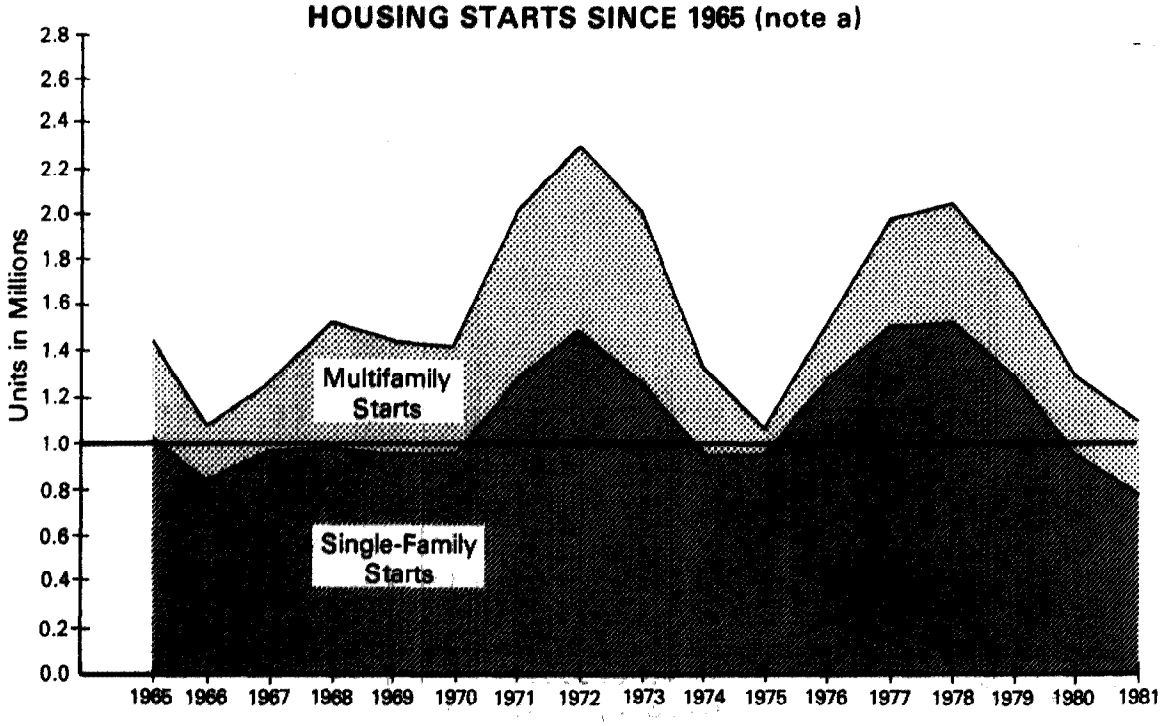
THE CURRENT SITUATION IN HOMEBUILDING

Housing starts, the most generally accepted measure of homebuilding activity, peaked most recently in 1978 at just over 2 million units. As can be seen in figure 3, the rate of housing starts turned down in 1979 and continued to drop through 1980 and 1981. The slide continued in the early months of 1982 and, through June, had exceeded the annualized 1-million mark only once in the previous 11 months. A slight rebound in May (with annual housing starts estimated then at 1.075 million units) was reversed in June when the rate of starts once again fell, this time to 911,000 units. Starts jumped again in July to an annually adjusted rate of 1.2 million units. This rise was attributable to a bulge of federally subsidized housing in the production pipeline which HUD recently processed.

1/ The new and existing housing markets are closely related. The vitality of the existing market is crucial to homebuilding and new home sales because the sales of many new homes are contingent on the resale of an existing home. One of the keys to the housing prosperity of the 1970's was the trade-up market involving the resales of existing homes and the corresponding purchases of new homes. Stagnation in today's existing housing market has reduced substantially the potency of the new housing market.

FIGURE 3

HOUSING STARTS SINCE 1965 (note a)



[a]This figure does not reflect any mobile home production. Single-family starts include structures with 1-to 4-family units; multifamily starts include structures with 5-family units or more.

Source: Prepared from data contained in the *Economic Report of the President*, February 1982.

Accompanying this prolonged downturn in housing starts, new home sales are at record lows with 1981 being the worst year for such sales since the Bureau of the Census began collecting statistics in 1963. In February 1982, unemployment in the construction trades was at 18.1 percent, involving approximately 1 million workers. Many construction firms have filed for bankruptcy, withdrawn from the building of housing units, or have greatly curtailed their operations. Many still in the homebuilding business are losing money or reporting only small profits. As will be discussed in chapter 5, the production of building materials, including those coming from the timber industry, has been severely affected by the downturn in housing. All in all, housing production is currently in the midst of its deepest and most sustained downturn in the post-World War II era.

DEMAND FOR NEW HOUSING: DEMOGRAPHICS AND ECONOMICS

The current downturn in the homebuilding industry is of less consequence if there is little need for new housing. On the other hand, if the need is significant, then the consequence of today's situation increases accordingly, with the unmet demand for housing continuing to accumulate. Although housing forecasts are dependent on many factors and are surrounded by imprecision and uncertainty, numerous estimates of the need for new housing in the coming years are at levels which exceed historical production rates.

Housing demand influenced by many factors

The total need for housing in a country is ultimately determined by the size of the population, but it is the total number of households to be housed--and other factors--that more directly influence what is known as effective housing demand (meaning households that are ready, willing, and able to pay).

Household formation is affected to a large degree by the age distribution in the population, particularly by the number of persons in ages 20 to 35. As a result of an earlier "baby boom," the number of young adults entering this prime household-formation period in the United States recently peaked, with this group now including a large number of prospective home buyers. It has been estimated that more than 41 million Americans will turn 30 during the 1980's, 10 million more than in the decade of the 1970's, and that this will definitely influence the demand for homeownership. The extent to which this potential demand for housing becomes effective demand will depend on numerous factors. Among the most important of these are

--the supply and price of housing;

--the net cost of housing after considering maintenance, depreciation, property taxes and finance expenses (less tax savings), and appreciation in home values; 1/

--housing finance conditions including the cost and availability of mortgage funds; and

--consumers' ability to buy and their expectations concerning inflation, employment, and current and future income compared to living costs.

Each of these factors influences the effective demand for housing very directly in the short run. In addition, over a longer period of time, they combine with demographic, social, and cultural factors to influence tenure and living style choices, the propensity to form households, and the desire to move or migrate. Until the last 2 years, these factors worked collectively to produce substantial increases in household formations and demand.

New housing demand: the future outlook

Forecasts of housing demand through the 1980's and into the 1990's are somewhat mixed and change periodically as time passes

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1/For a fuller discussion of the net cost of housing, see Patric H. Hendershott's article in the Federal Home Loan Bank of Cincinnati's 1982 Quarterly Review 1, entitled "The Price of Housing Services and Tenure Choice in the 1980's," pp. 5-8.

and new knowledge is obtained. Numerous forecasts made in the past suggested a demand for new housing through most of the 1980's at levels higher than the production rates of the 1970's and then a tapering off in the 1990's. Some estimates, for example, showed that 23 to 25 million new living units may be needed in the 1980's to meet the demand of new household formations and the removal of stock from the housing inventory for whatever reasons. This would be one-third more than the number of units built in the 1970's. While estimates in this range are quite common and higher estimates can be found, it is important to recognize that these are projections of demand based primarily on demographics and household formations. Whether or not these projections will translate into effective demand of comparable magnitude will depend, as indicated above, upon many different factors.

Many housing economists have recently lowered their estimates of need for new housing. These economists are predicting something less than 1.1 million new housing starts for 1982, about the same level as 1981. For 1983, 1.3 million starts are expected if mortgage interest rates drop to around 15 percent. Even if interest rates were to decline significantly, however, these economists expect housing to remain at suppressed levels through 1985.

Some housing industry officials have lowered their housing production expectations through the entire decade of the 1980's. The following are among the reasons cited for this outlook:

--The conversion to residential properties of thousands of schools, warehouses, and other nonresidential buildings, as well as the repartitioning of certain residential properties, meant that more people were able to find housing in the past decade than most analysts had anticipated.

--Data from the 1980 census shows 4 million more dwelling units in the Nation than previously thought.

--Currently 5 million existing houses are for sale with few takers.

--Pent-up demand has been dampened by the erosion of housing as an investment.

--Despite a recent weakening in home prices, the cost of owning a home is still high enough to depress the market.

--The Economic Recovery Tax Act of 1981 lowered the marginal tax rate for individuals. At the same time, it decreased the benefit of deducting for income tax purposes both mortgage interest and property taxes.

To further explain the lowering of housing expectations through the 1980's, housing and policy officials at HUD informed us that today's high housing values have led to (1) greater conservation of the existing housing stock and (2) more doubling-up of occupants in

housing units and the decision of many younger people to continue to live at home with their parents.

ECONOMIC FACTORS AFFECTING DOWNTURN IN HOMEBUILDING

The President of the National Association of Home Builders testified in March 1982 before the Senate Subcommittee on Housing and Urban Affairs that:

> "Homebuilding is a unique industry. We have the land, labor, materials and market that can help turn this economy around. We are the one industry that can break the logjam of bad economic news and put Americans back to work."

With the physical resources and market apparently at our fingertips why, then, do we have a crisis currently in the homebuilding industry? Why aren't homebuilders building houses to meet the demand that is said to exist? Why are new home sales lagging? What is the effective demand for new housing based on today's economic climate? Answers to these questions lie in the fact that the housing sector is tied closely to the economy as a whole and that the ills of the economy have depressed housing production. The President's Commission on Housing stated in its report, for example, that

> "If the housing industry is in trouble, the reason lies essentially in what has happened to the economy as a whole through the inflationary binge of the 1970s."

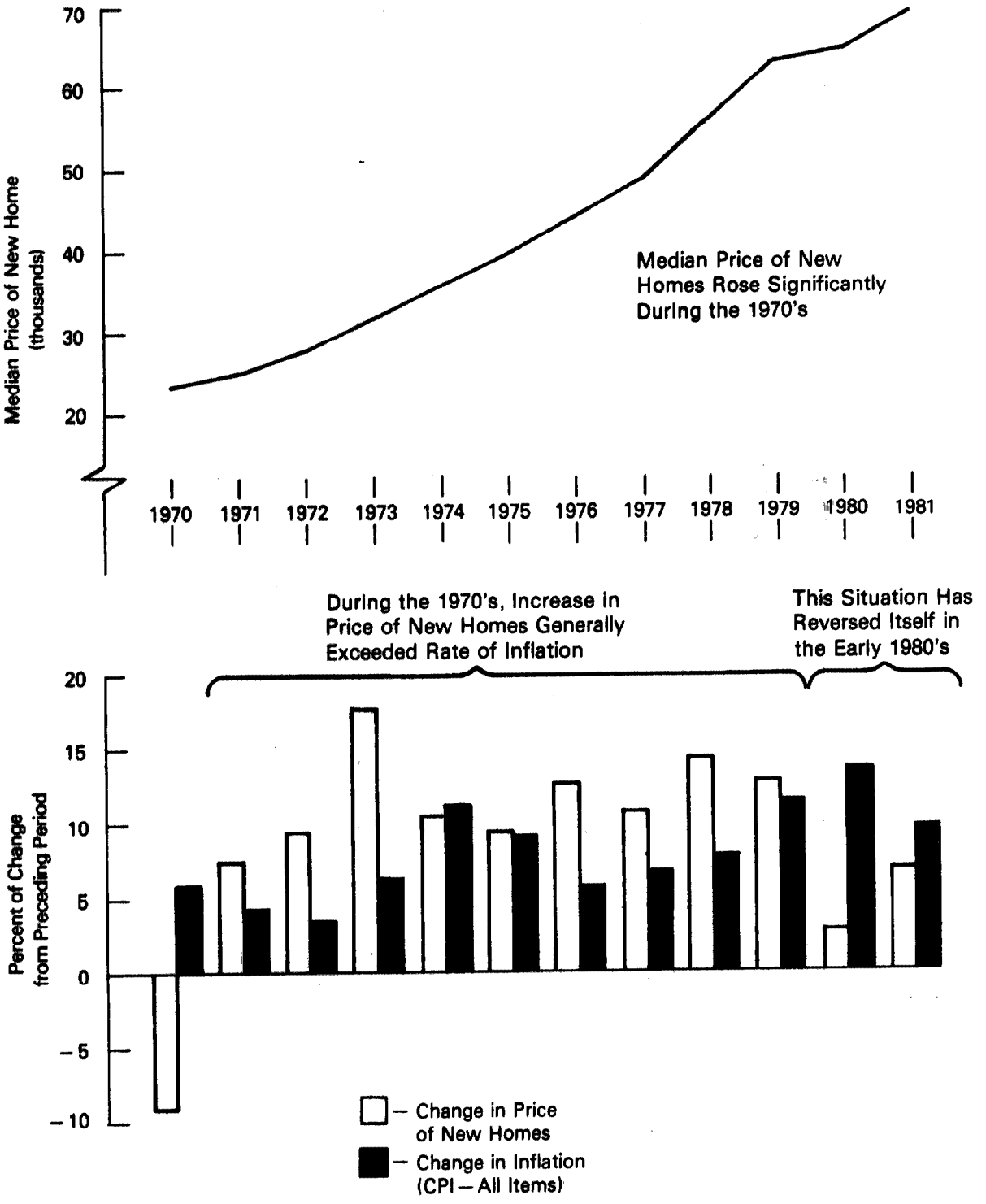
Inflation in the United States over the past 15 years or so has had both a stimulative and a depressive effect upon housing. It prompted investment in housing during the earlier years as increases in the value of housing consistently exceeded inflationary rates. Over the years, however, it has been responsible for hikes in most of the costs going into new home construction and can therefore be partially blamed for today's high housing prices. It has played a part in driving up mortgage interest rates to unprecedented levels. The cumulative effects of inflation have reached such proportions and outdistanced increases in household incomes to the point where fewer households can now afford new homes. Although increases in housing prices have recently dampened, those who can afford to buy now must spend a greater portion of their incomes for a home than they would have spent in the past. The homebuilding industry is suffering accordingly.

Housing prices and mortgage interest rates have risen significantly

Since 1970, prices for both existing and new homes have risen significantly. The upper panel in figure 4 shows, for example, that the median price of a new home rose from $23,400 in 1970, to $68,900 in 1981, an increase of approximately 194 percent. The

FIGURE 4

GROWTH IN THE MEDIAN PRICE OF NEW HOMES COMPARED TO RATE OF INFLATION



Source: Home price data was taken from Congressional Research Service Issue Brief Number IB78086, "Housing and the Economy," updated May 14, 1982. CPI data was obtained from the 1981 Statistical Abstract of the United States, p. 459.

rate of incline during the 1970's was relatively steep when compared with the very gradual increases of the years preceding 1970.

The lower panel in figure 4 shows that in 1980 and 1981, the rate of inflation exceeded the increase in the price of new homes. This was a significant departure from the 1970's when the rate of growth in housing prices generally exceeded the rate of inflation. Homeowners, during the 1970's, saw the value of their homes appreciate considerably. Many prospective home buyers were enticed into the market because they saw housing as a good hedge against inflation. Many saw that investment in housing would be more likely to maintain their income and wealth position than other options available to them. The expectation that housing prices would continue to rise, the tax benefits of homeownership, and strong demographic pressures all combined to increase the demand for housing and its desirability as an investment for many households. 1/ The demand for housing also remained strong during this period of continued inflation because of the system of mortgage financing in place at the time. This system, created in the 1930's, was built around specialized financial intermediaries which allowed households to finance their homes through long-term, fixed-rate mortgages with low downpayments. The fact that mortgage interest rates remained relatively stable and, by today's standards quite low, made it possible for these institutions to prosper and millions of households to satisfy their desires for new housing during this period.

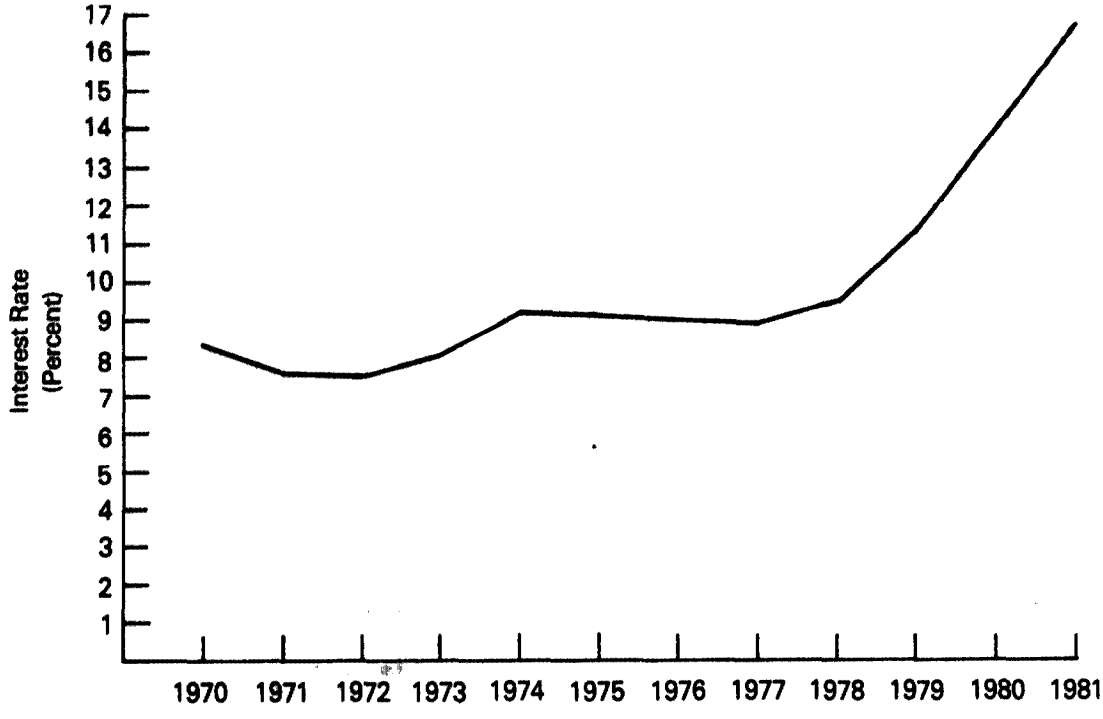
Low interest rates, however, now appear to be a thing of the past. Figure 5 depicts the trend of nominal mortgage interest rates (unadjusted for inflation) from 1970 to 1981. It shows that such rates remained close to the 8 or 9 percent marks during the period from 1970 to 1977. Since 1977, however, they have risen sharply to almost 17 percent in 1981, approximately doubling during the last 4 years. 2/ Although short-term interest rates have recently been declining, mortgage rates have not as yet been significantly affected.

1/For further discussion on this subject, see the report by Anthony J. Sulvetta and Howard M. Smolkin, "Housing Affordability in an Inflationary Environment," Executive Office of the President, Office of Management and Budget, (Washington, D.C.: June 1979).

2/The mortgage interest rate obtained by the average home buyer in 1981 was undoubtedly lower than the 16.7 percent rate shown in figure 5. This is because of the increased incidence of homeowners' financing, builder buydowns of interest rates, and other creative financing mechanisms being used at the time. Without such mechanisms, homebuilding would have been even more depressed than it was. These mechanisms do, however, act to hold housing prices at artificially high levels. Thus, the home buyer ends up "paying" through the higher house price rather than through the financing part of the deal.

FIGURE 5

TREND OF MORTGAGE INTEREST RATES
(1970 - 1981)



Source: Data Resources, Inc.

Between 1965 and 1978, mortgage interest rates increased less, and expected house price inflation rose more, than expected general inflation. The result was a real mortgage rate (adjusted for inflation) that declined slightly. On an after-tax basis, the decline was substantial, especially for upper income households in high tax brackets. As discussed in the section which follows, however, there has been a jump in the cost of owner-occupied housing since 1979. This jump is a reflection of the real after-tax mortgage rate which has risen to its pre-1965 level. 1/

High interest rates (both nominal and real), coupled with high housing prices and correspondingly high downpayment requirements, have made housing much less affordable to many households.

Housing affordability has recently diminished

In the past several years, the number of would-be home buyers who are frustrated in their search for affordable housing has increased. Inflation in the 1970's did indeed take its toll as

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1/Hendershott, pp. 5-6.

high housing prices and interest rates eventually combined to exceed the bounds of many household incomes. As a result, many households have been forced to defer their home purchases. Others have purchased smaller homes or a different type of housing than they might have otherwise and/or found themselves paying an increasingly larger share of their incomes for housing expenses.

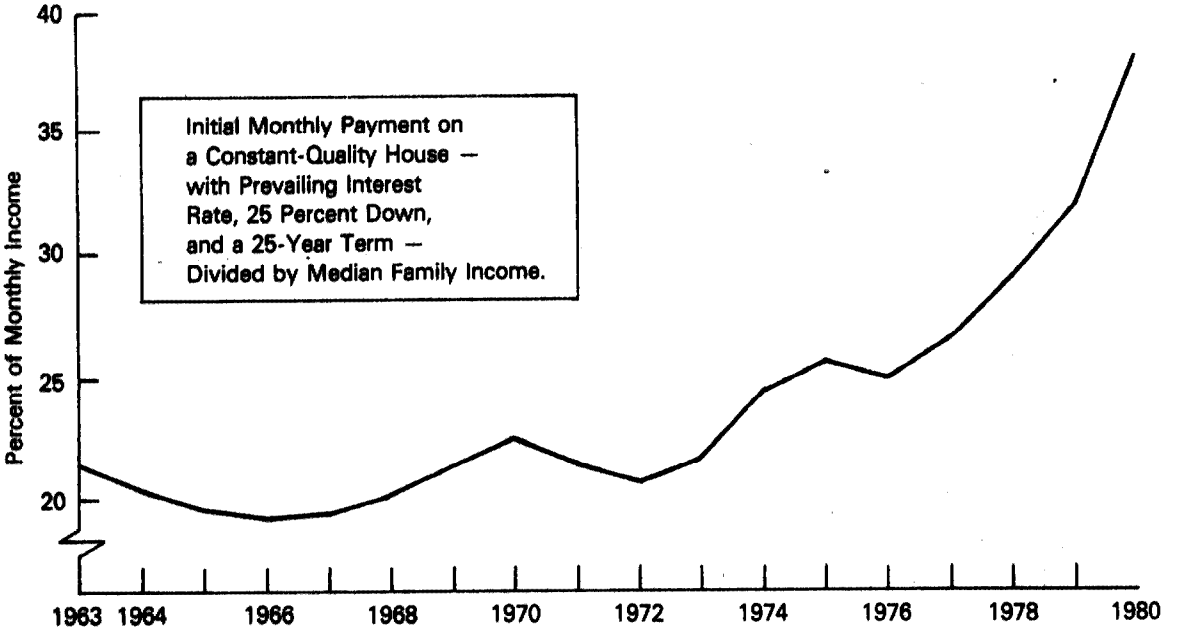
A traditional but simplistic measure of affordability is the ratio of the cost of housing as compared to income. Under this measure, households spending more than 25 to 30 percent of their incomes for housing were generally thought to be spending too much. By 1981, however, many new home buyers were spending almost 40 percent of their incomes for housing, and various financial institutions were changing their underwriting requirements to allow this.

The fact that new home buyers were being required to spend an increasingly larger proportion of their incomes for housing did not dampen housing demand much until 1979. This occurred because after considering the tax and capital gains advantages enjoyed by homeowners, the after-tax user cost of owner-occupied housing was less than earlier thought, and therefore a greater proportion of a household's income could be spent on housing.

Figure 6 shows the initial monthly payment burden of a new house as a percent of median family income for the period from 1963

FIGURE 6

RISE IN MONTHLY MORTGAGE PAYMENT BURDEN AS A PERCENT OF INCOME (NEW HOUSES 1963-1980)



Source: Prepared from a similar figure in *The Report of the President's Commission on Housing*, April 1982, p. 76.

to 1980. This ratio passed 25 percent in about 1975 and, as can be seen, was heading toward 40 percent in 1980. One should keep in mind, however, that a younger home buyer's income can generally be expected to go up following a house purchase. Therefore, with a standard fixed payment mortgage, the debt burden on the house remains relatively constant over the mortgage term, and the proportion of the home buyer's income going toward this burden will generally decline from perhaps 35 or 40 percent initially to lesser proportions in the later years.

In looking at the issue of housing affordability from the standpoint of the after-tax user cost of housing, table 1 presents evidence that housing affordability has become considerably more difficult in the past 2 years.

Table 1

Trends in Measures of Affordability

	After-tax user cost	Initial annual mortgage payment
1968	$ 892	$1,510
1969	792	1,833
1970	904	1,937
1971	983	1,893
1972	751	1,985
1973	751	2,345
1974	547	2,845
1975	171	3,083
1976	465	3,346
1977	-105	3,813
1978	-298	4,673
1979	-613	6,070
1980	824	7,909
1981	4,883	9,876

Source: This table was presented in a paper prepared for GAO by James Alm and James R. Follain, Jr., entitled "Countercyclical Stimulation of Single-Family Housing: It's Likely to be Expensive," June 30, 1982. Alm and Follain computed the user-cost column using data presented by Ann Dougherty and Robert Van Order in "Inflation Housing Costs and the Consumer Price Index," American Economic Review, March 1982. The user cost number equals $((1-t)i+d-ie)P$ where t is the marginal tax rate (.25), i is the mortgage interest rate, d is the maintenance rate (.01), ie is a measure of inflationary expectations constructed by Dougherty and Van Order, and P is the price of a constant quality new house. The 1981 figure was provided to Alm and Follain by Dougherty and Van Order.

The first column in table 1 contains estimates of the after-tax user cost of owner-occupied housing since 1968, taking into consideration appreciation and the tax advantages of homeowners. Note the decline in the user-cost measure during the 1970's, and particularly the fact that the cost of owner-occupied housing from 1977 through 1979 actually had negative values because high appreciation rates more than offset interest and other ownership expenses. Then note the dramatic increases experienced in 1980 and 1981. The table's second column is a rough measure of the annual mortgage payment on a 75-percent loan (obtained by multiplying the mortgage interest rate by 0.8 and then applying that product against the price of a constant-quality new house). This column indicates that the size of the initial mortgage payment was increasing over the years even though, until the last 2 years, the after-tax user cost was dropping.

CHANGING FINANCIAL ENVIRONMENT

In addition to their direct effects on housing, inflation and accompanying high interest rates have also been largely responsible for forcing changes in the financial environment in which housing is bought and sold. The financial institutions and techniques which have served the housing industry for nearly 50 years are undergoing fundamental change.

The mortgage market is a large and important component of the U.S. capital market, involving a complex network of institutions, instruments, and borrowers. However, the adequacy and stability of mortgage finance and its impact on housing activity have been continuing concerns during the postwar period, with frequently alternating episodes of boom and bust. Legislated interest rate ceilings on deposits have hindered the ability of depository institutions to attract new funds during periods of monetary restriction, and loan rate ceilings have severely constrained profit margins. The result has been periodic episodes of severe limitations on the availability of mortgage finance, producing severe crunches on homebuilding and real estate activities.

The key housing financial institutions have historically been savings and loan associations and mutual savings banks. The thrift institutions, as they are known, have been particularly hard hit by the instabilities of the past and by the fact that their portfolios are dominated by long-term mortgages bearing interest rates well below the current cost of money.

In response to these and other difficulties, new deposit innovations, financing instruments, and institutional arrangements have been introduced or evolved over the years. For example, direct Government support for mortgage lending and the secondary mortgage market has greatly facilitated the provision of funds to borrowers. In June 1978, financial regulators approved new short-term certificates bearing interest rates related to Treasury bill yields. In October 1979, the Federal Reserve Board changed its methods of fighting inflation by controlling the money supply,

rather than by controlling interest rates, which were left to find their own levels according to market forces. 1/ Finally, in April 1980, a number of trends and changes in financial markets were formalized in the Depository Institutions Deregulatory and Monetary Control Act. Most importantly for housing, the act legislated the phaseout of interest rate ceilings on deposits at financial institutions (an initial step in encouraging competition for deposits) and partially released the thrift institutions from their required specialization in housing. The act, together with market forces and other legislative changes, should result in the breakdown of institutional differences and barriers to competition between thrifts and other lenders, resulting in a dissolution of the differences between traditional types of lenders. These changes will cause the thrifts to play a lesser role in housing finance in the future.

The ongoing evolution of the financial services industry in the new environment suggests a wider range of participating institutions, a much greater variety of deposit and loan instruments with varying terms and returns, a consolidation of the thrift industry to a smaller number of firms, and a shift in the provision of mortgage finance away from the traditional sources, such as thrift institutions, to more diversified lenders and private investors by way of the secondary market (e.g., mortgage pools). The result is expected to be a more elastic future supply of mortgage finance but at higher mortgage rates, relative to other interest rates (e.g., AAA bond rates, long-term Government bond rates, etc.), than in the past. Whether the traditional boom-bust pattern for mortgage finance and housing in the U.S. economy can be mitigated or eliminated, as a result, is not clear. In chapter 6, however, we do examine (1) the ability of today's mortgage financing system to respond to an upturn in homebuilding, (2) whether anything can be done in mortgage financing to stimulate homebuilding, and (3) the degree to which any special efforts to help revive homebuilding will substitute for other housing activities, or for activities in other interest-rate-sensitive sectors of the economy.

RENTAL HOUSEHOLDS ALSO FACE AFFORDABILITY AND OTHER PROBLEMS

Rental housing plays a major role in the U.S. housing market, sheltering approximately one-third of all households. It is an alternative for many households that either cannot afford or choose not to buy their own homes. Although the number and quality of rental units have increased in recent decades, the rental housing market is suffering from high interest rates and declining real rents. Further, the current renter population has a relatively lower rent-paying ability than in the past, due in part to the fact

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1/This change is discussed in greater detail in the accompanying report, "An Analysis of Fiscal and Monetary Policies" (GAO/PAD-82-45).

that during the 1960's and 1970's, many middle- and upper-income households were attracted to homeownership because of its capital gains and tax-savings advantages. This tenure shift led to a decline in effective rental housing demand which in turn resulted in (1) reduced levels of rental starts, (2) more rapid depreciation and abandonment in the lower quality stock, and (3) increased conversion of the higher quality stock to condominiums and cooperatives.

Multifamily starts peaked in 1972 at about 906,000 units. This abnormally high level of activity was due to expectations of continued population growth and record levels of activity in federally susidized construction programs. Since 1972, multifamily starts have decreased and were at a level of 289,000 units in 1981.

Not all multifamily production goes toward rental housing, however; in fact, one developer in our multifamily symposium estimated that more than 50 percent of the privately financed multifamily units in the last 2 years were built for owner-occupants and not renters. He cited a number of reasons why fewer privately financed rental units are being built and why many of those previously built are being converted to owner-occupied units. His reasons included

--high costs for construction, land, and financing;

--high operating costs due to labor and energy increases;

--rent control which is in force or under consideration in over 200 local jurisdictions;

--financial advantages available through conversions of rental units to owner-occupied units; and

--the desire of many Americans to own their own homes and the willingness of many households to satisfy this desire with multifamily owner-occupied units.

What is the future for rental housing? First, rents can be expected to rise in the near future due to pressures from new household formations and the fact that high mortgage interest rates will keep many potential home buyers in the rental market. Rents will have to rise significantly, however, in order to generate new construction since the gap between rents and the costs of providing new rental units is substantial. Because of an expected lag in the response of new construction to rising rents, some of the rental housing demand will be satisfied by a response of the existing stock primarily through the (1) conversion of owner-occupied units to rental units, (2) division of larger properties into smaller units, (3) conversion of nonresidential properties into residential properties, and (4) rehabilitation and upgrading of existing properties.

Rental households will respond to the anticipated higher rents. Household formations will slow and more households will double up, primarily because young people and the elderly will choose not to live as independent households. For lower income households, ability to pay for future rental housing will depend to some extent on the degree of assistance available to meet rent payments. Some, undoubtedly, will be forced to live in housing which is physically substandard, overcrowded, or which absorbs a relatively high percentage of their limited incomes.

CONCLUSIONS

Americans are better housed than any nation in history. In the last three decades, despite periodic cycles in housing production, major gains have been made in the quantity and quality of housing stock. The current downturn in housing production, however, is both deeper and of longer duration than previous post-World War II downturns. Its primary causes have to do with the behavior of housing prices and real interest rates which have risen to, and stayed at, unprecedented levels. Both the rises in prices and interest rates are the result of a prolonged period of relatively high inflation through much of the 1970's. Interest rates have also been affected by many of the changes that have occurred in the Nation's financial system--for example, the Federal Reserve Board's efforts to constrain inflation by controlling the rate of growth of the Nation's money supply. There seems to be little prospect for a substantial recovery in housing production, to levels consistent with even moderate historical production rates or conservative estimates of potential demand, as long as interest rates remain at their present levels. In the next several chapters, however, we will examine some of the proposals which have been offered as ways of stimulating, in the short-term, at least a partial recovery.

CHAPTER 3

COMPARISON OF STIMULUS PROGRAMS

FOR HOMEOWNERSHIP

Concern over the crisis in homebuilding has given rise to intense debate over what actions, if any, the Federal Government could or should take to aid the troubled industry. Not everyone is in agreement as to what should be done. The administration, for example, has stated that there can be no sound and stable housing industry without a sound and stable economy. It rejects short-term emergency Government intervention on the grounds that it would likely fuel inflation and thereby harm the economy as a whole. The administration and others have pointed out that housing is only one of many industries that are currently feeling the impact of the Nation's economic recession, and they question why one industry should be singled out for help when so many others are likewise hurting.

Many members of the Congress and some industry groups feel differently--that the economy is dependent to a large degree on homebuilding and that to provide aid to homebuilding will be beneficial to the economy as a whole. A multitude of differing proposals have thus been advanced and are being contemplated. They vary widely in terms of their probable effectiveness, cost, and ease of implementation. We concentrated on those that would subsidize newly constructed units which begin construction after passage since these were expected to have the strongest impact on net housing starts and jobs. None appears capable of completely turning around housing and the homebuilding industry. It appears that this will occur only when interest rates have fallen and the overall economy has improved. A number of the proposals, however, have some potential for providing a short-term stimulus to homebuilding with measurable impacts in such areas as housing starts, employment, and GNP. The resulting increased economic activity would largely offset the effects of any financial "crowding out" (the phenomenon of mortgage lending displacing lending for other purposes), and would result in increased employment in 1983 and 1984, primarily in non-construction areas.

This chapter provides the results of our analysis of a number of proposals relating to homeownership. Chapter 4 will address a number of proposals which have been made regarding rental housing. In both chapters we relied heavily on econometric modeling work performed under our supervision using four models--(1) an augmented version of the DRI model of the U.S. economy; (2) a more specialized model of the housing sector developed by RDA; (3) a model of consumer response to changes in housing affordability developed by James Alm and James R. Follain, Jr., of Syracuse University; and (4) a model developed by William B. Brueggeman of Southern Methodist University which analyzes the effects of various financing provisions on rental housing investment. (For a more detailed description of the models used, see app. III.) We also relied to

a large extent on the results of three symposia held on mortgage finance, single-family housing, and multifamily housing (see app. II), and upon documentation obtained from and/or interviews held with officials of HUD, the Department of the Treasury, industry groups, and private interest associations.

LOWER INTEREST RATES, THE OBVIOUS BUT ELUSIVE SOLUTION

The housing industry is very dependent on both the cost and availability of credit. The most beneficial thing that could happen to the homebuilding industry and to resales of existing housing would be a decline in mortgage interest rates to a point where the underlying demographic demand for housing would translate into greater effective demand. The analysis shown in this chapter for the various countercyclical stimulus proposals indicates that modest declines in interest rates for buyers with certain incomes could trigger positive economic responses. Declines in interest rates throughout the economy, combined with increased employment, could therefore be expected to result in even larger gains in the housing sector.

One estimate developed for us by RDA suggested that an across-the-board mortgage interest rate decline of 4 percentage points for a full year would create demand for as many as 450,000 additional single-family homes. Other experts we consulted held a wide range of opinion as to the decline in interest rates needed to produce a strong housing revival. Most seemed to think that mortgage interest rates ranging from 10 to 14 percent would produce such a revival, depending on local market variations and the speed of secular changes in the mortgage lending industry. However, some of the experts felt that long-term conventional mortgage rates were unlikely to decline below 14 percent for the next 2 to 3 years. Furthermore, because of the changes that have occurred in the financial environment, housing must now compete on an equal footing in the capital markets with other investments. Combine this with the fact that lenders will probably continue to demand a higher inflation risk premium for mortgages and one may conclude that relatively higher mortgage interest rates will prevail as compared to those experienced toward the end of past housing downturns. 1/

A future rebound in housing, usually associated with a decline in interest rates and a general improvement in the economy, might be significantly more moderate than rebounds following past

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1/Patric Hendershott, "Relative Cost of Financing," (Federal Home Loan Bank of Cincinnati Quarterly, 1982) argues that the fixed rate mortgage gives the borrower two options: (1) pay off the loan if interest rates fall or (2) drag out the term by staying in the house if rates rise. In an inflationary environment, these options lower the lender's return on the mortgage thus making higher interest rates necessary.

recessions. When housing does rebound, future price and income trends and their relationship with housing affordability may mean that, regardless of demographic demand, new housing starts will be unlikely to exceed 1.4 to 1.6 million units for many years. 1/

SHORT-TERM STIMULUS PROPOSALS RELATING TO HOMEOWNERSHIP

Given high mortgage interest rates and the prospects that they may be around for some time, our analysis was confined to those proposals which might bring quick relief to the ailing homebuilding industry and the overall economy in terms of increased housing starts, employment, and other economic factors. The following are descriptions of the major proposals.

Temporary interest reduction

The temporary interest reduction--similar to the measure recently passed by the Congress, but vetoed by the President--would provide $3 billion over 5 years and reduce interest rates for low- and moderate-income homebuyers. Specifically it would

--offer subsidies to buyers of new single-family homes amounting to the lesser of 4 percent or the difference between the market interest rate and 11 percent (unless market interest rates fall to 12.5 percent, at which point the program would terminate);

--subsidize the first 5 years of the mortgage with interest rates reverting to the unsubsidized level beginning in the sixth year;

--limit assistance to mortgages of $67,500 or below and to families earning a maximum of $30,000 per year (except in high cost areas) and for houses newly built, or substantially rehabilitated started after enactment and completed by January 1, 1984; and

--recapture the subsidy at the time of certain dispositions (limited to 60 percent of net equity).

The proposal which passed the Congress 2/ would also have utilized (1) the allocation of funds according to State population, unemployment rate, and declines in housing starts and (2) a growing equity mortgage (GEM) which increases the home buyer's contribution to principal in each of the first 5 years of ownership. Our macroeconometric simulations do not take into account either of

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1/Duane McGough, "Outlook for Housing," (Speech before National Association of Recycling Industries, 1982).

2/H.R. 5922 "Urgent Supplemental Appropriations Act, 1982."

these factors although the impact of the GEM is analyzed separately.

Permanent interest reduction

A permanent interest reduction--similar to the 1974 Brooke-Cranston Emergency Home Purchase Assistance Act (often referred to as Tandem)--would provide $3 billion to buy down the interest rate for the life of a standard fixed payment mortgage (SFPM). The Government National Mortgage Association (GNMA) would purchase these mortgages which would carry interest rates up to 4 percent below the market rate (minimum interest rate would be 11 percent) and then sell these mortgages at a discount on the secondary market. Mortgage and annual family income limits would be the same as the temporary interest reduction program. Only those houses newly built or substantially rehabilitated after enactment, but completed by January 1, 1984, would be eligible for assistance.

Home buyer tax credit

Under the home buyer tax credit (HBTC), home buyers, regardless of income, would be eligible for credits against their Federal income taxes similar to those provided by the Tax Reduction Act of 1975. Specifically, households buying newly built or substantially rehabilitated homes which were started after enactment and completed by January 1, 1984, would qualify for a tax credit equal to 5 percent of the purchase price. The credit would not exceed $5,000.

Mortgage interest tax credit

To encourage additional mortgage investment, the mortgage interest tax credit (MITC) would make institutions with mortgage portfolios eligible for a Federal income tax credit equal to 2 percent of their mortgage interest income. Only those institutions allocating at least 50 percent of all new investments to housing would be eligible for the credit. The credit, however, would extend to all the mortgages in an eligible institution's portfolio.

Tax-exempt mortgage revenue bonds

It has been estimated that more below market interest rate mortgages could be financed by tax-exempt State and local bonds if Federal restrictions on their issuance were eased. The ability of State and local housing finance agencies to obtain low cost financing via tax exempt bond issues was limited by the 1980 Mortgage Subsidy Bond Act. This tax-exempt mortgage revenue bond (MRB) proposal would change the Act as follows:

--The spread between bond yields and mortgage interest rates (arbitrage) could increase from 1 to 1.25 percent.

--The price of eligible housing could increase from 90 to 110 percent of average area purchase price (120 percent in targeted areas).

--Instead of limiting assistance to first-time home buyers, all home buyers would be eligible for the subsidy, with income ceilings being set according to State and local discretion.

--The assistance would be limited to homes newly built or substantially rehabilitated, which were started after enactment and completed by January 1, 1984.

The Tax Equity and Fiscal Responsibility Act of 1982--H.R. 4961, passed August 19, 1982--raises the arbitrage limit to 1.125 percent, increases the price of eligible housing to 110 percent of average area price (120 percent in targeted areas), and requires that only 90 percent of the assisted households be first-time home buyers.

Other proposals for stimulating single-family housing

In addition to the major proposals described above, we analyzed several other vehicles for stimulating single-family housing. These include:

--A thrift institution portfolio swap in which thrifts originate below market loans, with GNMA providing the cash by purchasing old, low interest loans from them at par, to have the same effect as the permanent interest subsidy. This proposal would be far more expensive and likely more difficult to implement.

--An individual homeowner account (IHA) which facilitates saving for a downpayment by allowing tax exempt savings for prospective home buyers in much the same manner that individual retirement accounts (IRA) now assist saving for retirement; this proposal was eventually discarded as unlikely to have any measurable short-term impact on housing starts, and no detailed analysis was performed.

--A zero FHA downpayment which would allow households to obtain FHA-insured mortgages without meeting the current downpayment requirement of 3 percent of the first $25,000 on the mortgage plus 5 percent of the remaining loan balance (HUD is also considering measures to lower FHA downpayments somewhat).

--Using permanent and temporary interest rate reductions in conjunction with different mortgage instruments such as (1) SFPM which offers fixed level monthly payments for the life of the loan, (2) graduated payment mortgage (GPM) wherein the initial payments are less than those with the SFPM, but rise to higher levels in later years, and (3) the GEM described above.

MACROECONOMIC EVALUATION CRITERIA

The rationale for any countercyclical housing stimulus program is that the subsidy (1) increases housing sales and production and hence employment above what it would have been in the near future and (2) does not in turn merely displace production and other investments by individuals and corporations but rather increases the overall level of jobs and activity in the economy, raises personal income, and increases GNP without causing excessive inflation. Thus, the principal measures of program effectiveness defined here differ somewhat (particularly in emphasis) from those of a long-term housing assistance program but may include many of the same elements.

Net housing starts--A subsidy provided to new housing construction should produce net starts during some target period above what would be expected without the stimulus. Otherwise, home buyers or builders may receive windfalls without providing economic stimulus. The target period for our analysis begins in October 1982 and ends in December 1983.

Employment increases--A subsidy should increase demand for housing and in turn other goods, which should boost employment in construction-related industries and in other sectors of the economy.

GNP changes--To ensure that an increase in housing activity is not merely offset by a decline in other sectors of the economy, a subsidy should result in aggregate net economic growth as measured by determining changes in GNP.

Inflation rate--Subsidy programs require additional Federal spending and leverage greater housing consumption, but some undesirable inflationary effects may occur. Changes in the consumer price index (CPI) and other price indexes can be used to gauge the magnitude of this unwanted, but perhaps unavoidable effect.

Interest rate changes--Increased housing demand may also inadvertently drive up mortgage and other interest rates, as home buyers seek increased mortgage credit. This may crowd out borrowing by nonassisted home buyers or for investment in other sectors. The effect on housing and non-housing interest rates measures this tradeoff.

Impact on the Federal deficit--It is imperative to weigh the merits of any housing assistance proposal against its relative impact on the Federal deficit. The ultimate cost to the Government would equal the direct subsidy expenditures plus tax revenues foregone due to increased homeownership deductions taken. The cost, however, may be reduced by tax revenues generated from an increase in GNP.

BASIC CONDITIONS FOR ANY SUCCESSFUL HOUSING STIMULUS PROPOSAL

Certain basic conditions must be met if housing stimulus proposals are to be at all successful. These conditions can be thought of as additional evaluation criteria, but a proposal which does not meet most or all of these conditions should probably not be considered further. Programs must be implemented quickly, provide adequate incentives to buyers (or builders), and minimize program inefficiencies.

Implementation must be timely-- legislative language crucial

To be effective, any countercyclical housing program must come on line when housing activity is at--or near--its low point. Because delay could cause the program to miss the low point, and possibly provide inflationary stimulus to a recovering housing market and the economy, speed of enactment and implementation are crucial and depend upon how simple a program is to implement and administer. Under the best of conditions, construction could begin within 1 month of enactment of an administratively simple program. Small changes to an existing program with somewhat greater administrative complexity could result in construction starts within 2 months of enactment. However, instituting an essentially new and complex program can delay implementation by 5 months under even the most optimistic conditions (see table 2 on the next page).

Our estimates of program impact are based upon the assumption that any needed legislation is passed quickly and that the legislation is written to assure rapid implementation. To accomplish this, the Congress could include provisions in the legislation which

- --label it as an "emergency measure" and specify that accelerated rulemaking and review procedures such as under the Paperwork Reduction Act, should be used where permitted;
- --impose a 30- or 60-day time limit from enactment to issuance of funding commitments which can allow construction to begin (60 days would be for a complex program);
- --provide exemptions and waivers from a variety of congressional and Office of Management and Budget (OMB) reviews and waiting periods which would add a minimum of 60 days to the implementation period;
- --exempt from, or defer until after implementation, certain requirements, such as the paperwork procedures, environmental impact statements, public comment periods, and other potentially delaying procedures; and
- --enunciate clearly basic policies, such as income limits and other key provisions.

Table 2

Implementation Time Frames for Housing Stimulus Programs Depend on Their Complexity

	SIMPLE/FAST IMPLEMENTATION	MODERATELY COMPLEX	COMPLEX/SLOW IMPLEMENTATION
POSSIBLE CHARACTERISTICS	Current Program (Used Before) Apparatus in Place Simple Targeting Rules or No Targeting Well Understood by Users	Modification of Past Program Apparatus in Place More Complex Targeting Some Uncertainties	Entirely New Program Apparatus Must Be Developed Complex Procedures Not Understood by Users
TIME ESTIMATES			
Planning/Writing Regulations	2 Weeks	2-4 Weeks	30 Days
Internal Clearance	2-3 Weeks	2-4 Weeks	6 Weeks
OMB Clearance	10 Days	20 Days	20-30 Days
Procedural Steps (With Congressional Waivers)	1 Week	1 Week	1 Week
Field Implementation	1 Day	10 Days	60 Days
Market Response Homeownership Rental	Immediate 2 Months	Immediate 3-9 Months	Immediate 3-9 Months
Total Time Homeownership Rental	7-8 Weeks 4 Months	10-14 Weeks 5-11 Months	6 Months 9-15 Months
CLASSIFICATION OF PROPOSALS	• Permanent Interest Reduction • Multifamily Pipeline • Shallow Tandem • Investment Tax Credit Rental Housing • Homebuyer Tax Credit • Zero FHA Downpayment	• Permanent Interest Reduction (Recapture) • Temporary Interest Reduction • UDAG/Rental Housing • Thrift Institution Portfolio Swap	• Tax Exempt Mortgage Revenue Bonds • Rental Rehabilitation • Interest Reduction Loan • Individual Housing Accounts

Perhaps the most important factor which will affect the speed of implementation by HUD or other agencies is the strength of congressional and administration support. If a proposal does not have this support, internal agency and OMB reviews could be protracted, whereas agreement on objectives would speed implementation. Once a program is implemented, the market response may take anywhere from 1 day to several months, depending on the nature of the program. Table 2 shows how time lags vary with the complexity and novelty of any proposal. We have for simplicity grouped in table 2 both the single-family proposals discussed in this chapter as well as multifamily proposals discussed in chapter 4 to make certain generalizations.

Adequate assistance must be provided home buyers

A housing stimulus proposal must offer home buyers the assistance they need to purchase homes if it is to be effective. Potential home buyers typically face a number of barriers in purchasing a home. These barriers can be overcome by

--making housing more affordable by lowering the real user cost of housing through a reduction in either the sales price or the mortgage interest rate, 1/

--overcoming the "tilt" problem by lowering mortgage payments during the early years of homeownership when most households' incomes have not yet risen to cover such payments, 2/ and

--helping home buyers accumulate sufficient wealth to surmount the downpayment barriers which especially impede first-time home buyers regardless of their ability to make monthly mortgage payments.

To make housing more affordable, a subsidy must be deep enough to attract additional buyers--otherwise no stimulus occurs--but not so deep as to overly subsidize buyers. Subsidies which address the tilt problem should reduce mortgage payments in the initial years of homeownership, with the subsidy declining or being phased out in

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1/The user cost of housing includes the homeowner's mortgage payments plus maintenance costs, minus the house's expected appreciation and the tax advantages stemming from deducting mortgage interest and tax payments. In this way, the user cost attempts to reflect the actual cost of owning a home.

2/Tilt refers to the initial high mortgage payment to income ratios which disqualify many prospective home buyers even though their expected incomes in later years could easily handle the mortgage payments.

later years. Downpayment barriers are a function of high housing prices and low savings rates among younger households. Overcoming this problem temporarily could have a countercyclical stimulative impact on the economy. Another factor which is undoubtedly hurting housing sales somewhat is consumer resistance to high interest rates and unfamiliar mortgage instruments which are replacing the SFPM. Table 3 describes the ability of the single-family proposals to break down the various barriers.

Table 3

How Well Do the Alternatives Overcome the Barriers to Homeownership?

	Reduces Downpayment Constraint?	Reduces User Cost?	Mitigates Tilt Problem?	Reduces Consumer Resistance to High Interest Rates and New Mortgage Instruments?
Temporary Interest Reduction				
GEM	No	Weakly	Perhaps	Probably Increases
SFPM	No	Yes	Yes	Yes
Permanent Interest Reduction				
SFPM	No	Yes	No	Yes
GPM	No	Yes	Yes	Yes
Mortgage Revenue Bonds	No	Yes	No	Yes
Homebuyer Tax Credit	Weakly	Weakly	No	Yes
Mortgage Interest Tax Credit	No	Weakly	No	No
Thrift Portfolio Swap	No	Yes	No	Yes
GPM	No	No	Yes	No
Zero FHA Downpayment	Yes	No	No	No
Individual Housing Accounts	Yes	No	No	No

The downpayment constraint

Only two of the proposals analyzed are likely to have much impact on the downpayment constraint. The individual housing accounts which would be similar in concept to an IRA would, over a long period of time, encourage savings by exempting interest income from taxation for first-time home buyers. This proposal would probably not have any short-term effect because (1) the build up of wealth by households as a result of this limited incentive would be quite slow and (2) financial institutions would not experience marked increases in funds for housing. The advent of the IRA available now to all wage earners without restrictions on the use of money, might reduce the effectiveness of IHA's.

A zero downpayment loan under FHA for a certain subset of well qualified buyers who could meet stiffer underwriting requirements than FHA currently uses would eliminate a vexing barrier to home-ownership for young households. Lower debt to income ratios for buyers and strong credit worthiness tests could assure that this policy would have little impact on mortgage failure rates and FHA insurance losses. Risk would have to be carefully considered since the debt to home equity relationship is a strong determinant of failure rates for loans. VA, which uses co-insurance where lenders share a limited portion of the risk, has had a successful no-downpayment option for years. But VA borrowers generally have somewhat higher incomes, and the location of properties insured may differ. HUD is currently considering a variety of possibilities to lower the downpayment required on FHA loans.

Substitution inefficiencies must be minimized

Past housing stimulus proposals have generally been thought to be inefficient because of a variety of leakages arising from, (1) credit diverted to purposes other than housing, (2) windfalls to sellers, (3) purchases by buyers who receive the subsidy but who would have bought without it at roughly the same time, (4) purchases by buyers who would have bought later but moye up their purchases. However, the last group, those who move up their purchase decision, are really doing what a stimulus proposal attempts to do--moving forward consumer decisions to buy at a time when housing is in a slump and reducing demand during the next upswing in the economy. These consumers may also buy more expensive housing than they otherwise would have, which would tend to create more jobs and help the homebuilding industry. Whether or not a stimulus program which would result in moving consumer decisions foward is desirable depends heavily on the economic outlook. If strong recovery is anticipated it may prove helpful to shift starts forward. If only a weak recovery is anticipated, shifting starts may yield an even weaker recovery. Although the extent of the leakages have been heavily debated, some general conclusions can be made regarding how to decrease their impact.

Focusing on new construction and substantial rehabilitation

To assure that the subsidy cannot be used to buy-out unsold inventory and to preclude sellers of existing homes from raising prices to capitalize on lower interest rates, the proposal should focus on new construction and substantial rehabilitation. This should tend to create more jobs than a program which applies to all homes. 1/ Targeting to new construction also mitigates some of the negative substitution effects. Those who would have bought anyway should, on the average (based on our past research and work performed for this study), 2/ tend to purchase more expensive homes than they would have, thus creating additional jobs. Mobile homes (as opposed to other types of manufactured housing) should be eliminated if the goal is increased housing starts and employment; otherwise nearly all mobile home buyers would qualify for the subsidy, causing the substitution effect for those who would have bought anyway to be about 90 percent. 3/

Providing subsidies to buyers, not lenders or builders

When a subsidy, such as a mortgage interest tax credit, is provided directly to lenders, there is no assurance that the lenders' tax savings will be passed on to borrowers, particularly in tight credit markets. Also pension funds which have a wide range of investments to choose from and only lend on mortgages when rates are attractive, pay no taxes. This is probably reason enough to eliminate the mortgage interest tax credit as a serious proposal for countercyclical stimulus.

Another problem arises because these funds can go to any mortgage, including second trusts or refinancings, which can result in housing credit being used for other consumer spending. This phenomenon is a primary explanation of the huge increase in mortgage debt during the 1970's, which far outstripped the level of residential investment. (See ch. 6 for discussion of this phenomenon.)

1/Robert Buckley, "Housing Stimulus Programs and the Current Economic Environment," (U.S. General Accounting Office Symposium on Countercyclical Stimulus for Single-Family Housing, 1982), p. 3.

2/U.S. General Accounting Office, "What Was the Effect of the Emergency Housing Program on Single-Family Housing Construction?" (CED-78-155, 11/21/75), p. 45. James Alm and James Follain, "Countercyclical Stimulation of Single-Family Housing: It's Likely To Be Expensive" (U.S. General Accounting Office Symposium on Countercyclical Stimulus for Single-Family Housing, 1982), p. 35.

3/Michael Carliner, "Analysis of Lugar Mortgage Interest Subsidy Proposal" (Report to the U.S. General Accounting Office, 1982), p. 15.

Finally subsidies should be structured so that individual builders cannot gain an advantage in the market place by controlling large blocks of subsidy money. If certain builders can do this as an advantage over their competition, then they would probably increase their sales prices to capture a portion of the subsidy.

Income and mortgage targeting enhances impact

Although it is impossible to screen out households that would have bought anyway, income targeting disqualifies a large number of buyers who presently qualify for homeownership. Those remaining are much less likely to be able to buy without some assistance. One of our consultants estimated that limiting income eligibility to $30,000 should substantially increase the number of net housing starts which could be expected. 1/ Mortgage limits probably further decrease the likelihood of substitution. Not allowing higher mortgage and income limits in high cost areas would tend to avoid providing stimulus to areas where unemployment is already low, without necessitating complicated allocation formulas. 2/ This also takes into account the market reality that without subsidies, households in high cost areas generally purchase and accept less housing than in low cost areas.

Direct expenditures are probably preferable to tax incentives

Direct spending has the advantage of providing some targeting, whereas tax expenditures generally go to any buyer during the time period. Tax credits as analyzed in this report, or other incentives such as tax exemptions for mortgage revenue bonds, would have to be extremely stimulative to offset their usually higher subsidy per unit. Although it is not impossible to target tax credits by income, it is likely to be more difficult to administer targeting, particularly if criteria other than income are added.

The crowding out problem

Substitution of credit--crowding out--is the transfer of resources within the housing sector and from other sectors of the economy by giving a segment of home buyers preferred credit terms. If the total supply of credit is unchanged, giving one borrower an advantage will only reduce the availability (and increase the cost) of credit for others. Because housing is among the most interest-sensitive forms of investment, credit substitution is thought more likely to be confined to housing rather than leak into other sectors. However, proposals which generally increase borrowing

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1/Michael Carliner, "Analysis of Alternate Housing Stimulus Proposals," (Report to the U.S. General Accounting Office, 1982), p. 8.

2/Buckley, p. 12.

may push up all interest rates. This effect is probably most troublesome in a period like the present with high deficits and high interest rates. To show the effect of the crowding out factor at its worst, we generally analyzed specific proposals by assuming that the deficit would be increased by any spending proposal and that the Federal Reserve Board would not accommodate this spending by adjusting monetary targets. For a stimulus proposal to have a positive effect on starts and employment under this circumstance, an increase in the velocity of money induced by higher interest rates would have to occur.

PROGRAM TARGETING TRADEOFFS

Although targeting can help maximize the impact of stimulus proposals on jobs and the economy, there are significant tradeoffs encountered in doing so. Distressed employment areas, specific income groups, and households needing housing will all be affected by the specific nature of the proposal. For example, assistance can be designed to keep as many builders as possible solvent, so that future housing supply can rapidly expand to keep pace with potential increases in demand. Buying-out current builder inventories and subsidizing new starts would do this. Assistance targeted to marginal builders in areas such as the Sun Belt would be indicated, since the weakest and most non-competitive builders are already gone.

Employment targeting might also mean assisting those areas with the highest construction and overall unemployment rates. But maximizing countercyclical impact would force construction subsidies on the most economically distressed areas, which may not need additional housing in the foreseeble future. Because housing conditions and anticipated demand vary from area to area, housing stimulus should ideally be targeted accordingly. For example, assistance to growing areas such as the South and Southwest should be targeted to add to the housing stock.

Areas such as the Northeast where population growth is stagnant or declining, although in need of jobs, do not need additions to the housing stock, but more likely need improvement and maintenance of the existing stock. Accordingly, new construction programs would ideally be targeted to growing areas, with rehabilitation assistance being focused on their more static counterparts. Table 4 analyzes the implications of targeting homeownership subsidies to various housing types. 1/ In this table we assume that subsidy expenditures are limited by the current economic

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1/Table 4 relies heavily upon an analysis performed by Craig Swan, "Some Issues in the Evaluation of Countercyclical Stimulation of Single Family Housing," (U.S. General Accounting Office Symposium on Countercyclical Stimulus for Single-Family Housing, 1982), p. 15.

environment. Unlimited assistance could have noticeably different impacts on potential beneficiaries.

Table 4

Alternate Targeting Effects on Potential Beneficiaries*

	New Construction Subsidies	Subsidies for New Home Inventory	Subsidies for Existing Home Sales—But Not Inventory
New Home Buyers	**Positive** They Receive Subsidies **But** Much May Go to Builders	**Positive** Get Subsidies **But** Much May Go to Sellers	**Negative** Since New Homes Relatively More Expensive, Interest Rates Higher
Existing Home Buyers	**Positive** Existing Home Prices Likely Lower	**Positive** Existing Home Prices Likely to be Lower	**Positive** Receive Subsidies
Builders of New Units	**Positive** Can Sell New Homes at Profit But Lower Sales After the Period	**Positive** Can Make New Starts in Some Markets	**Negative** No Incentive to Continue Building
Builders With Inventories	**Negative** Must Further Discount Prices of Inventory	**Positive** Reduce Inventories—Those With Lower Prices Get Windfall	**Very Negative** Must Discount Even Further Than at Present
Existing Home Sellers	**Negative** Must Discount Prices, Face Higher Interest Rates	**Negative** Must Discount Prices, Face Higher Interest Rates	**Positive** Get Higher Prices and Can Buy New Homes
Economy	**Positive Countercyclical** Creates More Jobs in Near Term, Less Inflation	**Neutral to Negative** Job Effects Further in Future, Deficits Increase Inflation	**Negative** Probably Inflationary in Short Run, **But** Creates New Starts Further in Future

*Realtors are probably helped by any proposal that helps increase sales but probably somewhat less positively affected by subsidies to new home sales since builders can hire their own sales force.

COMPARISON OF STIMULUS PROPOSALS

To provide a quantitative perspective on the possible outcomes of the various proposals, we obtained the services of several econometricians to simulate the results one might expect from the principal proposals under consideration. In what follows we show the possible effects of four distinctly different proposals which our analysis indicated might have some countercyclical impact. The numbers shown are considered to be comparative between proposals rather than precisely predictive of actual outcomes.

Modeling assumptions

At the outset, we provided each of the modelers with certain underlying assumptions about how the economy would be functioning during the effective period of the stimulus. These assumptions on the underlying economic situation were taken from DRI's June forecast (see app. III for some of the details). Using these assumptions, each modeler then projected a base case prediction of housing starts, jobs, and related variables for the period from mid-1982 through the fourth quarter of 1984. It is against these baseline projections that the impacts of the stimulus programs are judged. We had DRI use two economic scenarios for its simulations in order to judge the likely difference in effectiveness of housing stimulus programs given different future paths of the economy:

--Recovery, which assumes a moderately strong recovery for the economy, with mortgage interest rates dropping to almost 14 percent by 1984, and a robust housing industry in which starts grow from over 1.3 million in 1982 to just under 2 million by 1984.

--Stagflation, which assumes continued high interest rates through 1984 while housing starts hover at just under a million in each of these years.

DRI assigns a likelihood of about 20 percent to the stagflation scenario and 50 percent to the recovery prediction. They have generally been adjusting their housing starts estimates downward for the last few monthly forecasts.

A near term stimulus proposal would have its logic in a scenario where the economy recovers more slowly and housing starts are still quite poor in 1983 but then improve in 1984. The two scenarios we analyzed bracket this situation. Some of the experts we talked with do not expect much improvement for housing in 1983. We have therefore used the recovery simulations to put a lower bound on the likely impacts of the various proposals and the stagflation simulations to provide an estimate of their maximum effectiveness. In both scenarios we assume that the introduction of the stimulus would add to the deficit and that monetary policy would not accommodate the increased demand for credit. These assumptions, which seem reasonable, tend to maximize the crowding

out effect and moderate the possible impacts of the stimulus on the economy.

Housing and macroeconomic impacts

Table 5 shows the results of the recovery simulations prepared using the augmented DRI model. The estimates indicate that the largest stimulative impact results from the permanent interest reduction alternative. The important results are in 1983, when the countercyclical stimulus would be desired.

Table 5

Housing Starts and Macroeconomic Impacts of Single-Family Stimulus Proposals (in a recovering economy)

	Temporary interest reduction a/	Permanent interest reduction b/	Home buyer tax credit	Mortgage interest tax credit
Net starts c/				
1982-83	51,000	100,000	93,000	28,000
1984	-19,000	-45,000	-19,000	11,000
Additional jobs				
1982-83	51,000	127,000	97,000	23,000
1984	7,000	-6,000	37,000	24,000
GNP (change in billions)				
1982-83	$3.905	$9.473	$7.791	$1.288
1984	$1.204	$1.222	$4.389	$1.404
CPI (change in percent)				
1982-83	0.06	0.14	0.10	0.03
1984	-0.01	0.04	0.05	0.02

a/The temporary interest reduction assumes budget authority of $3 billion but actually has expenditures of only $600 million each year for 5 years.

b/The permanent interest reduction is also $3 billion, but we assume that the entire amount is spent in 1983 as discounts on mortgages purchased and resold by GNMA.

c/Housing starts as shown here include multifamily condominiums and mobile home shipments.

At first glance one might expect the temporary and permanent interest reductions to have somewhat closer impacts than table 5 depicts because they have the same gross funding and both initially provide a 4-percent reduction in the interest rate. 1/ But the mortgage payment under the temporary interest reduction increases rapidly during the first 5 years, while under the permanent interest reduction, the interest rate remains the same for the term of the mortgage. Also, the temporary subsidy has a significant recapture provision. This recapture is estimated to reduce the value of the subsidy substantially. 2/ Thus, the value of the temporary subsidy was calculated to be roughly equivalent to a 1.5-percentage point decrease 3/ in the mortgage interest rate, while the permanent interest subsidy was calculated to lower the effective interest rate by 3.75 percentage points. 4/ If our estimate of the value to buyers of the temporary interest subsidy were raised to 2 percentage points, its impact on housing starts would increase to 60-65,000 starts. In both cases the subsidy was applied to roughly half of all home purchases in the simulations since this is the approximate impact of imposing income limits of $30,000 per household. In both cases the subsidies are exhausted in the third quarter of 1983, while the home buyers and mortgage interest tax credits are effective through December 1983.

The job impacts are proportionately higher for the permanent interest rate subsidy since buyers who would have bought anyway without the subsidy are expected to buy more expensive homes (larger or more amenities) and thus create additional jobs as compared to the smaller temporary subsidy. 5/ It should be noted that the present value costs of these two proposals vary

---

1/Although the permanent and temporary interest reductions both require $3 billion in budget authority and should subsidize approximately the same number of households, the permanent reduction is a deeper subsidy carrying a larger real cost to the Federal Government. Under the permanent subsidy alternative the Government pays the full amount when the loan is originated, whereas under the temporary subsidy payments are spread out over 5 years, thus lowering Federal borrowing costs.

2/Carliner, "Analysis of Lugar Mortgage Interest Subsidy Proposal," p. 17.

3/Craig Swan, "Some Issues in the Evaluation of Countercyclical Simulation of Single-Family Housing" (U.S. General Accounting Office Symposium on Countercyclical Stimulus for Single-Family Housing, 1982), p. 25.

4/Patric Hendershott, "An Analysis of Proposals To Subsidize Single-Family Housing" (U.S. General Accounting Office Symposium on Countercyclical Stimulus for Single-Family Housing, 1982), p. 10.

5/See p. 54 of this report.

substantially as well. This will be discussed in greater detail when we discuss costs.

The table 5 estimates require some qualifications:

--The housing starts and the secondary effects for the temporary interest rate reduction are probably higher than they might be with a GEM feature. This mortgage would probably meet with some consumer resistance which cannot be adequately quantified in these simulations. This mortgage also does not lower the real user cost of housing as much as it appears to, since the tax deductions are not as great as they would be with an equivalent sized payment on a SFPM. The temporary interest rate reduction proposal which passed the Congress also had a complicated State allocation scheme which could be expected to limit market response and slow implementation, because (1) it would take somewhat longer to allocate funds, (2) some States might get more money than they could absorb, and (3) reallocating funds toward the end of the year would very likely mean some of the funds would go unused.

--The mortgage interest tax credit calculation is probably on the high side relative to the others since lenders would very likely capture a portion of the subsidy and not pass it on to buyers. Some of this would occur under any circumstances, but the profit squeeze to which mortgage lenders have been subjected in recent years makes it even more likely. Also, pension funds , which can opt for other investments, do not pay taxes and would be reluctant to offer lower interest rates.

--The home buyer tax credit does not include income or mortgage limits and would probably turn out to be much more expensive than the others if the economy were to revive rapidly. Substitution might also turn out to be higher than is implicit in these calculations.

--Each housing start estimate is based on the assumption that mobile homes would be eligible for the subsidy. The likely substitution effect for mobile homes could be very high since almost all mobile home buyers meet the income limitations. Their inclusion tends to bring down the net impact on starts. For example, in the temporary interest rate reduction nearly one-third of the funds are allocated to mobile homes, where the possibility of any recapture is also very low because appreciation is unlikely. We included mobile homes because the housing legislation which the President vetoed included mobile homes and because their inclusion is thought to give us more conservative estimates of the likely effect of the programs. Whether mobile homes would actually receive financing under these proposals, given the structure of the housing finance industry, is subject to debate.

These estimates will be further analyzed as we look at specific aspects of the proposals. Table 6 compares the DRI recovery scenario housing starts estimates with those prepared by RDA and alternate estimates of increased housing consumption prepared by Alm and Follain of Syracuse University. The percentages shown as increased consumption are an estimate of how much additional housing services would be purchased by those households that would have bought anyway during the period. They are estimated as the increase in purchase price with a subsidy above what it would have been without the subsidy. RDA's estimates were produced by applying its housing sector model to develop gross housing starts estimates and adjusting these estimates for substitution. The DRI model estimates substitution implicitly.

Table 6

Housing Starts--
Alternative Estimates of Impact
(1982-1983)

	Housing starts (recovery)		Increased consumption
	DRI	RDA	Alm and Follain a/ (percent)
Temporary interest reduction	51,000	b/ 53,000	+5
Permanent interest reduction	100,000	84,000	+15
Mortgage revenue bonds	no effect	5,000	+8-10
HBTC	93,000	70,000	+6-7
MITC	28,000	61,000	very little

a/Alm and Follain estimated how much individual consumers would increase their spending on housing as a result of receiving a subsidy. The percentage amounts, therefore, do not imply any particular change in the rate of housing starts.

b/RDA assumed the value of the interest reductions to be somewhat higher than did DRI (2 percentage points versus 1.5 percentage points), which results in a slightly higher starts impact for the temporary interest reduction.

Employment and housing

The employment effects from constructing new housing units come largely from jobs created away from the building site in supporting industries. Traditionally, the estimates range from a total of 1.6 to 2.3 jobs per housing unit. A rough rule of thumb is that, for each housing unit started, two jobs are created, one in the construction industry and one in the economy as a whole. A recent analysis by the Bureau of Labor Statistics (BLS) using 1976 statistics adjusted to 1980 costs estimated that the provision of $1 billion in construction contract expenditures would create 25,400 jobs for multifamily housing construction and 22,000 jobs for single-family housing construction for 1 year. Table 7 shows that most of those jobs are offsite and that the majority are outside the construction industry.

Table 7

Jobs Created by a $1 Billion Expenditure on Contract Construction

	Private housing	
	Multifamily	Single-family
Construction Industry		
On-site	9,900	8,300
Off-site	1,200	1,200
Other Industries		
Manufacturing	7,600	6,100
Trade, transportation and services	5,200	5,100
Other	1,500	1,300
Total	25,400	22,000

BLS' estimates do not include planning, designing, and other development-related jobs and more importantly, they do not include the rippling, multiplier, or crowding out effects on the economy. In addition, they are not representative of what would happen at the margin if additional starts come on-line as a result of the stimulus expenditures in an era of strong credit demand and high interest rates. Jobs are in yearly full-time equivalents.

Table 8 compares the possible effects of the various housing proposals on jobs using a variety of estimates. Those labeled as "with multipliers and feedbacks" are based on DRI's recovery simulations and take into account the jobs created by the spending of those who get jobs as a result of the stimulus, and the crowding out which may reduce jobs in other sectors. Those labeled

"without" use the same DRI simulations to estimate construction cost expenditure increases and then apply the BLS factors shown in table 7.

Table 8

Total Jobs Impact Under Alternate Proposals
(Full-Time Jobs for One Year)
(1982-1983)

	Without multipliers and feedbacks a/	With multipliers and feedbacks
Temporary interest reduction	36,000	51,000
Permanent interest reduction	71,000	127,000
Home buyers tax credit	66,000	97,000
Mortgage interest tax credit	20,000	23,000

a/Calculated using the estimates of increased contract construction expenditures implicit in the housing starts predictions from the DRI's recovery simulations.

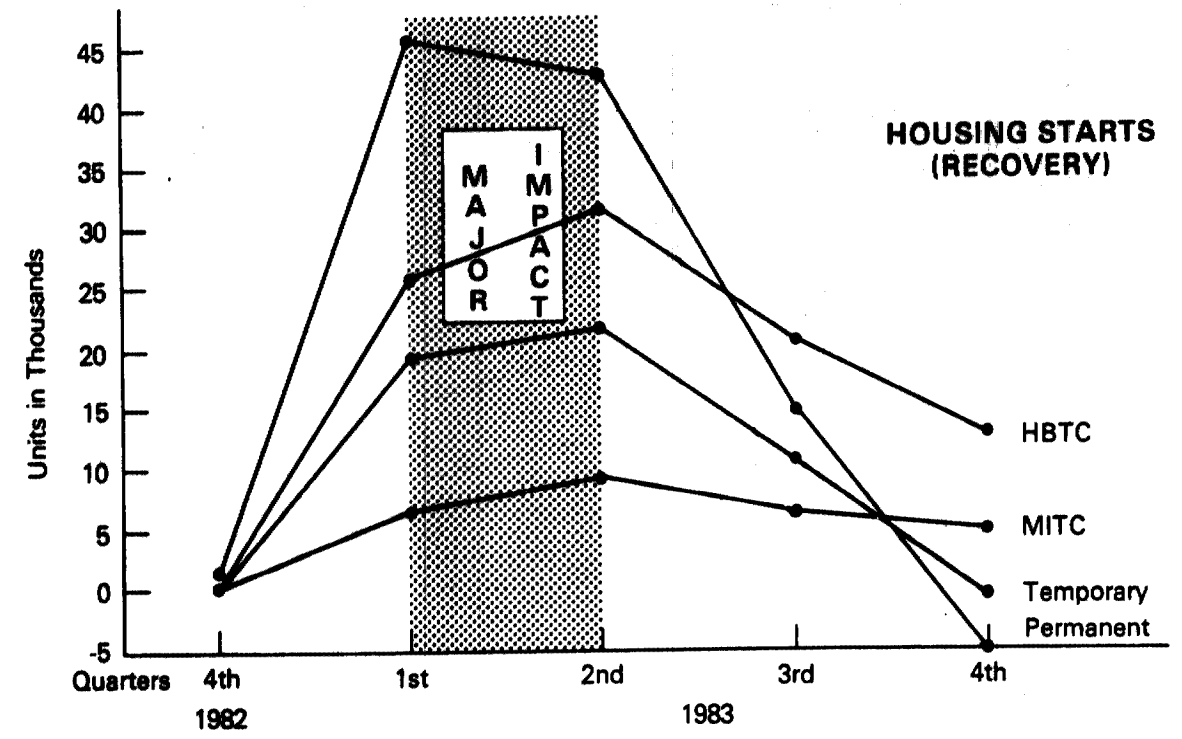
Countercyclical impact

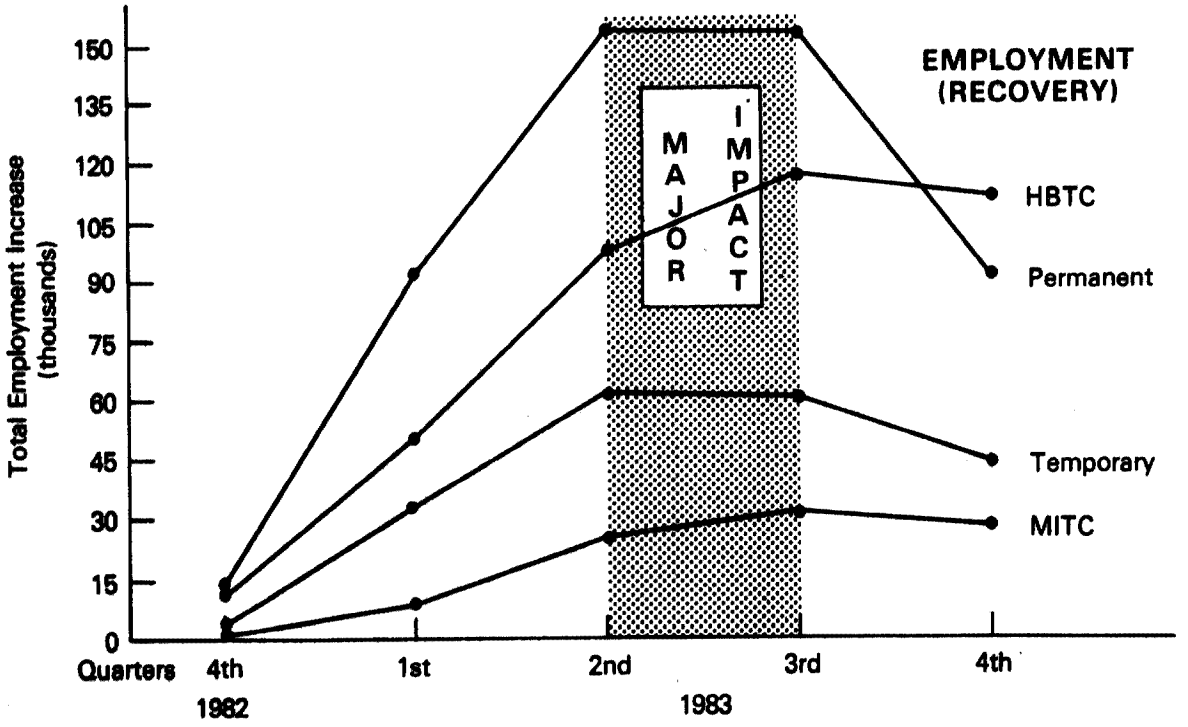
To do its job, a countercyclical stimulus should come in fast, just before or just after the economy bottoms out or is still at a low point, affect jobs and housing starts, and withdraw quickly before it begins to have an inflationary impact on the recovering economy. 1/ Each of the proposals discussed thus far has its maximum effect on starts in the second quarter of 1983 and on jobs in the third quarter of 1983. The strongest impact is created by the permanent interest reduction. The impacts on jobs and starts are shown in figures 7 and 8. Under the stagflation scenario, where the stimulus would be much more desirable, the net impact on jobs and starts is much greater.

1/For a discussion of cyclical contractions and expansions see Anthony Sulvetta and Jules Lichtenstein, "Public Works as Countercyclical Assistance," Executive Office of the President, Office of Management and Budget (Washington, D.C.: November 1979).

FIGURE 7

IMPACT OF FOUR HOUSING ASSISTANCE PROPOSALS ON HOUSING STARTS AND EMPLOYMENT IN A RECOVERING ECONOMY

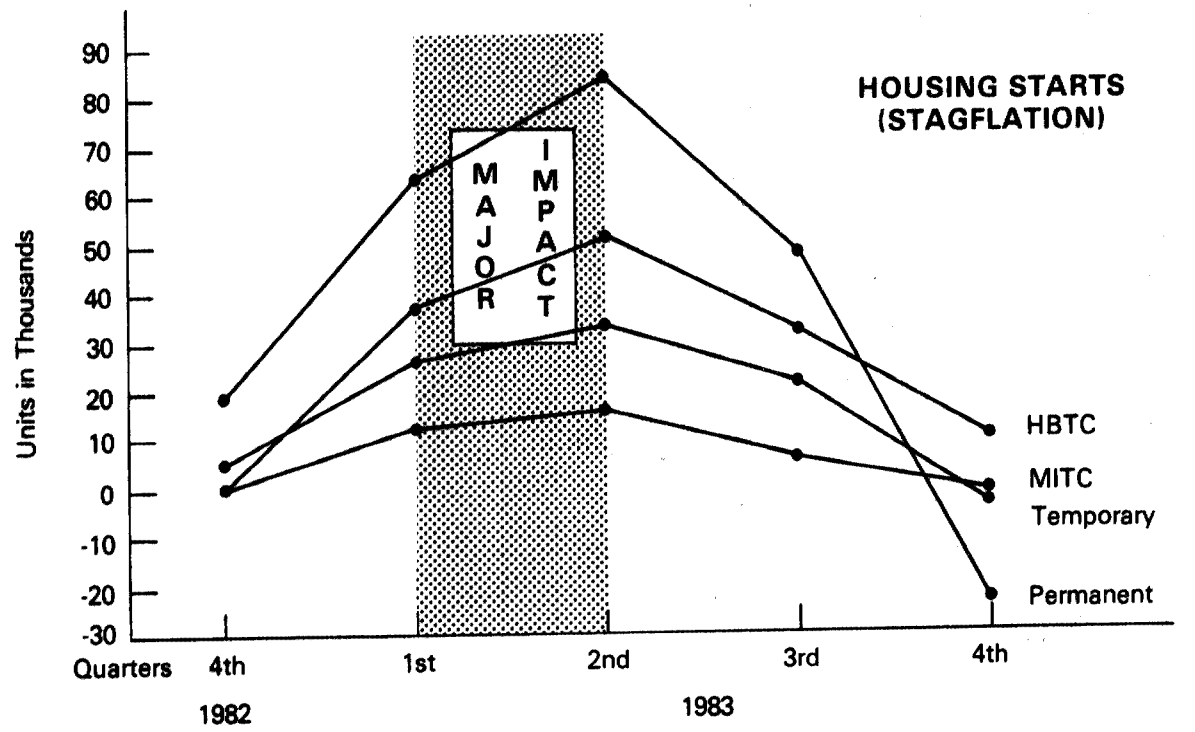


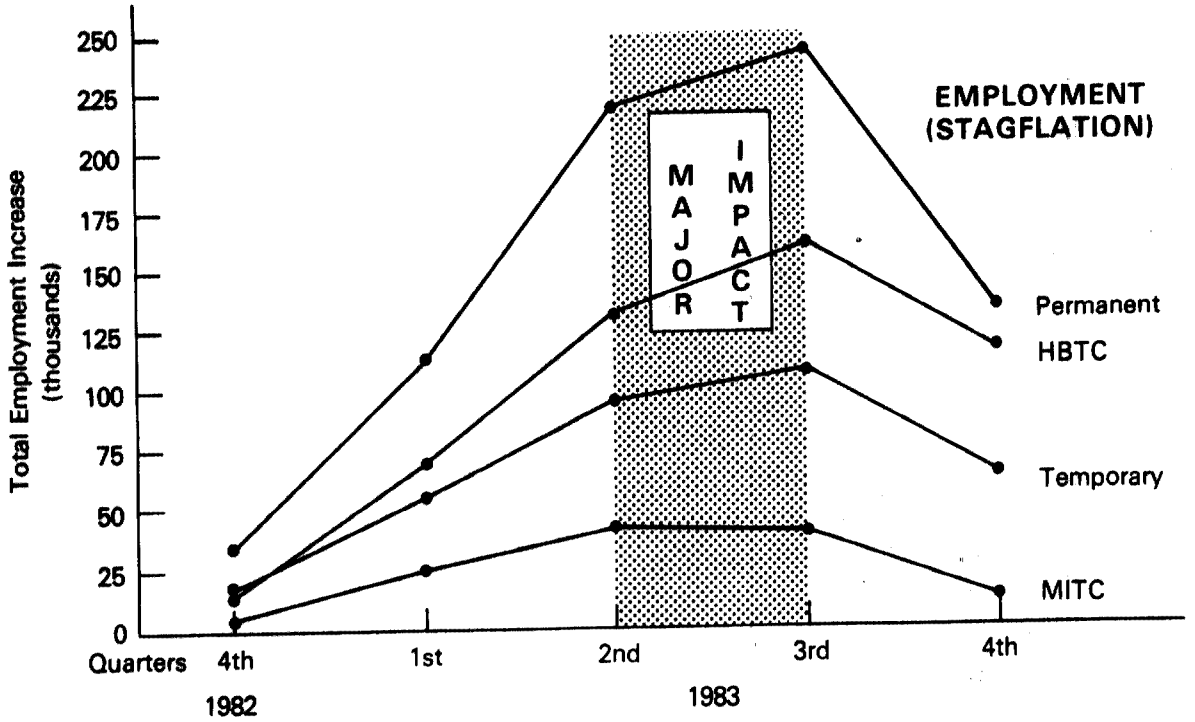


Source Data Resources, Inc.

FIGURE 8

IMPACT OF FOUR HOUSING ASSISTANCE PROPOSALS ON HOUSING STARTS AND EMPLOYMENT IN A DEPRESSED ECONOMY





Source: Data Resources, Inc.

Temporal substitution occurs more quickly in stagflation projections

The goal of a housing stimulus proposal is primarily to move starts forward to a slack period from a later boom period. These simulation results suggest--in keeping with the concensus among most experts--that any net starts which one gets from a stimulus proposal over the short run (unless it permanently alters the cost of housing) will be borrowed from the future. Since we have not simulated results past 1984, this effect cannot be observed in detail, but, nonetheless, the stronger the immediate effect on starts, the greater the payback in 1984. For example, the permanent interest rate reduction shows a much more substantial peak effect on starts, in the second quarter of 1983 than does the less costly temporary proposal, but the payback in starts is much greater in 1984. The simulations also seem to suggest that the lower the underlying level of housing starts is when the proposal is effective, the quicker and more substantial will be the paybacks in the next year. The first of these effects is illustrated by the columns in table 9 labeled "recovery," in which housing starts are substantial. The second phenomenon is illustrated by the "stagflation" figures.

Table 9

The Stronger the Countercyclical Stimulus, the Faster the Impact and the Quicker the Offset in Starts in Future Years

	Recovery		Stagflation	
	Temporary interest reduction	Permanent interest reduction	Temporary interest reduction	Permanent interest reduction
Net increase in 1982-83 starts from base projection	51,000	100,000	85,000	188,000
Net decrease in 1984 starts from base projection	19,000	45,000	42,000	81,000

As noted above, one can also conclude that the outcomes of these proposals become stronger if the base level of housing starts remains near 1 million units per year as assumed in the stagflation simulations. Table 10 illustrates in more detail the difference in impacts expected from the temporary interest rate reduction and the permanent interest rate reduction depending on the state of the economy and the housing industry.

Table 10

Expected Impact of Temporary and Permanent Interest Rate Subsidies Under Two Economic Scenarios, 1982-83 and 1984
(Increases as compared to base case predictions without the stimulus proposal in place)

	Temporary interest reduction		Permanent interest reduction	
	recovery	stagflation	recovery	stagflation
Housing starts				
1982-83	51,000	85,000	100,000	188,000
1984	-19,000	-42,000	-45,000	-81,000
Jobs increase				
1982-83	51,000	86,000	127,000	184,000
1984	7,000	-6,000	-6,000	-47,000
Deficit increase (billions)				
1982-84	$1.22	$1.25	$2.92	$3.14
Increase in GNP (billions)				
1982-84	$5.11	$6.57	$10.70	$12.89
Mortgage interest rate increase (basis points) a/				
1983	6	3	14	12
1984	5	8	8	22
Crowding out b/ (billions)				
NFC c/	.195	.500	.292	.774
SLB d/	-.259	-.351	-.643	-.850

a/The increase is measured as increases in the conventional commitment rate. A basis point is one-hundredth of a percentage point.

b/Crowding out is measured as the decrease in borrowing by other borrowers. Those identified in our symposia as most likely to suffer are included here. Figures are totals for 1983 and 1984. Minus sign indicates a decrease in total borrowing as compared to the baseline prediction.

c/Change in the dollar volume of nonfinancial corporation bond issues.

d/Change in the dollar volume of State and local government bond issues.

Crowding out

We measured the extent to which crowding out occurs in the financial markets by tracking increases and decreases in borrowing for 1983 and 1984 by other interest sensitive borrowers. Those tracked were identified in our symposia as most likely to suffer as a result of increased housing loan activity. Housing finance itself would probably suffer somewhat as a result of the increased demand but our calculations net out the impact on new home sales. The impacts on the sectors most affected are illustrated in table 10 for the permanent and temporary interest reduction subsidies. The home buyer and mortgage interest tax credits produced results similar to those of the permanent and temporary interest reductions, respectively.

Housing and employment stimulus as a function of the size of the subsidy

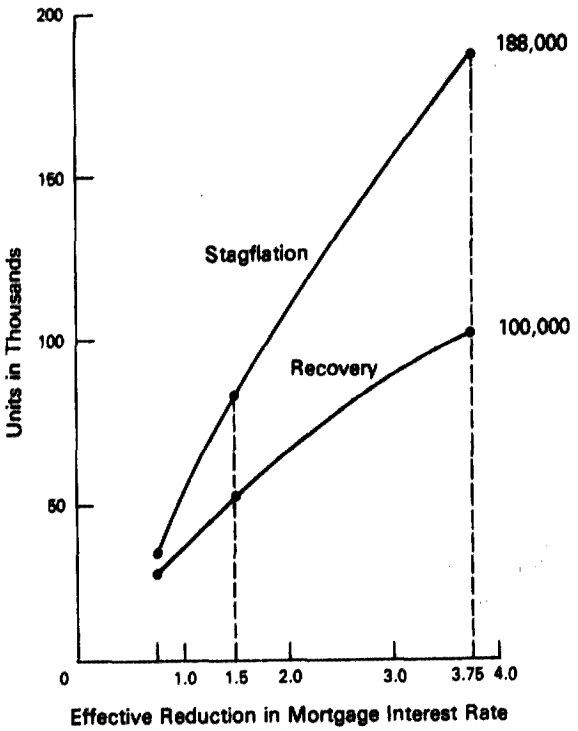
Based on our simulations we can conclude that over a certain range of circumstances and when the subsidies are provided to all those eligible for some period of time, that the depth of the subsidy provided to households determines the extent of the stimulus on housing and employment in the short term. Figure 9 illustrates this point for a range of effective interest rate reductions and an income limit of $30,000 which essentially eliminates half of all home buyers from eligibility for the subsidy. The subsidy could be made in the form of a variety of temporary or permanent schemes and could include or exclude a recapture provision. Cost, of course, increases with the depth of the subsidy.

There is probably a practical limit to the range over which this phenomenon holds since very small changes in debt service will probably not reduce user costs adequately to evoke a response, and since very high subsidies would suffer from higher substitution effects. After a certain point one runs into eligibility and other demographic constraints. Below a 1-percent reduction in interest rate, we would expect very little stimulative impact since it would bridge the affordability gap for very few households. If recapture is included, it lowers the effective value of the subsidy to the buyer and dampens the response while also lowering the cost to the Government. Making the subsidy temporary also lowers the effective subsidy and would lower the expected response as well as the cost.

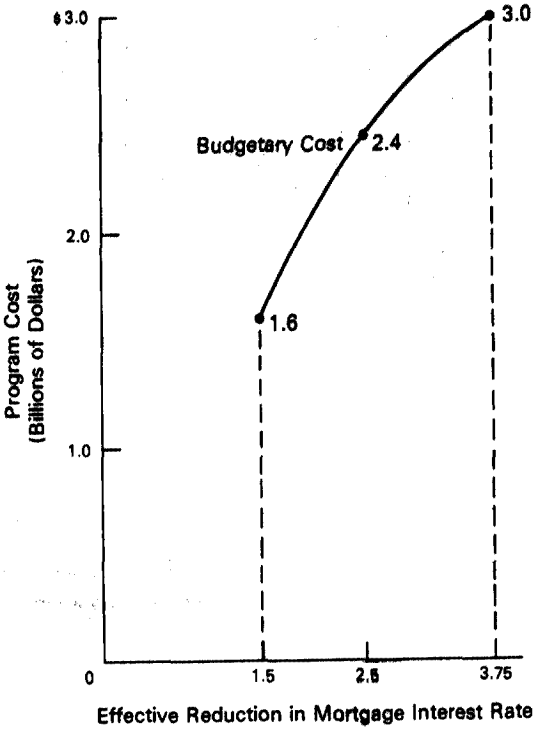
As noted earlier, the effective interest rate on the permanent interest reduction is approximately 3.75 percentage points. The temporary reduction with recapture is estimated to effectively lower the interest rate by 1.5 percentage points. These simulations seem to suggest that the effective interest could be reduced to perhaps 3 percentage points and still get a substantial countercyclical impact in mid-1983. This will be explored in more detail after we analyze the costs of these proposals.

FIGURE 9

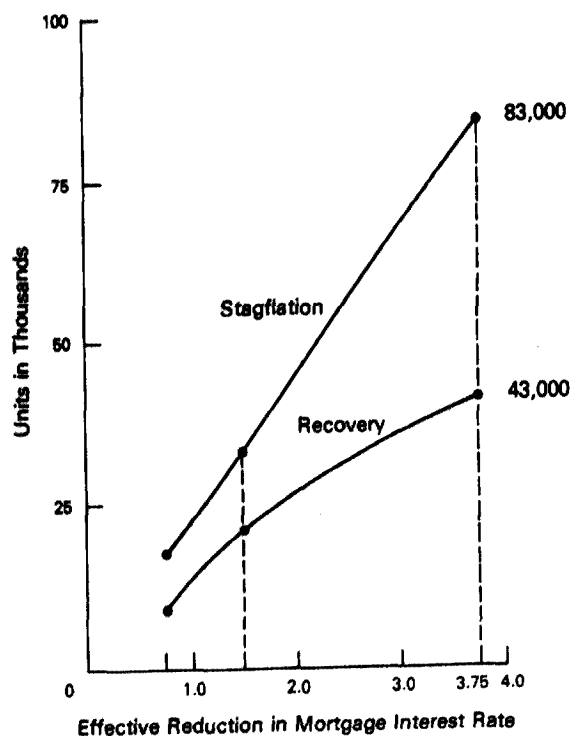
NET HOUSING STARTS IN 1982-83 INCREASE WITH THE VALUE OF THE SUBSIDY TO HOMEOWNERS...



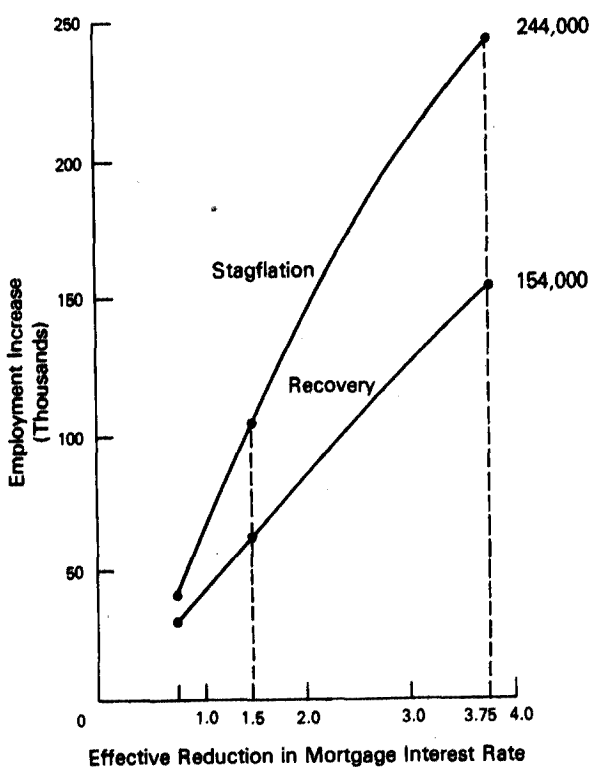
...AND SO DO THE COSTS.



THE VALUE OF THE SUBSIDY ALSO DETERMINES THE MAXIMUM QUARTERLY IMPACT ON HOUSING STARTS (WHICH OCCURS IN THE 2ND QUARTER OF 1983)...



...AND THE MAXIMUM IMPACT ON JOBS (WHICH OCCURS IN THE 3RD QUARTER).



SUBSIDY COSTS VARY WITH DEPTH OF SUBSIDY AND PROGRAM EFFICIENCY

The costs of the various stimulus proposals arise from three factors--the direct subsidies provided to households as yearly payments or lump sum discounts under the interest rate reduction programs, indirect subsidies through the deduction of mortgage interest, and lost revenue due to tax exempt bonds or other tax incentives and administrative costs. An offset to these costs would be any increased revenues to the Treasury resulting from greater economic activity. The proposals differ markedly in where the costs are incurred, as shown in table 11.

Table 11

Housing Stimulus Proposals: Where Are the Costs Incurred?

	Interest Reduction Payments	Loan Discount	Homeowners Deductions	Bond Tax Exemption	Tax Credits	Government Administrative Costs
Temporary Interest Reduction	✔		✔			✔
Permanent Interest Reduction		✔	✔			✔
Home Buyers Tax Credit			✔		✔	
Mortgage Interest Tax Credit			✔		✔	
Mortgage Revenue Bonds			✔	✔		✔
Thrift Portfolio Swap		✔	✔			

Cost per household subsidized versus the impact on increased consumption

The direct subsidies for the various proposals can be viewed on a per unit cost for each household subsidized or in terms of the cost per additional unit of housing subsidized. But these measures ignore the substantial effect which will occur when households that would have purchased anyway increase their spending due to the subsidy. The following table shows direct subsidy calculations prepared by Alm and Follain for several of the alternatives. The calculations are based on a household with a $30,000 income purchasing a home costing $55,252 with a market interest rate of 15.5 percent. The Alm and Follain simulation model is then used to calculate the subsidy and the increased consumption which is encouraged by receiving the subsidy. The cost figures in table 12 do not include the homeownership deductions which provide an additional, very large subsidy. The increased consumption figures can probably be thought of as an upper limit on the actual increase in consumption.

Table 12

Increased Housing Consumption as a Function of Subsidy Depth

	Direct subsidy	Home purchased	Increased consumption (percent)
Without subsidy	$ --	$55,252	—
Temporary interest reduction without recapture			
GEM	6,511	58,205	5
SFPM	6,949	62,120	12
Permanent interest reduction			
GPM	11,749	70,656	28
SFPM	10,763	64,276	16
MRB	12,912 a/	60,466	9
HBTC	2,952	59,043	7
GPM-no direct subsidy	--	59,756	8

a/This includes the additional subsidy provided to tax-exempt bond purchasers, which is why the increase in consumption relative to the subsidy is smaller than those of other alternatives.

Table 12 highlights two important points. First, the subsidy which goes to households that would have bought anyway during the period is not complete substitution because it very likely induced somewhat greater consumption (more expensive housing) which will have a direct effect on jobs and GNP. We attempted to take this into account in DRI's simulations but believe that the results probably greatly understate this effect, which was also documented in our 1978 report on the Brooke-Cranston housing stimulus program. 1/ To quantify it somewhat, we could say that if the temporary interest subsidy, using an SFPM, went to 400,000 households--350,000 of which would have purchased homes at an average price of $65,000--then the maximum increase in housing spending could approach $2.75 billion before feedbacks and multipliers. If this were true, it would be roughly equivalent to the new starts impact. Alm and Follain also concluded that a temporary subsidy with both a GEM feature and recapture would have little stimulative effect. It should be noted that the much higher after-tax user cost being experienced today might dampen this consumption effect somewhat. Our DRI simulations understate the impact as compared to the factors supplied by Alm and Follain.

Second, the analysis suggests that the selection of the mortgage instrument is nearly as important as the direct subsidy mechanism. The calculations indicate that:

--An unsubsidized GPM is nearly as stimulative as a shallow subsidy such as the MRB. This must be qualified by the fact that FHA's GPMs carry a slightly higher interest rate because GPMs require negative amortization which is undesirable to lenders and because lenders must also require larger downpayments. Recent changes in FHA's regulations for GPMs provide changes which reduce the downpayment needed.

--Using a SFPM with a temporary interest subsidy (versus a GEM) would very likely increase the stimulative effect of the subsidy with little or no change in the cost.

--Using some form of GPM with a permanent interest subsidy could possibly double the stimulative effect, again with a nominal increase in cost. This would probably require a structure which would offset the negative amortization caused by GPMs which makes them less desirable to lenders.

These results are only applicable directly to those who would have purchased anyway and cannot be applied directly to starts, but Alm and Follain believe that the figures should be proportional to the stimulative effect of proposals on housing starts. Their estimates can, therefore, be used as a guide in altering a proposal to make it more effective.

1/"What Was the Effect of the Emergency Housing Program on Single Family Housing Construction?" (CED-78-155, Nov. 21, 1978), p. 45.

Alm and Follain also provided estimates of cost-effectiveness for the various proposals on inducing consumption. These estimates were modified by adding the cost of the tax exemption to the MRB estimate. The ratios shown in table 13 do not take into account substitution effects but do show the relative magnitude of the cost of encouraging increased housing consumption by those who receive subsidies under the various proposals. They are calculated as the ratio of increased consumption to subsidy cost.

Table 13

How Well Do The Various Proposals Encourage Increased Housing Consumption Among Households That Would Have Purchased Anyway?
(Cost-Effectiveness Ratios)

Proposal	Ratio of increased consumption to subsidy cost
Temporary interest reduction	
SFPM - No recapture	1.45
GEM - No recapture	.88
GEM - Recapture	(Little or no effect)
Permanent interest reduction	
SFPM - No recapture	.83
GPM - No recapture	1.17
Home buyers tax credit	.92
Mortgage revenue bonds	.42
Graduated payment mortgage without subsidy	3.20

These calculations estimate the relative cost-effectiveness of various mechanisms in increasing consumption above what it would be for an unsubsidized SFPM. They account for both direct and tax subsidies in discounted dollars. The tax subsidies (except for the mortgage revenue bond proposal which includes an additional component for subsidies to bond purchasers) are calculated as the increase in tax savings resulting from increased interest deductions when households buy more expensive homes. They show the temporary subsidy to be much more cost-effective when combined with a SFPM as opposed to a growing equity mortgage. The mortgage revenue bond option is the least cost-effective of any proposal studied. The graduated payment mortgage without subsidy is shown to be quite cost-effective but as a countercyclical measure its use cannot be greatly expanded without some direct incentive. HUD

is now insuring a new slowly increasing payment GPM which can be combined with a builder buydown in the first 3 years. This GPM has payments which rise slowly for the first 10 years.

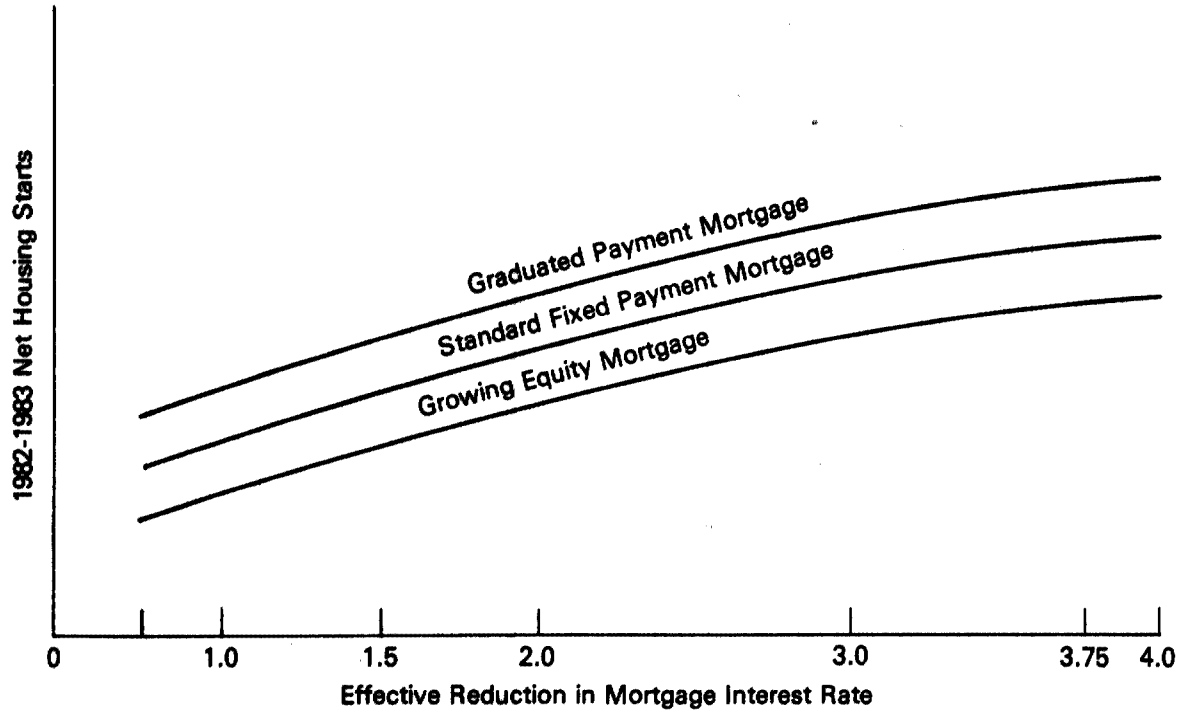
The relationship of stimulus to mortgage instruments

Given the relationship between subsidy depth and housing starts shown on page 52 and the results on the stimulus effects of various mortgage instruments, we might expect a relationship of housing starts (or jobs) to subsidy depth which would look like the figure below. However, these relationships should be considered no more than indicative of direction, since there is no empirical base for quantifying them.

This kind of result seems sensible in view of the generally agreed principle that housing demand can be moved forward by mortgage instruments that overcome the tilt problem of young households. To quantify this somewhat we can look at the temporary interest rate reduction with recapture which had an effective interest rate reduction of about 1.5 percentage points. The simulations show that with a SFPM and ultimate funding of about $1.6 billion roughly 50,000 additional housing starts would occur in 1983. We would then expect the housing starts figure to be somewhat lower with the same effective subsidy and a growing equity mortgage, and somewhat higher if the subsidy were provided in conjunction with a GPM.

FIGURE 10

HOUSING STARTS LIKELY IMPACTED BY THE MORTGAGE INSTRUMENT



The alternatives shown on the following page contrast the two interest reduction plans we analyzed in detail in table 10 to three plans which could be expected to be more cost effective. The plan referred to as the combination interest reduction is similar to plans now being used by some builders. It would combine a standard fixed payment mortgage at 2 percentage points below the market rate with an additional graduated reduction of interest payments in the first 5 years. This would reduce both the real user cost of housing and address the tilt problem. Based on our simulations, we would expect 85,000 housing starts with an effective interest rate reduction of 3.1 percentage points. Adding the graduation in the first 5 years should increase these starts.

The plan using a GPM includes a subsidy to avoid the negative amortization which a GPM would experience in the first few years, thus making the loan more attractive to lenders and avoiding the higher downpayment which a GPM often requires. This plan would be roughly equivalent in cost to the permanent interest reduction, but the graduated payment should provide more net housing starts.

The modified temporary interest reduction would require much less budget authority than the plan which passed the Congress in June 1982, encompasses no recapture provision, would likely be more desirable to consumers and could be implemented through GNMA with minimal administrative problems. We would therefore expect more housing starts than the 50,000 estimated for the temporary proposal we analyzed without the GEM feature.

Description of Alternative Interest Reduction Subsidies
(Assuming a Mortgage of $67,500)

	Temporary interest reduction (GEM)	Modified temporary reduction (SFPM) a/	Combination interest reduction (SFPM) b/	Graduated payment mortgage c/	Permanent interest reduction (SFPM)
Mortgage payment in year 1	$ 734	$734	$694	$645	$720
2	773	773	720	694	720
3	812	812	746	749	720
4	851	851	772	802	720
5	890	890	797	862	720
6-30	930	930	823	927	720
Discounted cost/unit d/	$8,745	$5,668	$10,668	$13,336	$13,878
Effective interest rate reduction e/ (percent)	1.5	1.5	3.1	3.8	4.0
Program budget authority (billions)	$3.0	$1.6	$2.6	$3.0	$3.0
Discounted cost (billions)	$1.6	$1.6	$2.6	$3.0	$3.0
Housing starts	less than 50,000	more than 50,000	more than 85,000	more than 100,000	100,000

a/Initial payments calculated at 12.75 percent which increase by 0.75 percentage points yearly up to 16.5 percent. Payments are similar to the temporary reduction but no recapture is required.

b/Initial payments calculated at 12.0 percent with the interest rate increasing by 0.5 percentage points yearly until 14.5 percent is reached.

c/A GPM with 14.5 percent nominal interest rate with the mortgage payment increasing by 7.5 percent per year.

d/Cost before recapture assuming 12-year prepayment of a 30-year loan.

e/Effective interest rate reduction without recapture, except for the temporary reduction. Interest rate reduction is the primary determinant of housing in our simulations for interest subsidies.

COST OF INCREASED HOUSING STARTS AND JOBS

Thus far we have shown that certain proposals are very likely more stimulative than others and that the ones most stimulative generally tend to be those with the deepest subsidies, but what we really want to know about a stimulus proposal is the cost of an additional housing start or job. Our single-family symposium papers, the discussions with experts, and our calculations seem to indicate that direct subsidies (such as the temporary and permanent interest reductions) are much more efficient than tax subsidies. This is true because tax subsidies are subject to economic inefficiencies and proposals using them are much harder to target. Our simulations seem to bear this out.

Direct subsidies which reduce mortgage interest rates are equally cost-effective in creating housing starts but differ in job creation

The temporary interest rate reduction, which provides subsidies for the first 5 years, and the permanent interest rate reduction, which lasts for the life of the mortgage, appear to provide roughly the same number of housing starts per billion dollars of cost, even though they are structured quite differently. The jobs impact of the permanent is somewhat stronger. Subsidies appear more efficient when the economy is weak and total base-level housing starts are lower because, as the funding increases and more and more units are subsidized, fewer units go to substitution demand. Table 14 shows estimates of total program cost for three alternatives and the cost per net housing start and job in 1982 and 1983--the period in which countercyclical stimulus would be most useful. Each proposal utilizes $3 billion in subsidies, but the permanent proposal is based upon the purchase and sale of all subsidized mortgages in 1983--with all funds being expended in 1983. The temporary proposal provides roughly $600 million for 5 years so that, after discounting, the actual cost is about $2.4 billion. When recapture is included in the calculations, the cost could be as low as $1.6 billion in present value.

The more stimulative a proposal is, and the more it addresses the tilt problem, the more likely it is to increase consumption among those who would have purchased anyway, thus increasing employment. Therefore, the permanent interest subsidy and the temporary proposal without recapture are shown to create more jobs per housing start than the less stimulative proposal with a recapture provision.

Table 14

Cost Per Net Housing Start And Job Created Under Alternate Economic Scenarios

	Temporary interest reduction (recapture) a/	Temporary interest reduction (no recapture)	Permanent interest reduction (no recapture)
	($3 billion expenditure)		
Discounted cost after recapture	$1.6 billion	$2.4 billion	$3 billion
Recovery scenario			
Projected net housing starts 1982-83	51,000	77,000	100,000
Cost per start	$31,400	$31,200	$30,000
Projected jobs b/ 1982-83	51,000	90,000	127,000
Cost per job	$31,400	$26,700	$23,600
Stagflation scenario			
Projected net housing starts 1982-83	85,000	135,000	188,000
Cost per start	$18,800	$17,800	$16,000
Projected jobs b/ 1982-83	86,000	130,000	184,000
Cost per job	$18,600	$18,500	$16,300

a/Recapture is calculated assuming repayment upon sale with 100 percent principal, but no interest. In reality, 100 percent recapture is unlikely, thereby making the possible real cost for this alternative somewhat higher.

b/Full-time employment equivalents.

Cost of indirect homeownership subsidies--
mortgage revenue bonds, mortgage interest
tax credit, and home buyers tax credit

Most of our estimates found the mortgage revenue bond proposal to be ineffective in creating net housing starts in 1983, and other analysis has shown that the tax expenditures associated with using mortgage revenue bonds are substantially larger than the interest reductions they provide households. Therefore, we could assume that if they could provide any stimulus it would be at a higher cost than the direct subsidies. That is, a sizable part of the tax expenditure is captured by the bondholders, rather than being passed through to the home buyer. For example, RDA estimated that if $2.5 billion in mortgages were financed by MRB's, few additional housing starts would result, but the Treasury would lose $175 million per year for the term of the bonds due to bondholder's tax exempt earnings. 1/

The mortgage interest tax credit showed strong results in our simulations, and at costs similar to other proposals being considered in 1982 and 1983, but it would probably be much slower to implement than assumed in our simulations. In addition, when fully implemented the cost could approach $2.5 billion per year and would grow proportionately with the outstanding level of mortgage debt. 2/ Lenders are also likely to capture a portion of the subsidy rather than passing its full value on to the buyers as assumed in our calculations. Consequently, this proposal should only be considered as a long-term structural change as suggested by the President's Housing Commission, not as a countercyclical stimulus.

The one indirect tax proposal which could have strong potential as a countercyclical stimulus is the home buyers tax credit which we defined as a credit against the buyer's tax bill equal to 5 percent of the purchase price of the home. To compare the cost of this proposal as compared to a direct subsidy we can look at the net cost to the Treasury in 1982 and 1983 (measured in our simulations as the increase in the deficit). The following table compares those deficit figures for the tax credit to those for the permanent interest rate reduction, which as the simulations were structured also incurs all its costs in years 1982 and 1983.

1/Carliner, "Analysis of Alternative Housing Stimulus Proposals," p. 14.

2/Ibid, p. 15.

Table 15

Interest Rate Subsidies Provide Stimulus More Efficiently Than a Tax Credit When the Increase in the Deficit is Compared to the Number of Net Housing Starts

	Permanent interest subsidy		Home buyers tax credit	
	Recovery	Stagflation	Recovery	Stagflation
Deficit increase 1982-84	$2.9 billion	$3.1 billion	$3.9 billion	$3.2 billion
Housing starts 1982-83	100,000	188,000	93,000	133,000
Cost per housing start	$29,000	$16,500	$41,900	$24,100

These figures show that in the stagflation scenario the cost per housing start for the two alternatives are much closer than in the recovery scenario. It also shows that the cost of mis-timing the subsidy to the low point in a downturn is much higher for the tax subsidy. This is because the tax subsidy goes to all households and in a recovery the cost grows much faster than the stimulative effect on housing starts. Such tax subsidies could be targeted by income but compliance would be somewhat more difficult to police than a direct subsidy.

CONCLUSIONS

Housing stimulus proposals currently being considered by the Congress and suggested by a variety of industry groups vary greatly in their likely effectiveness and costs. Many of the proposals are likely to be too slow to have any countercyclical impact, while others are structured in ways which may limit their effectiveness or cause them to be excessively expensive. Minor changes could be made to those having the highest potential for success without increasing their costs appreciably.

However, none of the proposals can bring about a long-lived housing recovery without a significant drop in interest rates. Rather, certain alternatives could provide short-term relief to the industry in early 1983 if sufficient funding were made available. The resulting increased economic activity would largely offset the effect of financial crowding out and result in increased employment in both 1983 and 1984, primarily as a result of non-construction related employment increases.

In order to have a countercyclical effect for the housing industry or the economy in general, a stimulus proposal should be

capable of starting up quickly, having its impact and withdrawing from the economy before it begins to have a pro-cyclical impact. Thus, the more quickly a proposal can be implemented and the more easily it can be terminated, the more likely it is to be successful. This implies that it should to the extent possible use existing mechanisms or programs with regulations in place, or at least be analagous to programs which are well understood by buyers and builders alike. This would indicate that a program which could provide a direct interest subsidy in the form of a Government subsidized loan discount or a self-implementing tax subsidy would be most effective.

Of the proposals we evaluated for homeownership subsidies:

--The fastest and most effective proposals could have a significant effect on housing starts in the first and second quarters of 1983 and jobs in the second and third quarters of 1983, assuming they become effective in the fourth quarter of 1982.

--Direct subsidies such as the permanent interest subsidy or temporary interest subsidy are likely to be more cost effective than those relying on the tax system. Resulting housing starts in the target period (before the economy or industry turns up) are likely to be roughly proportional to program cost, whereas jobs impacts seem to increase slightly as the stimulative effect on the proposal increases.

--In general, interest rate reduction proposals which lower mortgage payments in the early years and provide a shallower subsidy in the outyears could be expected to have the greatest effect on marginal home buyers. This reduces substitution since it would be less attractive to those who could afford market rates but are merely shopping for a bargain. This, in a sense screens against substitution. Hence, a graduated payment mortgage combined with an interest rate reduction would be more effective than the same level of subsidy with a standard fixed payment mortgage.

--The growing equity mortgage would be less desirable to buyers since it requires a much greater contribution to principal and lower tax deductions, and thus raises the user cost of housing in the early years. It is also not well understood by either the Congress or borrowers and there is not yet a secondary market for such mortgages.

--The home buyers tax credit, confined to units started after enactment, is probably the next most effective proposal in encouraging housing starts.

--The mortgage interest tax credit might provide reasonably good housing starts impact in 1983 at relatively low

initial cost if lenders actually pass the subsidy through to borrowers. We expect, however, that lenders would capture a substantial part of the subsidy, thus reducing and delaying its effects on starts. In addition, its costs would grow substantially over the years; therefore it should not be considered as a countercyclical program but rather as a long-term structural proposal as recommended by the President's Commission on Housing. We have not attempted to analyze its likely effect over the long term.

--A zero downpayment loan under FHA (suggested to us by a group of homebuilders) for a certain subset of well qualified buyers who could meet stiffer underwriting requirements would eliminate a particularly vexing barrier to homeownership. If combined with lower debt to income ratios for buyers and strong credit worthiness tests, it could have some impact on mortgage failure rates and FHA insurance losses. Risk would have to be carefully considered, however, since the debt to equity relationship is a strong determinant of failure rates for loans. VA, which uses co-insurance where lenders share limited risk, has had a no-downpayment option for years.

The substitution effect (where subsidies go to buyers, sellers, or lenders without providing additional starts or job creation) can be further reduced in a countercyclical program by

--targeting proposals to moderate income buyers;

--focusing on new construction started after the effective date of the program;

--providing subsidies to buyers not lenders; and

--using direct expenditures rather than tax subsidies.

Even where substitution by households that have bought anyway is significant, some additional economic stimulus is provided since those households receiving the subsidy will tend to buy more expensive homes than they would have without the subsidy.

Given these considerations, it is possible to design subsidy programs which will have some net effect on the level of housing starts. But this increment of starts would be achieved at substantial cost to the taxpayer and would represent only a marginal improvement for the industry. It seems clear that a return to what have come to be considered healthy levels of housing production will depend on a substantial decline in the level of long-term interest rates and an improvement in the overall economy.

AGENCY COMMENTS

HUD, the Department of the Treasury, FHLBB, and the Federal Reserve Board were given the opportunity to review and comment on a draft of this report. Numerous technical adjustments were made based on the comments received. By and large, there was no disagreement with the general nature of our findings and conclusions.

HUD, in a written response to us (see app. IV), stated, among other things, that the administration is strictly opposed to any short-term stimulus to the housing industry. HUD considers the costs of the various proposed stimulus programs to greatly exceed their housing and employment benefits.

FHLBB also provided a written response (see app. V). It found the report to be a well-done summary of alternative short-term stimulus programs.

CHAPTER 4

COUNTERCYCLICAL STIMULUS TO RENTAL HOUSING

When approaching the topic of countercyclical stimulus to rental housing, one is immediately faced with the irony that although homeownership subsidies may be the better prospect for quick stimulus to the housing industry, preserving and adding to the stock of moderately priced rental housing may be the more urgent housing need during the next decade and that low- and moderate-income renters are generally in greater housing need.

Homeownership has become the dominant form of tenure for American households, but its popularity and demand have also helped drive up the cost of land, labor, and materials for rental housing. The tax deductibility of mortgage interest coupled with home appreciation has opened a substantial gap between the attractiveness of ownership versus rental housing, thus depressing the value of rental housing relative to owner-occupied housing. This has created a strong incentive to convert units, where possible, from rental to owner-occupancy. Little incentive exists to develop additional rental units except where the demand for rental housing is unusually strong.

In spite of major gains in the quantity and quality of the rental housing stock over the last 20 years (much of it encouraged by Government programs), the rental housing stock is no longer growing 1/ and much of the moderately priced stock is in need of repair. Many low- and moderate-income households cannot easily afford their present rents, let alone those needed to provide adequate investment returns for new rental housing or to support renovation. Recent sharp increases in the real cost of ownership will put added pressure on the rental stock as many choose renting over buying. However, the gap between rents needed to encourage development and what tenants can or will pay will make it difficult for the market to respond with additional rental housing. Although rent levels are currently rising somewhat and recent tax law changes are encouraging investment in existing rental housing, these trends are unlikely to help low- and moderate-income renters who will be less able to afford increasing rents and are also unlikely to induce new construction.

1/The total number of conventionally financed rental starts decreased from 298,500 in 1977 to 97,300 in 1981. Further, if conversions to condominiums and cooperatives are considered, the net additions to the rental stock have been dramatically reduced in recent years to a net decrease of 19,500 units in 1980 and only 12,300 additions in 1981. See John P. Kerry, "Multifamily Housing in the 80's: Market Trends and Countercyclical Stimulus Options" (GAO Symposium on Countercyclical Stimulus for Multifamily Housing, 1982).

As with single-family housing, the key to a recovery in rental housing production lies primarily in a healthy economy and a decline in mortgage interest rates. In addition, rental housing developers are highly sensitive to factors other than financing costs, such as inflation in operating costs and the ability to pass these on in rents, which affect cash flows and the after-tax return on investment. Consideration of all these factors suggests that a substantial rise in rental housing production will not occur until there is a fairly broad-based recovery in the overall economy, a rise in family incomes, and a substantial decline in interest rates.

These circumstances, in turn, probably preclude any rapid construction response to shallow stimulus proposals for rental housing. There are, however, several kinds of rental housing activity which have the potential to respond quickly to stimulus, but which have generally not been the subject of full scale Federal intervention. These are the

--conversion of buildings from nonresidential to residential use or subdivision of larger housing units into smaller rental units,

--development of small rental buildings with a few units where the development and construction process is similar to single-family housing,

--moderate rehabilitation of rental housing in substandard condition, and

--conversion of unsold ownership housing to rentals.

These are probably the areas in which the private market will attempt to respond to rental needs without Government assistance and which are most likely to provide reasonably priced rentals affordable by many moderate-income households. Federal subsidies in these areas could be used as leverage to assure some continued availability of such housing to low- and moderate-income households.

Past research has also shown that subsidized substantial rehabilitation is more costly 1/ and clearly less effective per dollar in adding to the stock than new construction. Therefore, we attempted to focus the proposals analyzed here on less costly, more rapid kinds of development which would still serve the longer term housing needs of the Nation.

Regardless of whether new construction or rehabilitation is undertaken, a subsidy program which allows occupancy by nonneedy

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1/"Section 236 Rental Housing--An Evaluation With Lessons For The Future," (PAD-78-13, Jan. 10, 1978), p. 121.

households should probably provide as shallow a subsidy as possible. A subsidy which is too shallow may have no effect at all, but deep subsidies encourage expensive construction and wasteful rehabilitation, meaning higher rents and much less chance of availability to moderate-income renters in both the short- and long-term. Better units will be much more likely to be converted to ownership in the future.

METHODOLOGY AND EVALUATION CRITERIA

In this chapter we analyze proposals to spur new construction and rehabilitation of rental housing through a variety of loans, grants, and tax incentives. Our analysis relies on micro-simulations performed for us under contract by William Brueggeman, a series of symposia papers prepared for our June 28, 1982, symposium on multifamily housing, our past research, and numerous interviews with HUD officials and housing developers. Some limited simulations were performed using the DRI econometric model, but we did not refine these simulations since the market response times for multifamily housing are likely to be much longer than those for single-family housing and the multifamily proposals are much more difficult to simulate. We therefore decided to focus more attention on the single-family alternatives which are more likely to work as countercyclical stimuli. The major criteria for comparing the proposals are:

--adequacy of builder incentives,
--speed of implementation and market response,
--cost to the Government,
--targeting, and
--likelihood of substitution.

THE PROPOSALS ANALYZED

The proposals we analyzed were suggested by a variety of housing experts, HUD officials, lobbyists, builders, and other researchers. Some proposals which seemed totally unworkable or ineffective in the short run were eliminated, while others were altered to better target them and to limit their costs. All proposals would require that at least 20 percent of the units be set aside for low- and moderate-income households. Several bar conversion to condominiums for a period of 15 years, which should be considered in any rental subsidy program. As originally phrased, all proposals required start of construction after program initiation and completion before January 1, 1984. However, discussions with HUD housing officials indicated that simply requiring the beginning of construction by a certain date would be more workable. Requiring completion by a particular date would effectively exclude anything except relatively small projects. At the same time, of course, the inclusion of projects with longer construction periods would increase the risk of creating an economic stimulus at an inappropriate point in the business cycle. Therefore, it would make sense to require construction to start by June 30, 1983.

Table 16 summarizes the characteristics of each of the multifamily proposals, including subsidy and recapture mechanisms, mortgage limits, targeting provisions, and other features.

Table 16

Stimulus Proposals for Multifamily Rental Housing

	Basic Subsidy Mechanism	Recapture	Mortgage or Subsidy Limits	Time Targeting	Household Targeting	Other Provisions
Shallow Tandem	4% Interest Rate Reduction by GNMA Discount	15 Years, Full Principal and Interest at Treasury Rate	$40,000/Unit	Start After Passage But Before 6/30/83	20% Units to Households Under 80% of Median Income	New Construction; Substantial Rehabilitation; Conversion to Residential Use
Interest Reduction Loan	Loan for 4% Interest Reduction; Second Lien	15 Years, Recapture Limited to 60% of Increase in Value	"Modest Design" $40,000/Unit	Same as Tandem	Same as Tandem	Same as Tandem
Mortgage Revenue Bonds	Tax-Exempt Bonds	None	None	Same as Tandem	Same as Tandem	15-Year or Longer Ban on Conversion to Condominiums
Investment Tax Credit	10% Credit to Developers	None. Could Require Reduced Basis and Recovery Through a Capital Gains Tax	$4,000/Unit	Same as Tandem	Same as Tandem	None
Rental Housing Assistance Grants S.2171	Grants to State & Local Governments	Recapture Encouraged But Not Mandatory	No Direct Limits Although Limits Would Probably Be Advisable to Control Cost	None	Same as Tandem	"Severe Rental Shortage"; Overcrowding; Substandard Housing; Eligible Households
UDAG Housing Supplement	Competitive Awards	None Specified	$10,000/Unit ($5,000/Unit National Average)	Same as Tandem	Same as Tandem	15-Year Ban on Conversion on Condominiums
Accelerating Pipeline (Chiefly Section 8)	Increases Allowable Rents & Subsidies (FAF)	None	None	Second Half of 1982	Section 8	None

Shallow Tandem

The shallow Tandem program would enable developers to borrow funds for rental housing projects at significant discounts, which would be absorbed initially by GNMA. Such discounts would then be repaid by borrowers when a project is eventually sold or refinanced. More specifically, monthly payments on these discounted loans would be based on a sufficiently low rate of interest (not lower than 11 percent) to provide satisfactory debt service coverage from operating revenues of newly developed projects. A balloon payment large enough to recover the discount absorbed by GNMA at the time of origination, plus deferred interest on the discount, would be required after 15 years or if projects were sold or refinanced. Because this proposal requires that the initial discount is to be repaid with interest, there may be little or no direct subsidy associated with this proposal.

Interest reduction loan

The interest reduction loan proposal is similar to the shallow Tandem approach; however, it involves an explicit subsidy to developers. Essentially, developers would make first mortgage loans at current interest rates and simultaneously make second mortgage loans equivalent to one-third of interest requirements on the first mortgages. These second mortgages would be made available as long as current interest rates exceed 14 percent. Interest costs on the second liens would be compounded at the Government borrowing rate but would be deferred and become due as a balloon payment after 15 years, or sooner if projects are sold or refinanced. However, amounts due on such second liens would not exceed 60 percent of the appreciation of value in excess of cost of projects developed under this program. Because of this limitation, some portion of the subsidy is likely not to be recovered.

Tax exempt mortgage revenue bonds

Although tax exempt MRBs currently provide below market financing for rental housing, the 1980 Mortgage Subsidy Bond Act reduced their usage by imposing stringent income targeting. Further, the slow issuance of regulations by the Department of the Treasury has discouraged use of these bonds. This proposal suggests the following changes in the act: (1) assisted projects could convert to condominiums once half the subsidy period has expired (but not in less than 15 years), (2) the definition of target areas in which restrictions are relaxed would expand to include those where there is a continuing crisis of affordable mortgage credit which jeopardizes the housing industry, and (3) tenant income limits would be increased from 50 percent to 80 percent of area median income (this restriction applies to only 20 percent of the units).

Investment tax credit

This proposal provides a 10 percent investment tax credit on direct project costs (in excess of land cost) to developers of rental housing. However, the investment tax credit proposal would limit these credits to $4,000 per unit constructed. This is the only proposal considered that would utilize a direct reduction in taxes as an incentive to stimulate production.

Rental rehabilitation

Rental rehabilitation could be used as another approach for stimulating rental housing. Under the Urban Development Action Grant (UDAG) program, developers could obtain grants for up to $10,000 per unit. Subsidies would average $5,000 for the program as a whole, however. All UDAG regulations regarding matching private financing and neighborhood targeting would still apply in establishing whether such grants should be made. A second option in this direct grant approach is patterned after S.2171. 1/ It would provide funds for loans, grants, interest reduction payments and land acquisition grants to be made by state and local housing agencies. Projects selected for subsidies under the latter proposal would be based on a number of considerations including elimination of housing shortages, project cost, neighborhood development, and the likelihood of loan repayment. HUD officials advised us that they planned to support some form of rental rehabilitation program.

Section 8 pipeline

The section 8 pipeline involves increasing the financial adjustment factor (FAF) for section 8 projects which have HUD contract rent commitments, but not firm financing commitments. Funding commitments were lacking primarily because of high tax exempt bond interest rates, which, in turn, resulted in high debt service requirements relative to fair market rents presently allowed by HUD on such projects. Increasing the FAF would amount to a higher rental subsidy commitment from HUD, thereby enabling higher debt service commitments to be covered from current operating revenues. This would allow development of more section 8 projects currently in the HUD approved "pipeline." In July 1982, HUD amended the FAF to increase the interest ceiling from 12 to 14 percent. However, according to a HUD official, this action had little effect on projects in the pipeline because the tax-exempt bond interest rates were already declining to the point where the projects' financing was again feasible.

1/For a detailed analysis of this bill as originally introduced see CED2-158, letter report to Senator Christopher J. Dodd, April 13, 1982. The rental rehabilitation proposal now pending in the Senate is substantially different.

In August 1982, a supplemental appropriation was sent to the President which included a provision to release $1.75 billion in deferred spending authority needed to bring 34,000 units of section-8 assisted housing into construction by the end of 1982. These funds, if they become available, will be used for financing adjustments and development cost increases in projects.

WHY MULTIFAMILY RENTAL DEVELOPMENT IS SLUGGISH

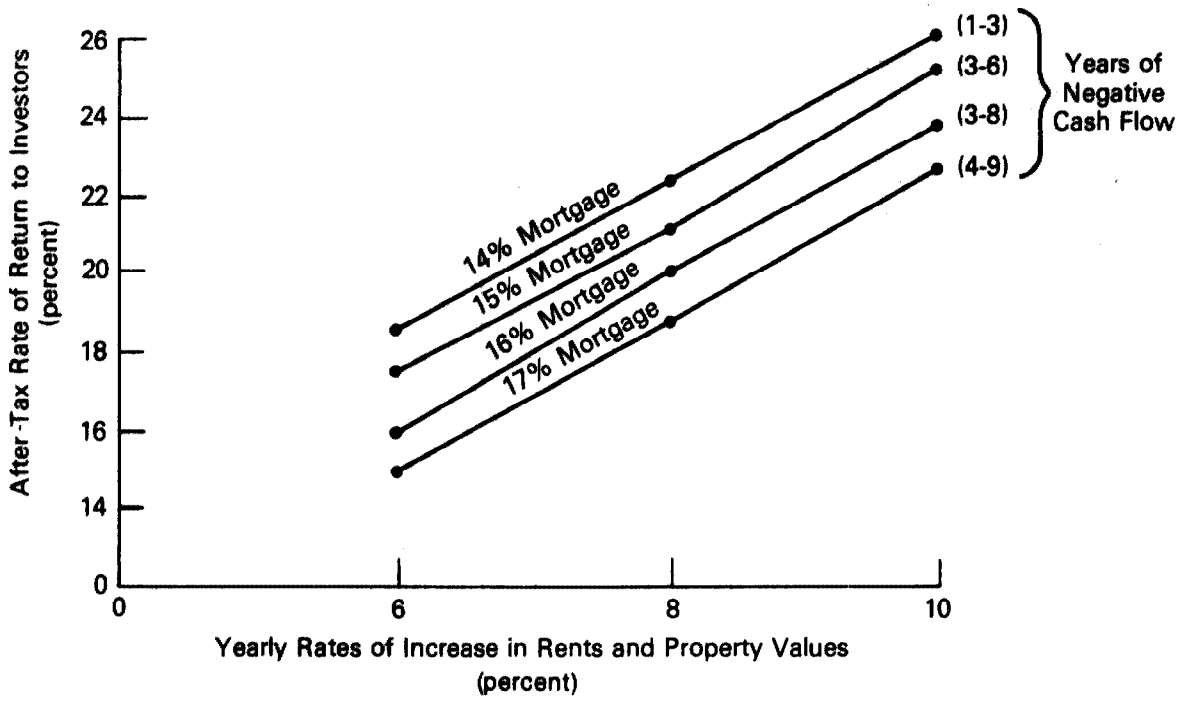
The principal impetus for private investment in rental housing is the expected return on investment. Rental development is occurring in certain markets even at today's high interest rates. A typical example would be a project of 150-250 units in a suburban location outside a large metropolitan area. Development costs would run roughly $35,000 per unit and rents would be just less than $400 per month. Other rental production activity taking place today is often in small buldings in small towns or satellite cities where land and construction costs are lower and zoning less restrictive but rental demand still strong. A great deal of this development takes place in the Sun Belt and much of it is being done with tax exempt financing in some markets. At current levels of mortgage interest rates, many multifamily rental projects are not financially feasible in otherwise viable urban markets. This is probably caused by uncertainties in expected appreciation rates and in spite of potentially good after-tax returns. One explanation is that probable long periods of negative cash flow discourage both investors and lenders who are considering such projects. Other impediments which are often cited as inhibiting rental development are (1) restrictive local zoning requirements that drive up the price of land (such as low density requirements or units per acre), (2) the fear of rent control, and (3) high development fees required by local governments. To encourage development, it is necessary to improve the before-tax cash flow and this can probably be done with relatively small subsidies, based on results calculated for this report.

To be competitive with alternative investments, after-tax returns on rental housing would have to be in the range of 17 percent today. Even then, before-tax returns on investment would be much lower than less risky investments and still would require several years of negative cash flows.

Figure 11 shows typical returns and the length of time developers are likely to experience negative cash flows under various economic situations. At expected property appreciation rates and rent increases below 6 percent annually, and at current interest rates, new rental investment is not at all likely.

FIGURE 11

INVESTMENT POTENTIAL ON UNSUBSIDIZED RENTAL DEVELOPMENT DEPENDS ON MORTGAGE RATES, REAL ESTATE INFLATION AND NEGATIVE CASH FLOW



Source: William B. Brueggeman, *A Micro-Simulation Analysis of Options Intended to Stimulate the Production of Rental Housing*, Paper Prepared for GAO, 1982.

COMPARISON OF PROPOSALS

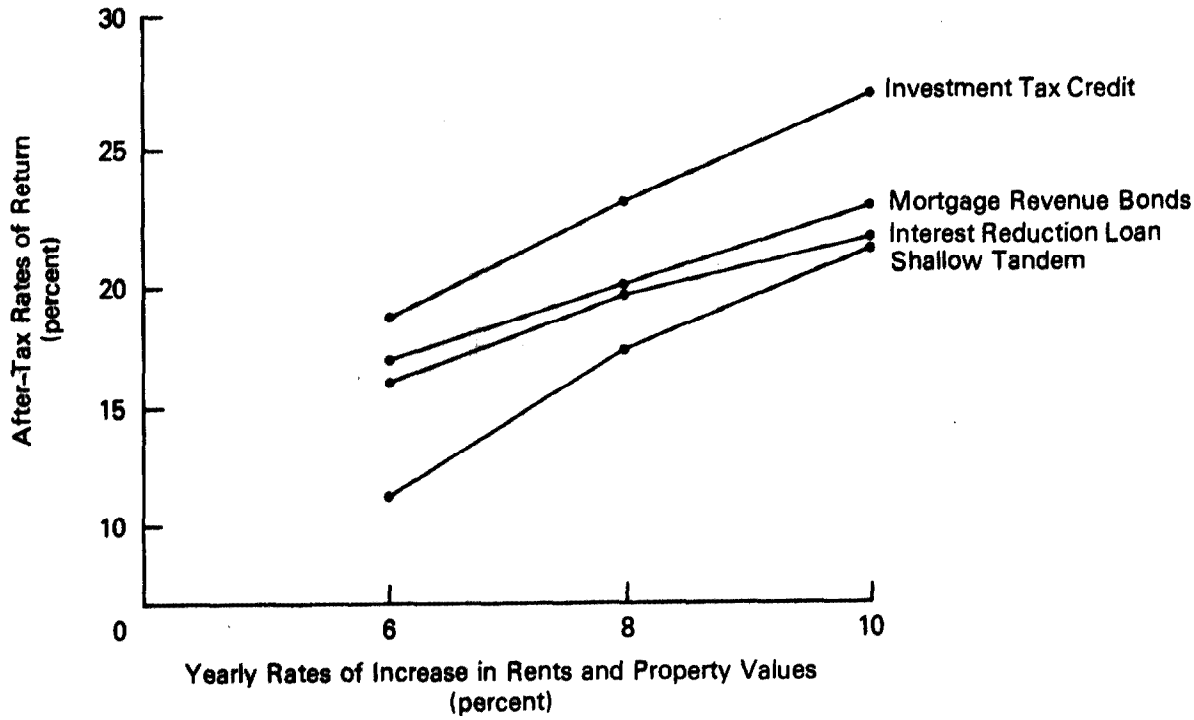
We compared the various proposals in terms of their ability to improve before- and after-tax returns on investment in rental housing at current interest rates, assumed to be 17 percent. We also compared the alternatives in terms of their cost and their likelihood of spurring investment. These comparisons were done using Brueggeman's micro-simulation model with assumptions about a typical project and information on current rents in areas of the country experiencing some development.

After-tax returns would be improved

Figure 12 shows relative after-tax returns on investment which are considered adequate for three of the four alternatives shown. The recapture feature of the shallow Tandem alternative makes the resulting after-tax returns marginal, particularly at the lower assumed rates of appreciation.

FIGURE 12

AFTER-TAX RATES OF RETURN TO DEVELOPERS VARY FROM PROPOSAL TO PROPOSAL



Source: Brueggeman, *Micro-Simulation Analysis*, 1982.

Cash flow improvements mixed

After-tax returns are only one factor in an investment decision. Poor before-tax returns, expressed as the number of years of negative cash flow, are also extremely important to investors and make it much more difficult for them to obtain mortgage funds. Table 17 shows these negative cash flow figures for a project without subsidy and with assistance provided by each of the four new construction proposals.

Table 17

Years of Negative Cash Flow
for Rental Housing Investment
(New Construction)

Inflation rate: rents and property values (percent)	Years of negative cash flow				
	Without subsidy	Shallow Tandem	Interest reduction loan	Mortgage revenue bonds	Investment tax credit
6	9	3	0	0	9
8	6	2	0	0	6
10	4	1	0	0	4

Source: Brueggeman, "Micro-Simulation Analysis," 1982.

The interest reduction loan is adequate to substantially reduce the cash flow problem and would likely induce development under the assumption that equity investors provide 25 percent of the development cost as a cash investment. Mortgage revenue bonds are assumed here to provide financing at 13.75 percent, which may be optimistic in a 17 percent mortgage market. They are also assumed to encourage 35 percent equity investment by developers since the subsidy is not recapturable and would thus be far more attractive to developers. Under these circumstances, the mortgage revenue bond option also could be expected to eliminate the cash flow problem. The investment tax credit would have no effect on the cash flow problem unless investors substantially increased their equity investment in order to make a project feasible and take advantage of the credit, thereby lowering the debt and needed debt service. Finally, the shallow Tandem proposal improves cash flow, probably enough to induce investment, but the full recapture of principal and interest provides a potentially large and risky payback of the subsidy which would probably discourage investment. This is because at lower rates of appreciation the investors might have to borrow money to pay back the subsidy, thus destroying any potential for profit.

Present value of subsidy

Using Brueggeman's simulation results, we can calculate the subsidy required to induce investment in multifamily housing and then compare the subsidies provided by each of the alternatives as a measure of cost and efficiency. The present value of the subsidy required to induce investment is estimated at roughly 5 percent of total development costs, as displayed in table 18. The blanks in table 18 indicate that no subsidy would be required.

Table 18

Estimates of Subsidy as a Percentage of Development Cost Needed to Induce New Rental Housing Development

Required after-tax return on equity to investors (percent)	Minimum subsidy cost as percent of development cost		
	Expected rate of appreciation in property value:		
	6	8	10
15	6	-	-
17	9	2.5	-
20	12.7	7.9	1.4
	Average value =		4.4 percent

Source: Brueggeman, "Micro-Simulation Analysis," 1982.

With current uncertainty regarding property appreciation, subsidies in the 5 to 6 percent range would probably be reasonably stimulative today. If interest rates were to decline while all other factors remained the same, the required subsidies would probably be much smaller. Table 19 shows how, by using this base and calculating the expected subsidy as a percent of development cost for each of the alternatives, we can get a measure of whether or not the proposal provides adequate funding. Some proposals provide a subsidy which is large enough in size but may not be effective due to the delivery mechanism.

Table 19

Adequacy of Subsidy Amount to Induce Rental Housing Development (percent)

Option	Expected value of subsidy	Expected value of subsidy needed	Excess (+) deficiency (-)
Shallow Tandem	.5	4.4	-3.9
Interest reduction loan	3.9	4.4	-0.5
Tax exempt mortgage revenue bonds a/	4.0	4.4	-0.4
Investment tax credit	6.8	4.4	+2.4
Section 8 (FAF)	10.2 b/	4.4	+5.8
Rental housing rehabilitation	20.0 c/	4.4	+15.6

a/This option also provides a large subsidy to bond holders which reduces the present value of the subsidy to the developers. In discounted present value, the subsidy to the bond holders amounts to at least 30 percent of the development cost.

b/Financing subsidy only; rent subsidy excluded. In actuality, section 8 units are probably substantially more expensive to the Government per unit than those which would be provided with a shallower subsidy.

c/This assumes a $25,000 rehabilitation development cost as opposed to the $35,000 development cost for new construction alternatives. This figure was calculated by GAO.

Source: Brueggeman, "Micro-Simulation Analysis," 1982.

Relative cost effectiveness

Of the proposals compared in this chapter, the interest reduction loan program is probably the most likely to provide

stimulus in the short term and is also the most cost effective proposal. Shallow Tandem, while inexpensive, provides inadequate incentives. Mortgage revenue bonds are the highest in cost relative to their impact on investment returns, and the investment tax credit would probably have little impact for the cost incurred. The rental housing grants proposal would probably be effective in spurring investment but likely provides a greater subsidy than needed as analyzed in this report. The relative costs and the factors determining the likely effectiveness of the proposals are summarized in table 20.

Table 20

Comparing the Rental Housing Alternatives: Stimulus Potential and Cost-Effectiveness

	Before Tax Return	After Tax Return	Potential Stimulus	Cost-Effectiveness
Shallow Tandem (Full Recapture)	Improves Due to Reduced Negative Cash Flow	Does Not Improve	Slight Because Full Recapture Creates Substantial Risk to Investors	Low Cost/Low Effectiveness
Interest Reduction Loan (Partial Recapture)	Improves Due to Reduced Negative Cash Flow	Provides Adequate Returns	Most Stimulative	Most Cost-Effective; Balances Government and Investor Concerns
Mortgage Revenue Bonds	Improves Due to Reduced Negative Cash Flow	Greatly Improves, Better Than Necessary	Stimulative Effect Similar to Interest Reduction Loan	Less Cost-Effective Due to High Cost of Tax-Exempts Which Exceeds Benefit to Developers and Lack of Recapture
Investment Tax Credit	Unchanged Because Finance Costs Are the Same	Greatly Improves, Better Than Necessary	Least Stimulative; Negative Cash Flow Unchanged; Provides Windfall Unless Developers Provide More Equity	Potentially High Cost; Least Effective Unless it Results in a Large (But Unexpected) Increase in Investor Equity
Rental Construction and Rehabilitation Grants	Improves Due to Lower Debt	Improves	Very Stimulative	Cost-Effective; Subsidy Probably More Than Adequate for Rehabilitation

Substitution effects for rental housing are very hard to predict

As discussed with regard to single-family housing, substitution dampens the effect of stimulus proposals by providing subsidies to development which would have taken place anyway (or for the same households) or by driving up borrowing costs for other rental housing developers and discouraging unsubsidized development.

Both of these effects have been estimated to be quite significant in the past except where housing is targeted on the needy, in which case only the mortgage lending effect takes place. 1/

But in the past the supply of mortgage funds was probably more inelastic and the amount of unsubsidized moderate priced rental development was much higher. Today, with the integration of mortgage finance into the capital markets and a much lower level of unsubsidized rental housing, substitution within the housing sector could well be much lower. In simulations done for us by DRI on the investment tax credit for rental housing and a multifamily interest reduction loan, we found very little substitution of subsized units and minimal substitution of multifamily for single-family units in the short run. Substitution in the long run could of course be much greater.

Since it is much more difficult to estimate the levels of substitution, other evalution criteria were relied on more heavily to distinguish between alternatives. However, some income targeting and limiting subsidies to lower priced rentals might mitigate the substitution while enhancing the extent to which a program meets the Nation's longer-term needs for rental housing. Proposals could also minimize substitution (and displacement) by targeting subsidies at housing already occupied by low- and moderate-income households and in need of modest rehabilitation.

Targeting

Many of the proposals analyzed have the potential to target geographically and to certain income groups but the likely outcome differs considerably from proposal to proposal. 2/ Table 21 analyzes this phenomenon in greater detail along with some ideas on how financial substitution (crowding out) might differ from proposal to proposal. One aspect of the targeting problem not presented in table 21 is the extent to which a proposal targets at areas experiencing rental shortages. Proposals which would allow development where rental housing demand is already strong enough to induce some development would probably satisfy this need. A shallow subsidy with minimum income targeting, such as the interest reduction loan program, could probably work in such areas.

1/See Michael P. Murray, "Countercyclical Housing Policies: Microeconomic Medicine For Macroeconomic Ills" (GAO Symposium on Countercyclical Stimulus for Multifamily Housing, 1982).

2/For a further discussion of targeting under each proposal, see James E. Wallace, "Multifamily Housing Stimulus Proposals: Public Policy Issues and Program Feasibility" (GAO Symposium on Countercyclical Stimulus for Multifamily Housing, 1982).

Table 21

Comparing the Rental Housing Alternatives: Targeting and Substitution Due to Financial Crowding Out

	Income Targeting	Builder Targeting	Targeting to High Unemployment Areas	Impact on Financial Markets
Shallow Tandem	Adequate	Likely to be FHA Builders	Poor	Crowding Out (Less If GNMA Holds Loans)
Interest Reduction Loan	Adequate	Same as Tandem	Poor	Same as Tandem
Mortgage Revenue Bonds	Adequate	Windfall to Assisted Developers Because Subsidy Not Linked to Low Rents. No Recapture.	Poor	Little Crowding Out, But State and Local Borrowing Costs May Rise
Investment Tax Credits	Poor	Benefits Large Developers	Poor	Significant Crowding Out; But Less Than Tandem
Rental Construction and Rehabilitation Grants	Good	Could Benefit Both Small and Large Builders With and Without FHA Insurance	Good	Little Crowding Out
Pipeline	Best if Limited to 100 Percent Projects; Poor if Offered to Partial Projects	Limited to Builders in Pipeline	Adequate	Little Crowding Out

Implementation of multifamily rental housing proposals is much slower than for single-family housing

The timing needed for planning, processing, and building multifamily units under each of our proposals is considerably longer than for single-family construction. Chapter 3 emphasizes the importance of speedy implementation and its dependence on program simplicity. Moreover, the greater time period required for market response and construction of multifamily units is likely to diminish the countercyclical impact of these proposals. 1/

1/Michael J. Lea, "An Analysis of Countercyclical Stimulation of Multifamily Housing in the Current Macroeconomic Environment," (GAO Symposium on Countercyclical Stimulus for Multifamily Housing, 1982).

The proposals which are similar to past and present programs and are simple to administer could become operational relatively quickly. These are the shallow Tandem, an investment tax credit, and faster production of units in the multifamily pipeline. As shown in table 2 in chapter 3, the time needed for rule-making, clearance, and field implementation procedures is about 2 months. Under the shallow Tandem and multifamily pipeline proposals, construction could begin 2 to 3 months later for the limited number of units near the end of the pipeline. Similarly, the investment tax credit could be operational 2 to 3 months after the regulations become effective--the time needed to develop the drawings and specifications for the project. Thus, 4 to 5 months elapse before the market responds with housing starts.

The estimates provided here are generally based on estimates provided by HUD and do not presuppose time limits until the funding expires. Proposals which enforce construction starts before a certain date to get funding could be expected to speed up the market response which could be quite fast for moderate rehabilitation or small scale rental development.

The proposal to increase UDAG appropriations for development of multifamily rental housing is somewhat more complex to implement. Again, rule-making and field implementation would take about 2 months. The market response is expected by HUD to take a much longer time period of perhaps 8 months. This estimate includes a 2-month application review period and a 6-month lag until construction begins, but again, presupposes that no time limit is involved. Unlike the multifamily Tandem and pipeline proposals, UDAG has not been used extensively for residential construction but it is generally faster in getting projects underway than either section 8 or the Community Development Block Grant program.

Finally, implementation of proposals which are entirely new or complex will be slow. These include proposals for an interest reduction loan for rental housing production, rehabilitation assistance, and the UDAG proposal for rental housing. HUD officials told us that the quickest way to implement the interest reduction loan proposal would be to structure and administer it through procedures similar to the now inactive section 236 program. Nonetheless, the interest reduction, along with the other two proposals, will require extensive time--at least 9 months--to design the programs and develop and implement rules. Even the mortgage revenue bond proposal, which has an existing delivery mechanism, would likely take at least 9 months until bonds could be issued and perhaps another 6 months before construction could begin on projects not already under development.

The lengthy time period required for planning and constructing large multifamily rental housing projects, particularly when HUD processing is involved, makes the countercyclical value of multifamily proposals much more questionable. Table 22 compares the speed of delivery and other factors relative to these proposals' likely effectiveness in providing countercyclical stimulus to housing.

Table 22

Comparing the Rental Housing Alternatives: Advantages and Disadvantages

	Speed of Impact	Delivery System	Administrative Simplicity	Subsidy Depth	Budgetary Impact
Shallow Tandem	Fast	Partially in Place	Simple	Too Shallow Due to Full Recapture and Associated Risk	Lowest Cost/ Unit Due to Stiff Recapture Provision
Interest Reduction Loan	Slow	Not in Place	Similar to Tandem; Somewhat More Complex	Adequate	Low Cost/Unit But Full Loan Is Outlay in First Fiscal Year
Mortgage Revenue Bonds	Slow	State Finance Agencies Offer Strong Viable Delivery System	Simple	Adequate	Higher Cost/ Unit Because Tax Exemption Is Least Efficient
Investment Tax Credit	Fast	Tax System	Simple	Larger Than Necessary But Ineffective Due to Delivery Mechanism	Uncontrollable in Total
Rental Construction and Rehabilitation Grants	Slow if New Legislation; Somewhat Faster if Through an Existing Program	State and Local Governments Have Project Pipeline in Place	Complex	Adequate; Depends Upon State and Local Governments	Controllable; But Cost/ Unit Is Uncontrollable Unless Capped
Multifamily Pipeline	Fast	In Place	Complex	More Than Adequate	Controllable; Very High Per Unit Cost

CONCLUSIONS

Multifamily proposals as countercyclical stimulus suffer from a variety of drawbacks as compared to single-family proposals. For example,

--longer lead times prior to construction delay the countercyclical impact, particularly when FHA processing is involved, and

--no complete delivery mechanism, except for the section 8 pipeline, is now in place for shallow subsidies to rental housing, and many of the multifamily proposals would take longer to implement than the single-family proposals.

Certain mechanisms such as the investment tax credit and the shallow Tandem proposals could probably be implemented more quickly than the others. But the analysis suggests that these approaches are likely to prove relatively ineffective. Of the alternatives analyzed, the interest reduction loan, the mortgage revenue bonds, and the rental rehabilitation programs are probably most capable of encouraging new residential development because they provide adequate subsidies to overcome current barriers to development. But implementation of these approaches is likely to be relatively slow.

The shallow Tandem alternative could be modified to include a second lien constituting a recapture provision similar to that in the interest reduction loan program. This would make it possible to utilize the Tandem mechanism (which is largely in place and which could probably respond more quickly) with a more workable subsidy form.

The interest reduction loan could also be implemented by modifying the inactive section 236 program. This would involve a shallower interest subsidy and the addition of a limited recapture provision. This would operate through a second lien covering the deferred interest.

Subsidy recapture, as shown in this analysis, probably does not have as strong a negative effect on the stimulus of rental housing production as it would for owner-occupied housing. Since it is structured as a second lien with payback contingent upon property appreciation, it does not decrease the basis of the property and thus increases the tax shelter. If the developers/investors can still see a profit, they will be willing to invest. This is not unlike many private loan arrangements between mortgage lenders and real estate investors where appreciation is shared.

The multifamily section 8 pipeline, which could and likely will be accelerated to have a small effect on total starts in early 1983, will work more quickly than any other multifamily or single-family alternative. It is, however, a very costly mechanism.

It is very difficult to estimate substitution under the current housing and economic situation. Most of the proposals are likely to suffer substantial substitution of subsidized demand for unsubsidized demand just as in the single-family proposals. With the breakdown in compartmentalization of housing credit, however, substitution is less likely to be concentrated in the housing sector than in the past. The extent to which an overall increase in housing credit has adverse effects on other sectors will depend on the general condition of the financial markets and future policy actions by the Federal Reserve Board. These factors cannot be predicted with any confidence.

AGENCY COMMENTS

As discussed in chapter 3, adjustments to this chapter were based on technical suggestions received from HUD and the Department of the Treasury during meetings with department officials.

CHAPTER 5

CONDITION OF THE FOREST PRODUCTS INDUSTRY: REDUCED DEMAND AND OTHER PROBLEMS

The demand for U.S. forest products has steadily declined since 1978. This reduced demand has resulted in hundreds of mills closing or curtailing operations and thousands of employees laid off in the West and South--the Nation's major forest products-producing areas. For example, employment in the West and South declined by more than 67,000 jobs, or 12 percent, between 1978 and 1981. 1/ The reduced demand has also led to less harvesting of timber on federally owned land, which translates into less revenues for Federal and local governments.

The principal cause of the reduced demand is the deep and prolonged decline in housing production. Another increasingly important cause of reduced demand has been the increasing U.S. market penetration of Canadian softwood lumber. The share of U.S. lumber consumption provided by Canada has risen from a cyclical low of 19 percent in 1975, when consumption was 30 billion board feet, to 30 percent in 1981, when consumption was 31 billion board feet. The reduction in overall wood volume in residential construction due to other changes, such as the mix between single-family and multi-family units, has also slightly reduced the demand for forest products. In addition to reduced demand, certain segments of the industry, particularly in the West, hold contracts to buy Federal timber at prices that are unprofitable in the current depressed market. In early August 1982, legislation was introduced in both the House and Senate to extend or modify these contracts.

The most obvious way to help the forest products industry is to increase housing production. Another proposal currently under consideration by an industry coalition is to seek a countervailing duty on lumber imports from Canada. A longer term solution, which could help somewhat, is an expansion of U.S. exports.

WHAT IS THE FOREST PRODUCTS INDUSTRY?

Timber in the United States is harvested and processed by the forest products industry for numerous products, such as lumber (softwood and hardwood), plywood (softwood and hardwood), panel products (particleboard, insulating board, and hardboard), pulpwood

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1/Unless noted otherwise, the sources of statistical data presented in this chapter are data bases maintained by DRI. The information for these data bases is drawn from numerous sources, such as the Western Wood Products Association, the American Plywood Association, "Random Lengths," the Bureau of Labor Statistics, and the Southern Forest Products Association.

(logs and chips), other industrial products (posts, poles, and pilings), and fuelwood. For purposes of this report, we focused on softwood lumber and softwood plywood since they are most closely related to the residential construction industry and are most subject to fluctuations in demand.

The forest products industry (softwood lumber and softwood plywood) is large and diversely owned. It is located broadly across the Nation, but with heavy concentration on the west coast of Oregon and Washington, in the inland region (eastern Oregon and Washington, northeastern California, Idaho, and Montana), and in the South (from east Texas and Oklahoma across to Florida and Virginia). No one company dominates the industry; the single largest lumber producer in North America represented only 6 percent of total production in 1980, while the single largest plywood producer controlled 19 percent of U.S. capacity in the same year.

Overall national statistics on lumber production, by firm, do not exist. A survey conducted by the magazine "Forest Industries" does, however, provide such data for much of the industry. The 1981 survey results, published in July 1982, showed that firms responding to the survey accounted for 85 percent of the estimated U.S. softwood and hardwood lumber production of 29.7 billion board feet. Table 23 shows the survey results for 1981.

Table 23

Number of U.S. Lumber Mills and Production, by Region, for 1981

Region	Number of mills	Production (billion board feet)
West	400	13.5
South	515	9.6
North and East	355	2.1
Total	1,270	25.2

The West is the leading producer of lumber even though the South has more mills. The survey also indicated that even though three large firms produce over 1 billion board feet per year, the industry has about 1,200 smaller firms in the United States with each firm producing 50 million board feet or less per year.

The plywood industry, as reported by the American Plywood Association, consisted in 1980 of 180 mills--111 in the West, 65 in the South, and 4 in the North. The majority of production, 54.2 percent of the 16.5 billion square feet, came from the West, while the South and North contributed 44.9 percent and 0.9 percent, respectively.

Employment estimates in the forest products industry are generally based on the "Employment and Earnings" report of the

Bureau of Labor Statistics. The information is reported under the industry category "Lumber and Wood Products." Industry unemployment was 13.4 percent and 12.6 percent in 1980 and 1981, respectively. During the first 6 months of 1982, seasonally adjusted unemployment averaged 16.4 percent. Table 24 shows yearly employment trends for the last 7 years, including 1975, when there was a housing slump and 1978, when there was a housing boom.

Table 24

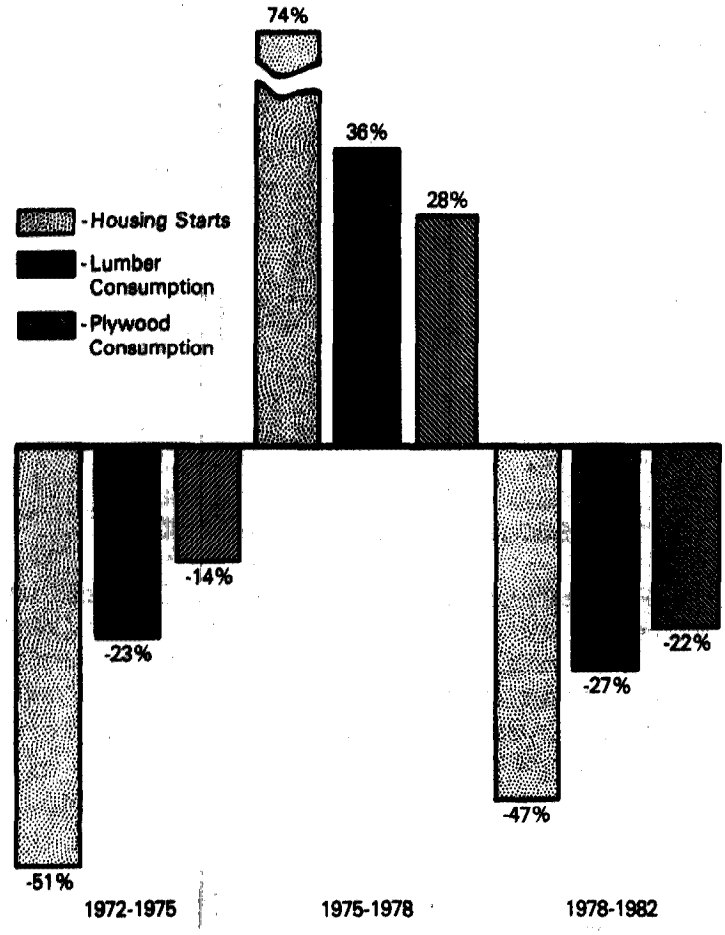
Lumber and Wood Products Employment--1975-81

Year	Total U.S. employees	Employees in West and South	
		Total	Percent of U.S. total
1975	613,000	455,000	74.2
1976	674,000	501,000	74.3
1977	717,000	533,000	74.3
1978	751,000	557,000	74.2
1979	760,000	563,000	74.1
1980	684,000	508,000	74.3
1981	660,000	490,000	74.2

The U.S. consumption of lumber and plywood over the last decade has been quite cyclical and corresponds to increases and decreases in housing starts. Figure 13 compares changes in lumber and plywood consumption with changes in housing starts during previous cycles. This shows that they move in close relationship with each other but consumption cycles are somewhat less extreme than those for housing starts.

FIGURE 13

HOUSING STARTS COMPARED TO LUMBER AND PLYWOOD CONSUMPTION – 1972-75, 1975-78, AND 1978-82



Source: Data Resources, Inc.

Table 25 shows that major swings in lumber and plywood consumption have primarily been affected by residential construction consumption not other consumption.

Table 25

Lumber and Plywood Residential Construction and Other Consumption--1972, 1975, 1978, and 1982

	1972	1975	1978	a/1982
Lumber consumption (billion board feet):				
Residential construction	19.0	10.9	18.5	8.8
Other	20.6	19.4	22.8	21.1
Total	39.6	30.3	41.3	b/30.0
Plywood consumption (billion square feet):				
Residential construction	10.1	6.1	10.2	5.1
Other	8.4	9.8	10.1	10.7
Total	18.5	15.9	20.3	15.8

a/ Estimated by Data Resources, Inc.

b/ Total does not add due to rounding.

PROBLEMS FACING THE FOREST PRODUCTS INDUSTRY

It is evident that the number one problem facing the forest products industry is reduced demand, principally due to the housing slump, but other causes of reduced demand have exacerbated the situation. In addition, certain segments of the industry hold unprofitable contracts to buy Federal timber.

Reduced production results in mill closures, unemployment, and lower Federal revenues

Between 1978 and 1981 production in the industry declined 27 percent for lumber and 16 percent for plywood. Further declines are projected for 1982. All sections of the country where lumber and plywood are principal industries are suffering from production declines and related employment losses. For example, major reductions in U.S. employment occurred in the West and South between 1978 and 1981, when employment declined 20 percent and 6 percent, respectively. Table 26, prepared from information obtained from the National Forest Products Association and the American Plywood Association, further illustrates the current problem by showing the number of softwood lumber and plywood mills, by major producing regions, in terms of mills which were either closed or had curtailed operations and the number of employees affected. About 52 percent of the softwood lumber mills and 63 percent of the plywood mills were either shut down or working reduced schedules.

Table 26

Lumber and Plywood Mills-- Closed, Curtailed, and Employees Affected

	Mills closed	Mills curtailed	Employees affected
Lumber industry:			
(week ended May 8, 1982)			
West	163	232	a/ 51,457
South	186	159	b/ 28,025
Plywood industry:			
(week ended May 22, 1982)			
West	42	33	a/ 7,025
South	13	27	a/ 3,731

a/Represents both laid-off employees and those employees working reduced schedules.

b/Represents only laid-off employees.

The reduced demand for lumber and plywood has also reduced the need to cut timber. Since timber purchased from Federal lands is not paid for until cut, Federal timber revenues have declined. Although the volume of national forest timber sold has been relatively constant over the last few years, the amount harvested has declined from 10.4 billion board feet in fiscal year 1979 to 8 billion board feet in fiscal year 1981. As a result, Forest Service timber receipts have declined from $1,149 million in fiscal year 1979 to $947 million in fiscal year 1981.

Because a portion of Forest Service timber revenues (25 percent) is returned to local governments in the States where timber is harvested, these governments are also suffering reduced revenues. Some local governments depend heavily on this income to finance local schools and roads. Local governments in the States of Oregon, California, Washington, Idaho, and Montana received 81 percent of total payments to States from national forest receipts in fiscal years 1979-81. Table 27 shows the receipts to these local governments, by selected State, since fiscal year 1979.

Table 27

Forest Service Timber Revenues to Local Governments, by Selected States--Fiscal Years 1979-81

State	Fiscal years 1979	1980	1981
	(millions)		
Oregon	$121	$ 99	$ 95
California	50	38	41
Washington	40	33	29
Idaho	14	10	9
Montana	9	8	8
Total	$234	$188	$182

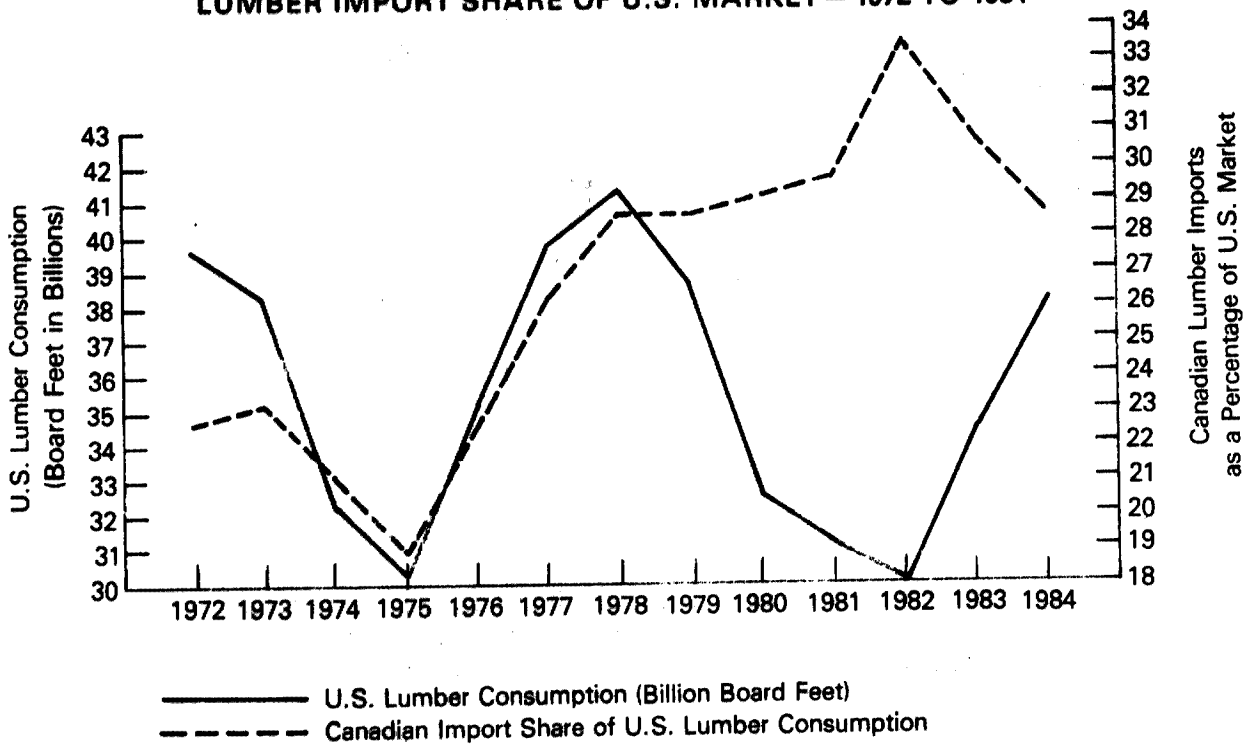
Canadian share of U.S. softwood lumber market has increased

Another reason for reduced demand for U.S. produced lumber (but not plywood) has been the increased penetration of Canadian softwood lumber in the U.S. market. Little softwood plywood is imported into the United States principally because a tariff is applied to it. The United States has long been a major consumer of Canadian softwood lumber. Canadian exports to the United States increased from 5.8 billion board feet in 1970 to 11.8 billion board feet in 1978 before dropping to 9.2 billion board feet in 1981. Although U.S. imports of Canadian lumber have decreased each of the last 3 years, the Canadian share of U.S. consumption rose from 19 percent in 1975 to 30 percent in 1981 and is expected to reach nearly 34 percent in 1982.

In the past, the Canadian share of U.S. lumber consumption decreased during cyclical slowdowns in U.S. consumption and increased during boom periods. As figure 14 shows, however, this trend changed after 1978 when U.S. consumption started a deep decline, but the Canadian share of the U.S. market kept increasing. DRI projects that this trend will peak in 1982. As U.S. consumption picks up beginning in 1983, the Canadian share is projected to begin declining, dropping to less than 29 percent by 1984.

FIGURE 14

U.S. LUMBER CONSUMPTION COMPARED WITH CANADIAN LUMBER IMPORT SHARE OF U.S. MARKET – 1972 TO 1984

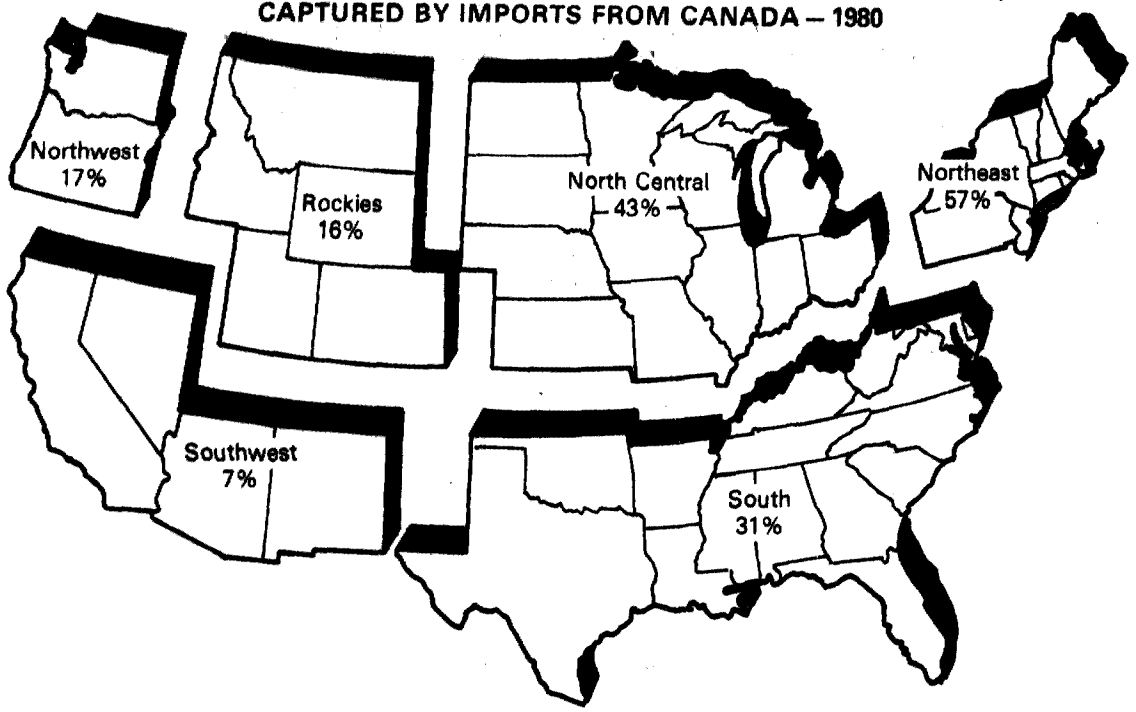


Source: Data Resources, Inc.

Imports of softwood lumber from Canada have captured substantial shares of the market in the Northeast, North Central, and Southern United States. The Canadian Province of British Columbia is the source of 84 percent of the lumber imported into the Southern States. Figure 15 shows the percentage of the U.S. softwood lumber market captured by imports from Canada.

FIGURE 15

PERCENTAGE OF U.S. SOFTWOOD LUMBER MARKET, BY REGION, CAPTURED BY IMPORTS FROM CANADA – 1980



Source: Economics, Statistics and Energy Department of the Council of Forest Industries of British Columbia, August 26, 1981.

At present, virtually no barriers to trade in softwood lumber exist between the United States and Canada. The two countries constitute a single market in which competition for sales of similar lumber size and grades is almost entirely by price. When demand for lumber is declining, as it has been since 1979, price competition is intense.

In its April 1982 report entitled "Conditions Relating to the Importation of Softwood Lumber Into the United States," the U.S. International Trade Commission stated that the primary reason for Canada's increasing market share is the lower cost of raw materials for Canadian lumber producers. Such factors as product differentiation, marketing and pricing policies, transportation costs, and tax policies appeared to have a less significant impact on the competitive posture of the industries in both countries. The depreciation of the Canadian dollar has also given Canadian lumber producers an advantage in pricing lumber for the U.S. market. The exchange rate of the U.S. dollar per the Canadian dollar has continued falling from close to parity in 1975-76 to about 0.78 as of July 1982.

In Canada, timber on public lands (93 percent of commercial timberland) is offered under license to private companies which generally pay an appraised price usually set by the individual

market values at the time of sale or at competively bid prices. According to the April 1982 U.S. International Trade Commission study, the 1981 average price for stumpage in coastal British Columbia was about one-sixth the comparable U.S. Forest Service price in western Oregon and Washington: $18 per thousand board feet versus $118. In better market years, such as 1979, British Columbian prices were roughly half of comparable U.S. prices.

Other changes have reduced consumption for residential construction

The actual consumption of, or demand for, forest products in residential construction is highly dependent upon the housing mix (single-family or multifamily), size of unit, and wood content. Changes in these variables have resulted in overall declines in consumption since 1976. The use of lumber and plywood in single-family and multifamily residential construction illustrates the impact these changes have had since the mid-1970's.

For example, since 1976 the mix of housing has changed from 76 percent single-family/24 percent multifamily to a 65/35 mix in 1981. 1/ During the same period, the number of board feet of lumber per square foot used in such housing declined from 6.32 for single-family and 4.47 for multifamily in 1976 to 5.8 and 4.07, respectively, in 1981. These declines resulted from more efficient use of wood and some slight substitution. Unit size has not changed dramatically--single-family units are slightly smaller and multifamily units are slightly larger. When these other changes are combined with 452,000 fewer housing starts in 1981 than in 1976, total lumber consumption for single-family and multifamily residential construction has declined about 5.2 billion board feet, or a 37.3 percent decrease, since 1976.

Although over one-half of the decline is directly related to the 452,000 decrease in total housing starts (456,000 decline in single-family and 4,000 increase in multifamily), the other changes have had a marked impact on consumption. For example, if the United States had the same total number of housing starts in 1981 as in 1976, but the housing mix, size of unit, and wood content were based on 1981 factors, there would still be a 2.2 billion board feet decrease in lumber consumption from the 1976 level--enough lumber to build 223,000 single-family houses in 1981. The same trend holds true to a lesser degree for plywood consumption. Since 1976 plywood consumption for single-family and multifamily residential construction has declined 2.3 billion square feet, or a 29.6 percent decrease.

1/DRI defines single-family as one unit and multifamily as two or more units.

High-priced Federal timber under contract cannot be profitably harvested--legislative relief sought

The Forest Service sells national forest timber under competitive bidding procedures to the highest bidder. The successful bidder enters into a contract with the Forest Service to pay for the standing timber when cut within a specified time period, typically 3 to 5 years. During the 1970's when lumber prices were escalating, purchasers began to bid high prices for national forest timber in anticipation of future price increases, and they delayed harvesting as long as possible so as to maximize their profits. Prices bid for the timber, especially on the longer term contracts, often substantially exceeded the value of the timber at the time as lumber or other finished products. In effect, the buyers were speculating on the basis of their expectations that prices would continue to rise.

A March 1982 Forest Service study of national forest timber sales contracts in Oregon, Washington, northern California, northern Idaho, and western Montana showed that 66 percent of 15.8 billion board feet of sold timber analyzed could not have been profitably harvested under market conditions at the time. The Forest Service concluded that some sales had been bid so high--particularly in northern California, western Oregon, and to a lesser degree Washington--that they could not be harvested profitably even under the best markets ever experienced. The Forest Service also believes that requiring purchasers to harvest under these contracts could lead to wholesale defaults and subsequent bankruptcies. Under these circumstances, it is likely that only a portion of the purchasers' contractual liabilities would be collected on defaulted timber sales.

The Forest Service has not made similar reviews for other sections of the country, but discussions with Forest Service officials in the Southern region indicated that the volume of unprofitable timber sales contracts in the South is small, and the price of the timber is generally considerably less than in the West. The total volume of sold but uncut timber in the Southern region is about 2 billion board feet, whereas in the Western regions the volume is about 28 billion board feet. The highest priced timber in the South is around $300 per thousand board feet, whereas in the West some timber was sold in excess of $750 per thousand board feet.

Segments of the forest products industry, particularly in the West, are attempting to seek legislative relief to extend or modify the high-priced timber sales contracts. In early August 1982, companion bills H.R. 6913 and S. 2805 were introduced in the House and Senate to allow for the termination of an unspecified portion of the volume of a purchaser's contracts and for up to a 5-year extension of the remainder.

Prior to this legislation's introduction, industry proposals had specified that up to 40 percent of the volume of a purchaser's

contracts could be terminated. A May 1982 Forest Service analysis of this 40-percent termination provision showed that a probable 8.6 billion board feet of timber sales volume would be terminated. The Forest Service estimates that the theoretical net loss in Federal Government revenues from the terminations over the next 5 to 7 years, after allowing for resale at present values and assuming eventual collection of all contractual liabilities, to be $1.3 billion. The Congressional Research Service in another analysis of the same 40-percent termination provision calculated a revenue loss similar to the Forest Service estimate. Its May 1982 report stated that if 50 percent of the timber's value under contract were canceled, $2.3 billion worth of timber would be affected. On resale, before considering administrative costs, revenue losses of up to $1.3 billion or more might occur. It is not clear what revenue loss might result from other alternative actions, such as granting contract extensions or allowing purchasers to default and pursuing court action.

PROPOSALS TO INCREASE DEMAND FOR U.S. FOREST PRODUCTS

Increased housing production is the one major proposal that will aid the industry in the short-term by creating an immediate increased demand for forest products. Another proposal currently under consideration by an industry coalition is to seek a countervailing duty on imports of Canadian lumber. A longer term solution, which could help somewhat, is an expansion of U.S. exports.

Increased housing starts will stimulate production in the industry

The short-term solution most often mentioned to ease the industry's lack of demand is to increase housing starts. Through such an increase, the forest products industry would realize some immediate benefits of production and employment increases; but the U.S. consumer would face rising forest product prices. The magnitude of the increases are dependent upon the number of increased housing starts.

To illustrate the impact which increased housing starts would have on forest products consumption, production, prices, and employment, we had DRI project these impacts using its FORSIM (Forest Simulation) model. 1/ The projections were based on various increased levels of housing starts for the period 1982 (beginning in the fourth quarter) through 1984. The macro assumptions used in the FORSIM control forecast were taken from the June 1982

1/The FORSIM model is one of two econometric models currently available to analyze and project overall trends in the forest products industry. The other model is the Forest Service's Timber Assessment Market Model.

macro control forecast for the U.S. economy. The control forecast projected that housing starts (seasonally adjusted annual rate in millions of units) would be 1.07 in 1982, 1.37 in 1983, and 1.62 in 1984.

Compared to the control forecast, the simulations indicated that increased housing starts would have immediate impacts on the forest products industry in 1982. Full impacts do not become evident until 1983 and 1984, with the 1983 impacts being greater, except for prices, than those projected for 1984.

Four different levels of increased total housing starts were used--50,000, 100,000, 150,000, and 200,000 (seasonally adjusted annual rates). The mix between single-family and multifamily starts was varied to reflect the ratio of single-family starts to total starts defined in the control forecast. This ratio was 62.6 percent in 1982, 64.5 percent in 1983, and 67.3 percent in 1984. For example, in 1983, 64,500 of the 100,000 total increased housing starts were assumed to be single-family starts.

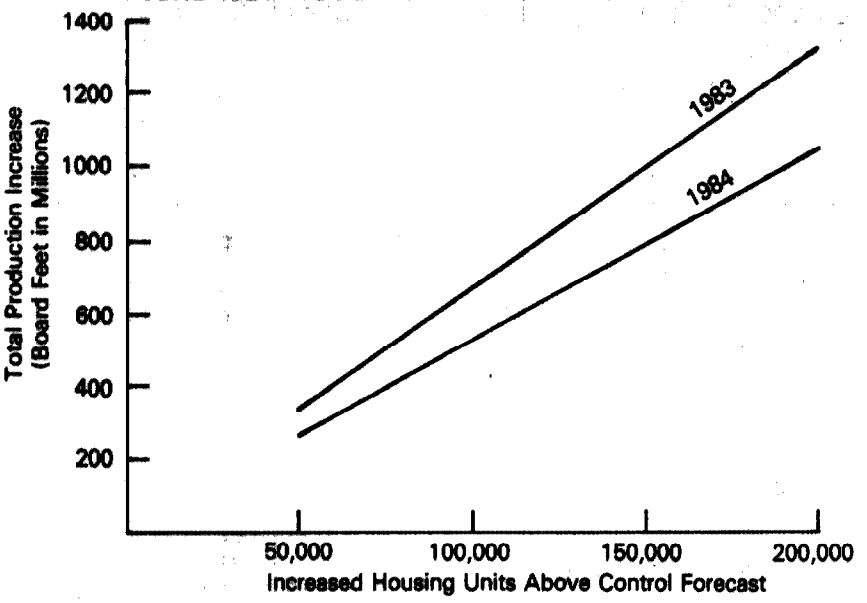
The simulations showed that by increasing housing starts, forest products consumption, production, prices, and employment in the United States are increased. Canadian lumber imported into the United States also increases under the simulations. For example, in 1983 the simulations projected that for each increment of 50,000 total housing starts (32,250 single-family and 17,750 multifamily), U.S. production of lumber and plywood would increase 340 million board feet and 190 million square feet, respectively. Imports of Canadian lumber would increase by 80 million board feet. In 1984, the same increases in housing starts produce smaller results due to price increases dampening demand, some material substitution, and some inventory reductions.

Although the simulations indicated that as housing starts are increased, production, prices, and employment also increase, these increases are rather small for each 50,000-unit increase in total starts. The percentage increases in 1983 range from 1 to 2 percent for production and price impacts to less than 1 percent for employment impacts. Therefore, to obtain a 4- to 5-percent increase in 1983 U.S. lumber and plywood production, total U.S. housing starts would have to increase about 200,000 units. Such an increase would result in almost a 3-percent increase in U.S. Western and Southern employment and a 7- to 8-percent increase in selected lumber and plywood product prices.

Figures 16, 17, 18, and 19 depict the 1983 and 1984 production, employment, and price impacts resulting from varying levels of housing starts.

FIGURE 16

LUMBER PRODUCTION INCREASES RESULTING FROM INCREASED HOUSING STARTS – 1983 AND 1984

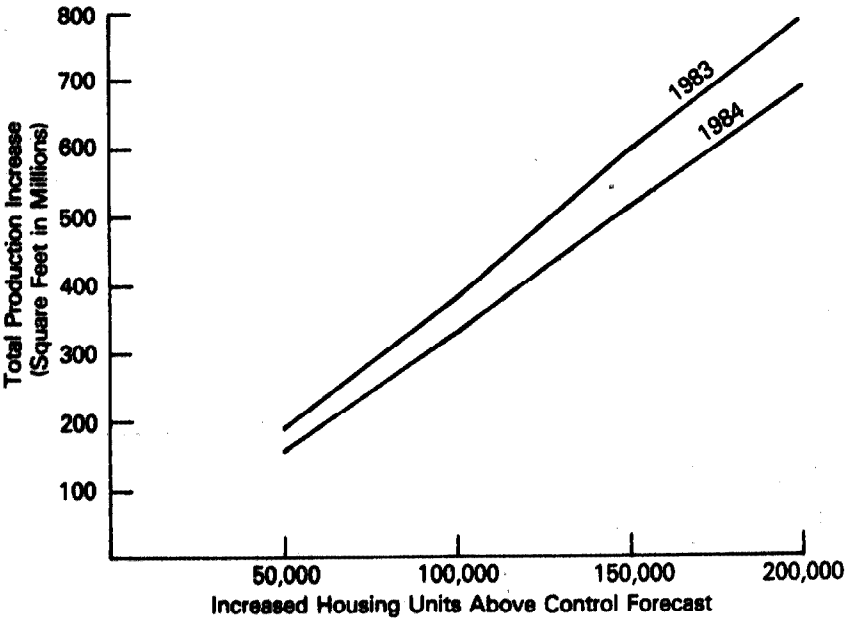


Control Forecast:
1983 – 25.75 Billion Board Feet
1984 – 28.85 Billion Board Feet

Source: Data Resources, Inc.

FIGURE 17

PLYWOOD PRODUCTION INCREASES RESULTING FROM INCREASED HOUSING STARTS – 1983 AND 1984

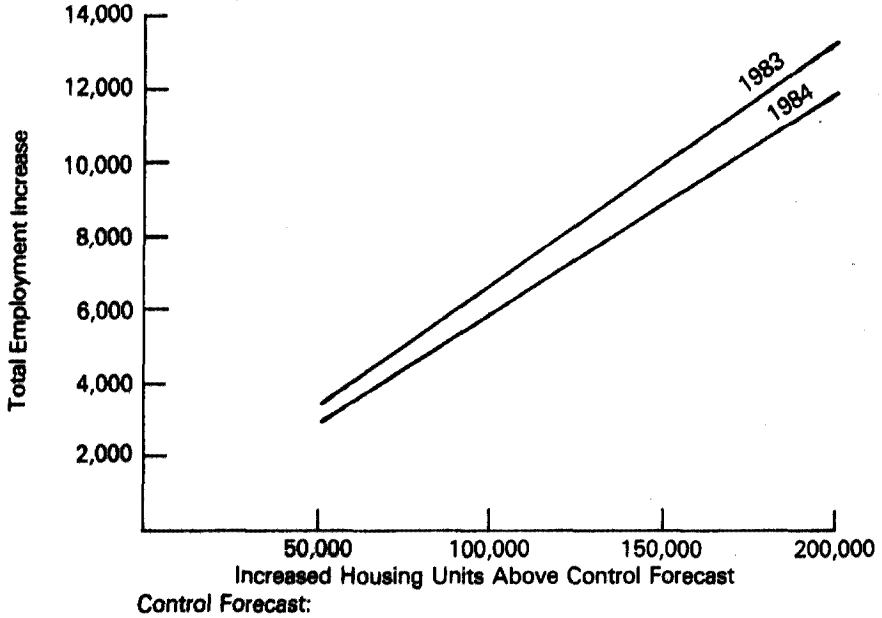


Control Forecast:
1983 – 17.90 Billion Square Feet
1984 – 18.78 Billion Square Feet

Source: Data Resources, Inc.

FIGURE 18

U.S. SOUTHERN AND WESTERN EMPLOYMENT INCREASES RESULTING FROM INCREASED HOUSING STARTS – 1983 AND 1984



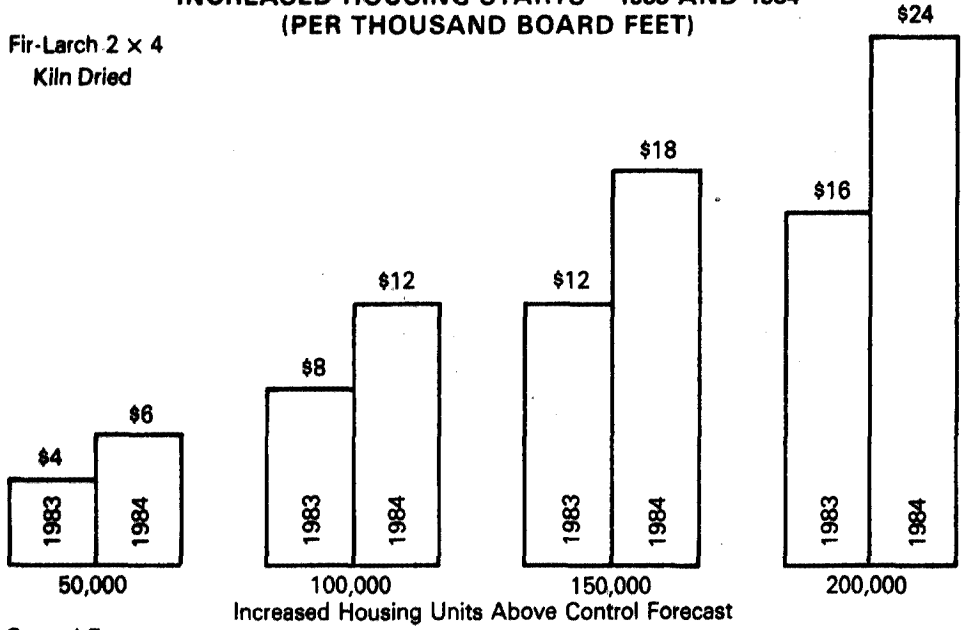
Control Forecast:
1983 – 516,100
1984 – 552,700

Source: Data Resources, Inc.

FIGURE 19

SELECTED LUMBER PRICE INCREASES RESULTING FROM INCREASED HOUSING STARTS – 1983 AND 1984 (PER THOUSAND BOARD FEET)

Fir-Larch 2 x 4
Kiln Dried



Control Forecast:
1983 – $230 Per Thousand Board Feet
1984 – $313 Per Thousand Board Feet

Source: Data Resources, Inc.

U.S. industry coalition may seek a countervailing duty on lumber imports from Canada

In the past, U.S. lumber producers have often suggested the need for protectionist trade barriers against lumber imports from Canada, but no action was ever taken. However, the U.S. producers have now become much more concerned about the expansion of the Canadian share of the U.S. lumber market. At the time of our review, forest products interests were putting together an industrywide coalition to petition for a countervailing duty on Canadian softwood lumber imports. The industry coalition plans to petition for such a duty under the procedures contained in the Trade Agreements Act of 1979 (19 U.S.C. 1671a), which amended the Tariff Act of 1930. Under this provision, an interested party (the softwood lumber industry coalition in this case) can file a petition alleging that the industry has been materially injured by a subsidy provided to foreign competitors. The petition is simultaneously filed with Department of Commerce's International Trade Administration and the U.S. International Trade Commission. The International Trade Administration will determine if Canada is providing, directly or indirectly, a subsidy with respect to the manufacture, production, or exportation of softwood lumber into the United States. The U.S. International Trade Commission will determine if the U.S. softwood lumber industry is materially injured or is threatened with material injury by reason of the imports of softwood lumber. If the determinations are made favorable to the U.S. industry coalition, an interim countervailing duty could be assessed as early as 85 days or up to 150 days after the petition is filed.

Because softwood lumber imports from Canada account for so large a fraction of U.S. consumption, raising trade barriers would likely have significant forest products consumption, production, price, and employment effects both in the United States and Canada. An understanding of the potential effects of trade barriers would provide insights into the functioning of the U.S. and Canadian lumber markets and could prove useful in any future evaluations concerning trade barriers. To simulate the potential effects, we again had DRI perform the projections using its FORSIM model. Trade restrictions normally take the form of either a tariff/duty or quota. To simplify our analysis and discussion, we chose a quota scenario to illustrate the potential impact of one form of trade barrier. We assumed the imposition of a quota on Canadian lumber imports equal to 20 percent of U.S. lumber consumption (rather than the forecasted levels, which ranged from 34 percent in 1982 to 29 percent in 1984). Implementing a quota on Canadian lumber imports into the United States would also affect the distribution of market shares in other international markets. To account for the impact of the U.S. quota on these international markets, we further assumed that Canadian producers would prove to be substantially more competitive in both Canadian domestic and overseas markets. Consequently, U.S. exports to Canada and other countries were reduced by 50 percent from the forecasted levels.

The simulation was run from the third quarter of 1982 through 1984. During this period, the reduction in Canadian imports is immediately reflected in higher U.S. lumber production, prices, and employment. The simulated impacts are shown in table 28.

Table 28

Simulated Impacts Resulting from a Quota on Canadian Lumber Imports 1983-84

	1983		1984	
	Amount	Percentage increase	Amount	Percentage increase
U.S. lumber production (million board feet)	2,760	10.7	2,010	7.0
Employment: (number of employees)				
West	10,800	5.0	7,700	3.3
South	12,700	4.2	9,900	3.1
Total	23,500	4.6	17,600	3.2
Prices: (dollars per thousand board feet)				
Fir-larch 2x4, kiln dried	$23	10.0	$22	7.0
Southern pine 2x4, kiln dried	$25	10.6	$24	7.6

Canadian shipments of lumber to the U.S. would be 3.8 billion board feet lower in 1983 and 3.3 billion board feet lower in 1984. The drop in Canadian lumber imports is greater than the increase in U.S. production for two reasons: (1) the loss of U.S. overseas export markets allows U.S. production to be channeled into the United States that would otherwise have gone overseas and (2) mill and dealer inventories would be reduced to lower levels to meet higher consumption.

On a regional basis, production levels would increase about 10 percent above forecasted levels in 1983 in each region. By 1984, the West would show slightly greater production increases over forecasted levels than the inland and Southern regions. This

reflects the greater slack currently prevailing in the West which will allow for a larger pickup in production during any recovery.

A positive benefit of the Canadian quota would be increased U.S. forest products employment. The simulation estimates that employment in the Western and Southern regions would increase about 5 percent in 1983 and about 3 percent in 1984. The gain in Western employment would outpace that for the South, particularly in 1983, and Oregon and Washington in particular would register strong gains.

With Canadian competition curbed and a higher demand on U.S. mills, lumber prices would also increase. The simulation shows lumber prices would be 10 to 12 percent higher in 1983 and 7 to 8 percent higher in 1984 than forecasted levels. The full price impacts of a Canadian quota would not be felt until 1985 and 1986, however. Under the simulation, by 1984 U.S. mills will be operating at over 92 percent of capacity--the highest level since 1973. If housing were to recover to higher levels in 1985 and other end-use markets showed a healthy recovery, then product prices would escalate rapidly and could have some inflationary impacts on the construction industry and other sectors of the U.S. economy.

The long-run implications of restricting imports were not evident in this short-run scenario. Some of the longer run impacts from the continued implementation of an import restriction policy were projected to be

--higher U.S. product prices leading to reduced lumber demand as material substitution takes place,

--higher timber prices and faster harvest of domestic timber reserves,

--increased investment in new capacity,

--increased competition in international markets, and

--international repercussions for free trade policies.

Canadian lumber needed during heavy demand periods

While Canada is heavily dependent upon the United States as a purchaser of its lumber, the United States, in turn, relies on Canada to provide the lumber needed in all but the worst years to meet U.S. demand. In good years, U.S. lumber production capacity is insufficient to meet U.S. demand. For example, in 1978 when U.S. lumber consumption was at 41.3 billion board feet (a record high), total U.S. productive capacity was only 34.2 billion board feet--a 7.1 billion board foot shortfall. In strong markets, the lack of Canadian lumber would prove to be a burden on U.S. consumers in terms of higher prices, higher general inflation, and supply shortages.

Increased exports--industry and the Federal Government predict great potential for U.S. producers

The forest products industry, with the National Forest Products Association 1/ as its spokesman, and the Federal Government believe the United States has great potential to increase future exports of wood products. 2/ Japan is the largest market for U.S. wood products, with imports from the United States totaling nearly $1.3 billion in 1981. Other major markets for U.S. exports are West Germany, the People's Republic of China, Italy, Belgium, Mexico, Korea, the United Kingdom, Australia, and Sweden. The industry estimates that exports could almost double from $3.7 billion in 1980 to over $7 billion (using constant 1980 dollars) by the end of this decade. Expanding exports is a promising long-term solution to increase somewhat the overall demand for forest products.

Although the United States has only the third largest forest acreage in the world, behind the Soviet Union and Canada, it far surpasses both of these nations in terms of forest productivity--growth of wood per acre per year. In addition, this production advantage, according to industry estimates, may even improve in the future. These estimates indicate that the Soviet Union and Canada face production cost increases because they must now develop new and more costly forest areas to increase production. Furthermore, the estimates also indicate that Scandanavia, the major supplier to Europe, is reaching the limits of its sustainable wood production.

Industry points out, however, that an increase in exports, to have a lasting impact, must be on a sustained basis. The United States must demonstrate that it can function as a reliable supplier to world markets. It cannot "dump" wood products during periods of low U.S. domestic demand and expect to win over a lasting share of the world market. Industry believes that through increased sustained demand of the export market, risk is decreased, investment return is improved, employment is stabilized, and wide swings in price are reduced.

The Federal Government also believes that a strong potential exists for the export of solid wood products. As a result of new

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1/The National Forest Products Association is a federation of 31 forest industry associations in addition to direct company members. Through its membership, it represents more than 2,500 companies engaged in timber growing and the manufacture and marketing of a wide variety of forest products.

2/Wood products is defined by the industry as softwood and hardwood lumber and plywood, logs and chips, veneer, particleboard, and other solid wood products. Pulp and paper products are excluded.

emphasis placed on forestry products when the Agricultural Trade Act of 1978 was passed, the U.S. Department of Agriculture's Foreign Agricultural Service signed an export market development agreement with the National Forest Products Association. Furthermore, the Agriculture and Food Act of 1981 mandated the implementation of a full-scale program for forestry products, including commodity information, trade policy, and market development activities. In April 1982, a separate Forest Products Commodity Division was established for the first time in the Foreign Agricultural Service to promote the export of forest products. The objectives of this division are to assist the forest products industry in its overseas market development efforts, provide information on the potential of export markets, aid in resolving foreign trade barriers, and help provide export credits for the industry. This is a long-run program designed to create additional overseas demand for U.S. forest products.

To illustrate the potential effects of increased exports of softwood lumber and plywood on domestic consumption and production, we had the Forest Service simulate the impacts of a doubling of softwood lumber and plywood exports over the levels the Forest Service has forecasted for each of the years 1982 through 1984. 1/ The Forest Service was unable to project employment impacts.

Compared to the forecasted levels, the simulation showed that a doubling of softwood lumber and plywood exports would increase domestic production, but not by the full amount of the increase in exports because domestic consumption would be reduced and imports (primarily from Canada) would increase. Table 29 shows the extent of these changes during 1983 and 1984.

1/The Forest Service used its Timber Assessment Market Model.

Table 29

Simulated Impacts Resulting from a Doubling of U.S. Lumber and Plywood Exports--1983-84

	Lumber		Plywood	
	1983	1984	1983	1984
	(million board feet)		(million square feet)	
Simulated impacts:				
Increased domestic production	652	716	470	493
Decreased domestic consumption	389	203	215	222
Increased Canadian imports	397	543	-	-
Total increase in U.S. exports	1,438	1,462	685	715

The doubling of softwood lumber and plywood exports represents an increase in demand for these products which leads to price increases. The drop in domestic consumption of softwood lumber and plywood results from the price increases. Also, as prices increase, more lumber would be imported into the United States from Canada.

On balance, the doubling of softwood lumber and plywood exports would have a small but positive impact on lumber and plywood producers, but domestic consumers of lumber and plywood would face higher prices and, as a result, would reduce their consumption. Regionally, the simulation showed that the increased lumber production would come almost equally from the major Western and Southern producing regions while the increased plywood production would come principally from the West.

Increased exports may have the potential, over the longer term, to increase the overall demand for lumber and plywood and to reduce somewhat the cyclical instability of the industry. In the short run, however, the condition of the forest products industry is linked very closely to the condition of the homebuilding industry. And homebuilding, in turn, is dependent primarily on the overall state of the economy and particularly on the cost and availability of long-term credit.

CONCLUSIONS

The U.S. forest products industry is experiencing a reduced demand for its products, which, in turn, lowers the industry's production and employment. The slump in housing construction

activity is the major cause for much of the reduced demand. Increasing U.S. market penetration from Canadian lumber imports and the overall reduction of wood volume used in residential construction are other causes affecting U.S. demand. In the short term, an increase in housing starts was the solution most often mentioned to address the current plight facing the industry. Our simulations projected that a 200,000 increase in total 1983 housing starts would result in a 4- to 5-percent increase in U.S. lumber and plywood production, almost a 3-percent increase in U.S. West and South employment, and price increases of 7 to 8 percent.

Other proposals aimed at increasing the demand for U.S. products are the U.S. industry coalition's consideration of seeking a countervailing duty on imports of Canadian lumber and the potential expansion of U.S. wood exports. Although our illustrative simulation projected positive production and employment impacts resulting from a quota on imports of Canadian lumber, there are a number of drawbacks, such as higher prices, supply shortages in peak or strong markets, higher inflation, and possible international repercussions for free trade policies. Our simulations also projected positive, but smaller, impacts resulting from a doubling of U.S. exports of wood products. We believe, however, that it would be very difficult for the United States to restrict imports and expand exports at the same time. If U.S. imports of Canadian lumber are restricted, the Canadian share of the international export market would probably increase. U.S. producers, on the other hand, would face much stiffer competition in this international market since Canada would probably be the low-cost producer.

AGENCY COMMENTS

A draft of this chapter was provided to the Secretary of Agriculture for review and comment. Because of the tight time frames for issuance of this report, meetings were held with officials from the Forest Service's Timber Management Division and the Foreign Agricultural Service's Forest Products Commodity Division to obtain technical review comments. Overall, the officials believed that the chapter accurately characterized the current problems facing the forest products industry.

CHAPTER 6

MORTGAGE FINANCE AND THE REVIVAL OF THE HOUSING INDUSTRY

If the Nation's housing industry is to revive, funds needed to finance additional single- and multifamily housing starts must be made available through the Nation's credit markets. In assessing the ability of the present system of mortgage finance to support or to help bring about revival of the housing industry, we determined that:

--Despite the financial problems of the thrift industry, the system of mortgage finance as it exists today could supply the funds needed to finance a revival of the housing industry.

--Since the primary problem with mortgage demand is affordability, there appear to be no changes in mortgage instruments or in institutional arrangements that, taken by themselves, would substantially increase housing demand.

--Special efforts to revive housing will tend to divert credit from other housing lending activities or for lending in other interest-rate-sensitive sectors of the economy.

The sections which follow identify more precisely the relationship between mortgage finance and the revival of the housing industry. Although the following discussion refers to some of the recent developments in the mortgage finance sector, we have made no attempt to provide a detailed description of all the changes which have taken place. 1/

OVERVIEW OF THE MORTGAGE MARKET

As was indicated in chapter 2, the mortgage market is one of the largest and most important components of the U.S. capital market. At the end of 1981, residential mortgage loans outstanding by all lenders (including those for farm residences) amounted to about $1.2 trillion--an amount greater than the U.S. debt subject to statutory limitation and almost 2-1/2 times the outstanding corporate bond issues financed in U.S. credit markets. About 88 percent of the residential debt outstanding represents mortgages on single-family structures.

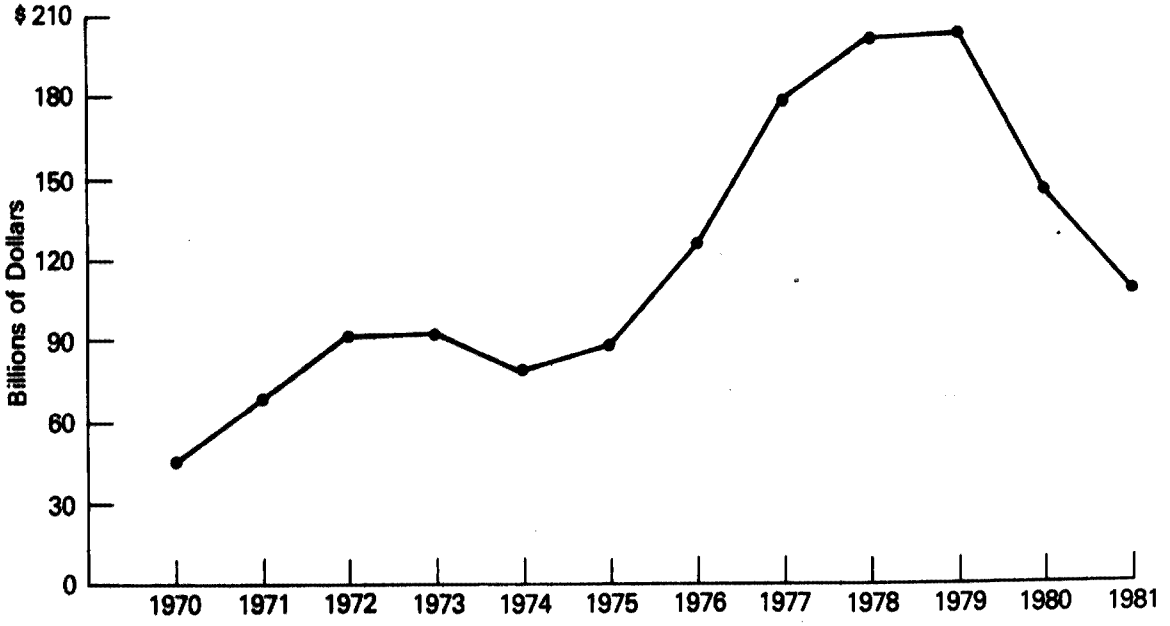
1/For such a discussion, see chapter 2 of this report and section III of "The Report of the President's Commission on Housing," April 29, 1982.

Residential mortgage activity (in absolute dollars) rose dramatically during the 1970's in relation to the GNP and gross investment in residential strutures. For example, from 1975 to 1979, the annual net increase in mortgages almost tripled while the GNP increased less than 60 percent. During this time of increasing inflation, rising property values, and a high volume of new home construction, the annual amount of net new mortgage lending grew to absorb up to 31 percent of all funds raised in U.S. credit markets and to account for the equivalent of more than 5 percent of the GNP. The annual net increase in mortgages also exceeded the annual gross investment in housing during the latter part of the period from 1975 to 1979. However, mortgage lending has declined considerably since 1979, when nominal and real interest rates soared, appreciation of housing prices slowed, the economy entered a recession, and the real after-tax cost of housing rose rapidly.

Cyclical factors that affect housing starts also affect mortgage activity. Figure 20 shows the level of mortgage originations from 1970 through 1981.

FIGURE 20

ANNUAL MORTGAGE ORIGINATIONS FOR RESIDENCES BY ALL LENDERS



Source: Data obtained from HUD's "Survey of Mortgage Lending Activity."

Figure 20 depicts the fact that mortgage originations financed during the recession year of 1974 declined by 14 percent from the previous year. During the recessionary period since 1979, there has also been a sharp reduction in mortgage lending. The $108.9 billion in mortgages originated in 1981 was 26 percent below the level of the previous year and almost half the record $202.3 billion level of 1979. The drop in the level of mortgage activity since 1979 is more severe than in any recession since World War II. The cyclical nature of mortgage finance and housing starts is to be expected, however, since housing is both sensitive to interest rates and dependent on credit availability.

THE PRESENT MORTGAGE FINANCE SYSTEM COULD SATISFY A HIGHER LEVEL OF EFFECTIVE DEMAND

Most of the proposed programs we have discussed as ways to revive the homebuilding industry assume private-sector, long-term mortgage financing for all of the housing units constructed under them. The mechanism whereby the private-sector participation is obtained varies, however, with the program. In the permanent interest reduction program for homeowners, for example, GNMA commits itself to purchasing all mortgages made under the program. Although GNMA's intention would be to discount the mortgages it acquires and sell them in the secondary market (this is the assumption used in the chapter 3 evaluation of the program), the scale of the program does not depend upon such secondary market sales. If GNMA is unable to sell the mortgages it acquires, or if it chooses to hold them until a later date when interest rates are expected to be lower, the size of the Federal deficit rises to finance the unsold mortgages. On the other hand, a tax credit program for home buyers depends entirely upon home purchasers arranging their own private-sector financing.

To the extent that any special housing program results in a net increase in housing starts, the overall level of private-sector mortgage financing associated with housing activity would also be expected to increase. The relationship between net new starts and net increase in the level of outstanding mortgage commitments depends upon such factors as the timing of construction, price of the new units, mortgage terms, and net effect on sales of existing homes. In terms of magnitude, net additional units constructed as a result of a special program to revive housing might require about $50,000 in additional mortgage funds for each such unit--or approximately $5 billion for every 100,000 units. 1/ Applying this rough estimate of mortgage need, Federal programs to stimulate

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1/In 1981, the average mortgage on newly constructed, unsubsidized homes was about $65,000. A $50,000 estimate assumes that special programs would be income targeted and would include single- and multifamily structures and mobile homes.

housing would appear to involve an increased demand for mortgages of no more than about 15 percent over what might otherwise be expected for the years 1983 and 1984, even if the economy performs very poorly during this period. 1/

When compared to levels of mortgage finance that were achieved in the 1970's, it would appear that there would be little problem in financing additional mortgages associated with efforts to revive the housing industry even if all of the requirements were to fall in one year. However, rapid institutional changes in the mortgage finance system and changes in the overall economic environment raise questions about how successful special Federal programs could be in directing additional funds into mortgage finance. Institutional factors that might have a bearing on the success of programs to revive housing are discussed in the remainder of this section; economic matters are discussed in the concluding section of the chapter.

Chapter 2 mentioned that inflation and accompanying high interest rates have been largely responsible for forcing changes in the financial environment of the housing market. Financial institutions and techniques which have served housing for a long time are undergoing some fundamental changes. Even though times have changed and the roles of various participants have shifted, it appears that the system in place today is capable of providing the mortgages associated with at least a modest revival in housing, whether the revival occurs as a result of changes in the economy as a whole or as a result of special stimulus programs.

Savings and loan associations and mutual savings banks hold about half of all home mortgages in the country and have been among the institutions hit hardest by the economic downturn and the unexpected rise in interest rates that occurred beginning in 1979. Due to the disparity between earnings derived from long-term, low-yielding mortgages and higher rates of interest that had to be paid on deposits, many of these thrift institutions are suffering losses. The net worth of the savings and loan industry fell almost 15 percent in 1981, and a loss of about the same magnitude

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1/Under its recovery scenario, DRI is forecasting net mortgage financing levels of about $60 billion and $70 billion for 1983 and 1984, respectively, for a total of $130 billion. For its stagflation scenario, DRI expects the net level of mortgage activity to be close to half of the recovery scenario amount. A stimulus program that resulted in a net increase of 200,000 housing starts (twice the magnitude of most situations modeled in chapter 3) would thus require about a 15-percent increase in net mortgage lending for 1983 and 1984 in the stagflation scenario and less than an 8-percent increase in the recovery scenario if the program resulted in an increased mortgage demand of $10 billion during the 1983 to 1984 period. The net demand over the whole period would be somewhat lower if the effect of the program were simply to shift financing needs forward from 1984.

is expected for 1982. Thrift industry losses should not, however, result in supply constraints on mortgage financing other than those associated with the overall macroeconomic environment.

One reason why thrift industry losses should not result in special constraints on the supply of mortgage funds is that thrifts still have the capability to play a significant, albeit changed role in housing finance. Thrifts continue to maintain a large positive cash flow with which to acquire additional mortgages, mortgage-backed securities, and other assets. In 1981 thrift institutions increased their assets by $38 billion, $13.3 billion of which represented a net increase in home mortgages. 1/ The thrifts' share of net mortgage financing is down considerably from previous years (it averaged about 50 percent during the 1970's), but there are strong tax and competitive incentives for thrifts to continue to finance housing. As portfolios become more diversified and new mortgage instruments become more accepted, the thrifts' share in financing mortgages might increase once again. 2/ The continued presence of thrifts in housing finance is illustrated by the relatively small decline which has occurred in the percentage of thrift-originated mortgages, many of which are then sold in secondary markets. (See figure 21 on the following page.)

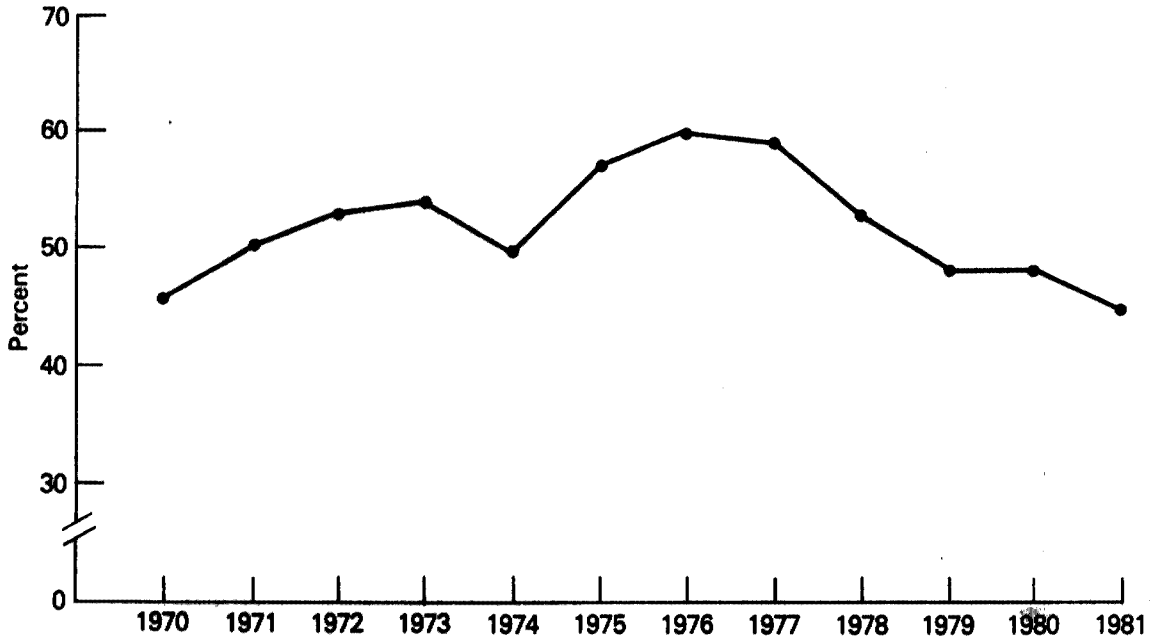
A second reason to believe that there should be no institutional constraint on the supply of mortgage funds to finance a recovery of housing is the efficiency of the mortgage market itself. There is now such diverse institutional participation in the mortgage market that increased numbers of purchasers seeking mortgages in today's environment can get them if they can pay competitive rates.

1/The $13.3 billion does not include purchase of mortgage-backed securities. The Federal Reserve flow of funds series does not indicate ownership of these securities. Statistics from the Federal Home Loan Bank Board, however, indicate that savings and loan institutions increased their net holdings of mortgage-backed securities by about $6 billion in 1981.

2/The extent to which thrift institutions will participate in mortgage financing, whether directly by holding mortgages or indirectly by holding mortgage-backed securities, is uncertain. Some participants in GAO's symposium on mortgage finance expected thrifts to be concentrating on efforts to restructure their portfolios in the near term, given the balance sheet strains faced by the industry.

FIGURE 21

PERCENTAGE OF RESIDENTIAL MORTGAGES ORIGINATED BY THRIFT INSTITUTIONS



Source: Data obtained from HUD's "Survey of Mortgage Lending Activity."

The ability of nonthrift lenders, and capital markets generally to meet residential mortgage demand is illustrated in the period from 1975 to 1979, when the amount of net mortgage lending increased sharply. In 1975 the net increase in mortgage lending was $41.4 billion. By 1979 the level had risen sharply to $120.2 billion. Of the increase of almost $80 billion in mortgage financing that occurred during this period, almost 80 percent was accounted for by commercial banks, mortgage pools, U.S. sponsored credit agencies, and other nonthrift institutions. 1/ Advances from Federal home loan banks, which involved funds borrowed from capital markets, also figured prominently in thrift mortgage lending in 1979.

1/Thrift institutions participated to some extent in mortgage pools, but statistics on mortgage pool participation are not available from the Federal Reserve flow of funds tables from which these statistics are derived.

At our symposium on housing finance, participants generally agreed that the present institutional structure for originating and financing mortgages could accommodate increased effective demand at least to a level consistent with construction of 1.5 million new housing starts per year. We see no reason to disagree with this assessment. Exact estimates of how many new units could be financed without further changes in the way mortgages are financed cannot be made because the amount of mortgage funds that would be demanded at a given level for new construction depends upon the average price of the units, the net new financing on housing resales, the amount of borrowing against housing equity for non-housing purposes, and other credit market conditions. Symposium participants also seemed to agree that the future of mortgage financing lies with broadening mortgage lending to all participants in an integrated capital market, rather than through attempting to recreate a protected housing finance role for thrifts.

HOUSING REVIVAL DEPENDENT ON MAKING HOUSING MORE AFFORDABLE, NOT SO MUCH ON CHANGES THAT COULD BE QUICKLY MADE IN MORTGAGE FINANCE

The changing economic climate has brought forth many recent changes in the mortgage instruments used to finance housing. Versions of variable rate, graduated payments, and other new instruments have all had some success in recent years in helping home buyers finance their homes and in satisfying the wishes of lenders who, in many cases, have not wanted to tie themselves to long-term, fixed-rate mortgages. The mortgage market is still changing and has not yet settled on a standard mortgage form or forms to replace the long-term, fixed-rate mortgages that dominated housing finance until the late 1970's and are still favored by consumers. In today's market, with housing costs high and the outlook uncertain, it is difficult to reconcile the interests of borrowers, originators, and secondary market participants. The sharp increase in the real after-tax cost of housing is the major factor contributing to the decline in the effective demand for housing (and therefore mortgages) and has accelerated the negative impact on housing of institutional changes in mortgage lending. High nominal and real interest rates, unprecedented interest rate variability, declining or negative rates of house price appreciation, and possible changes in consumer tastes and expectations may all profoundly affect the demand for housing and mortgages over the next several years.

Given the combination of high costs that place new housing out of the reach of most households and uncertainty about factors affecting mortgage demand in the future, none of the experts we consulted suggested that there were changes in mortgage instruments or in the techniques of mortgage financing that could be encouraged by the Federal Government to trigger a significant, short-term revival of housing. The need for agencies such as FHA, FNMA, FHLMC, and FHLBB to continually experiment with mortgage techniques was often stressed to us, but the benefit was expected to be

primarily facilitating market efficiency when economic conditions improved.

We agree that the major restraint on housing and mortgage demand is affordability and that there is no obvious, short-term "fix" to the mortgage finance system--apart from a subsidy of some type--that by itself could stimulate a revival of housing. Nor, in today's environment, can the Federal Government promulgate a mortgage instrument that would necessarily be accepted by borrowers, originators, and secondary market participants. One of the simulations of special housing stimulus programs discussed in chapter 3 does suggest, however, that in combination with subsidies, some forms of mortgage instruments may be more effective than others.

SPECIAL EFFORTS TO REVIVE HOUSING WILL TEND TO SUBSTITUTE FOR OTHER ACTIVITIES

Assuming the Federal Reserve Board successfully pursues a policy of controlling monetary aggregates and does not accommodate special housing programs, any special housing program will tend to reallocate credit or spending rather than to expand credit or spending. The exact nature of the substitution or crowding out effect depends upon the relationship between monetary aggregates which the Federal Reserve tries to control and the amount of credit that can be made available to nonfinancial sectors of the economy. Although a given level of monetary aggregate does not necessarily fix an exact amount of credit or total spending in the economy, most economists we consulted believe that current Federal Reserve Board policy restricts the amount of credit that can be made available in the economy at the present time.

If the supply of credit in today's economy is relatively inelastic, then a large portion of the mortgages (and interim construction financing) associated with special efforts to revive housing could be made available only if lending institutions or households refrain from making other loans or reduce other spending. Some of the loans not made would undoubtedly have been for consumer purchases, State and local borrowing, or other interest-sensitive lending. Since housing is the largest of the interest-sensitive sectors, it is likely that a large share of any crowding out that would occur would come from within the housing sector. If the Federal deficit is increased to pay for the housing subsidy, the Federal borrowing for this activity will also tend to have a crowding out effect. To the extent credit or spending is reallocated, the net employment increase for the economy as a result of the special program is correspondingly reduced.

In today's economic environment, it seems reasonable to expect that special efforts to revive housing will tend to reallocate credit and spending within housing and other interest-sensitive areas of the economy. However, it is not possible on an *a priori* basis to quantify with any degree of certainty the extent to which this crowding out tendency will limit the effectiveness of special

housing recovery programs, especially if the size of such programs is relatively modest. The DRI model used in chapter 3 to evaluate the impact of housing stimulus programs estimates that (1) a considerable amount of substitution takes place within the housing sector itself and (2) a modest amount of crowding out occurs in the State and local, nonfinancial corporate, and consumer durable sectors of the economy. The implication of the model, which assumed no net change in the M1 monetary aggregate but an increase in real and nominal GNP, is that the income velocity of money will rise slightly as housing stimulus programs increase total credit and spending in the economy. 1/

AGENCY COMMENTS

FHLBB agreed with our general conclusion that today's system of mortgage finance could supply the funds needed to finance a housing revival of the magnitude discussed in the report. FHLBB believed that it would probably have been useful if the report had contained more discussion and quantitative analysis of the extent to which special stimulus programs would merely divert credit from other housing lending. Also, FHLBB believed it might be helpful to stress more that mortgage instruments or institutional arrangements would not substantially affect housing demand because such changes take longer than the short-run focus of this report.

1/The M1 monetary aggregate consists primarily of currency in circulation, demand deposits, and other transaction accounts. The income velocity of money is calculated by dividing GNP by the M1 monetary aggregate.

APPENDIX I

Congress of the United States
House of Representatives
Committee on Appropriations
Washington, D.C. 20515

April 26, 1982

Honorable Charles A. Bowsher
Comptroller General
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Bowsher:

The Committee is very concerned with the continuing recession. Though there are many industries and factors involved, there are two areas of major importance to the nation's economic health. They are the protracted recession in the housing industry and the effect that monetary and fiscal policies are having on interest rates. This Committee's jurisdiction includes many programs which impact on these subjects.

The housing industry has been in a recession for more than three years. On an annual basis, housing starts have totaled less than 1,000,000 for seven consecutive months. Most analysts agree that the housing industry is experiencing its most difficult conditions since World War II. It has been estimated that 200,000 firms related to building and supplying the nation's housing have failed in recent years. Hundreds of thousands of construction jobs have been lost. The effect on basic industries such as lumber has been devastating in certain areas of the country, particularly in the Pacific Northwest and the South.

The fiscal and monetary policies undertaken by the government, including the Federal Reserve System, have not been successful in reducing interest rates to levels which will stimulate the economy. The restrictive monetary strategy espoused by the Federal Reserve System has apparently retained a tightened credit policy to the extent that many corporations and individuals have been unable to obtain capital for needed expansion, and the Federal Reserve does not appear willing to try any other approach as has been necessary in other recessions and even in the great disastrous Depression of the 1930's.

APPENDIX I

Accordingly, the Committee requests that the General Accounting Office conduct two comprehensive reviews. The first should assess existing Federal policies relating to home construction. The review should include suggestions of ways in which the nation's housing industry could be revived, contributing to the overall economic recovery. Special emphasis should be devoted to proposals which will aid the logging of timber and the lumber industry. The second review should be a thorough analysis of the nation's monetary and fiscal policies with suggestions for change. Special attention should be placed on the effect of the restrictive monetary policy of the Federal Reserve System on present and future economic growth.

It is anticipated that in the conduct of both reviews with suggestions, the General Accounting Office will be expected to obtain the views of experts in industry and educational institutions. In addition, to the extent permitted by law, executive agencies will be expected to provide such assistance as may be available and required to complete the studies and plans. Both reviews and specific plans should be completed no later than August 31, 1982 and transmitted to the Committee.

On a separate but related subject, the Committee is calling on the Department of Agriculture to develop a plan to protect and restore the basic national wealth represented by hundreds of millions of productive acres being destroyed or threatened by certain infestations. These matters are of critical importance to our present and future economic strength and the Committee appreciates your continued cooperation.

Sincerely,

Jamie Whitten

Chairman

LIST OF SYMPOSIA PARTICIPANTS AND PAPER TOPICS 1/

SINGLE-FAMILY SYMPOSIUM

Moderator: Anthony Downs, Senior Fellow, Brookings Institution

Paper title: "Housing Stimulus Programs and the Current Economic Environment"

Presenting paper:	Discussant:
Robert Buckley Director, Housing Finance Analysis Department of Housing and Urban Development	Kent Colton Professor of Public Management and Finance Graduate School of Management Brigham Young University

Paper title: "Some Issues in the Evaluation of Countercyclical Stimulation of Single-Family Housing"

Presenting paper:	Discussant:
Craig Swan Associate Professor Department of Economics University of Minnesota	James Kearl Associate Professor Department of Economics Brigham Young University

Paper title: "Countercyclical Stimulation of Single-Family Housing: It's Likely To Be Expensive"

Presenting paper:	Discussant:
James Follain Associate Professor Maxwell School Syracuse University	Martin Levine Deputy Assistant Director Human Resources and Community Development Division Congressional Budget Office

Paper title: "An Anaysis of Proposals To Subsidize Single-Family Housing"

Presenting paper:	Discussant:
Patric Hendershott John W. Galbreath Professor of Real Estate Ohio State University	Douglas Diamond Visiting Economist Department of Housing and Urban Development

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1/Formal papers are being prepared for publication by GAO and will be available separately.

APPENDIX II

MULTIFAMILY SYMPOSIUM

Moderator: George Sternlieb, Director, Center for Urban Policy Research, Rutgers University

Paper title: "Multifamily Housing in the 1980s: Market Trends and Countercyclical Stimulus Options"

Presenting paper:

Jack Kerry
Director, Washington office
Winn Development Corporation

Discussant:

William Brueggeman
Corrigan Professor of Real Estate
Southern Methodist University

Paper title: "An Analysis of Countercyclical Stimulation of Multifamily Housing in the Current Macroeconomic Environment"

Presenting paper:

Michael Lea
Associate Professor
Department of Consumer Economics and Housing
Cornell University

Discussant:

Ray Struyk
Director, Center for Housing, Community Development, and Energy Policy Research
Urban Institute

Paper title: "Multifamily Housing Stimulus Proposals: Public Policy Issues and Program Feasibility"

Presenting paper:

James Wallace
Senior Research Manager
Abt Associates

Discussant:

Michael Stegman
Professor
Department of City and Regional Planning
University of North Carolina

Paper Title: "Countercyclical Housing Policies: Microeconomic Medicine for Macroeconomic Ills"

Presenting paper:

Michael Murray
Rand Corporation and
Claremont Graduate School

Discussant:

Larry Ozanne
Visiting Scholar
Office of Policy and Economic Research
Federal Home Loan Bank Board

MORTGAGE FINANCE SYMPOSIUM

Moderator: Anthony M. Santomero, Professor of Finance, Wharton School, University of Pennsylvania

Panelists:

Charlotte A. Chamberlain
Director, Office of Policy and Economic Research
Federal Home Loan Bank Board

Jack Guttentag
Professor
Wharton School
University of Pennsylvania

Dennis Jacobe
Director of Research
U.S. League of Savings Associations

Dwight Jaffee
Professor
Princeton University

Max H. Karl
Chairman of the Board
Mortgage Guarantee Investment Corporation

P. Michael Laub
Director of Economic and Policy Research
American Bankers Association

Elinor H. Lawrence
Vice President
Secondary Marketing Division
Glendale Savings and Loan Association

Donald E. Lawson
Vice President
National Association of Mutual Savings Banks

Maurice Mann
Vice Chairman
Warburg Paribus Becker, Inc.

Lewis Ranieri
Managing Director
Salomon Brothers

Mark Riedy
Executive Vice President
Mortgage Bankers Association of America

Dale Riordan
Vice President and Assistant to the Chairman
Federal National Mortgage Association

David Seiders
Senior Economist
Federal Reserve Board

Robert Sheehan
Director of Economic Research
National Association of Home Builders

Jane Shontell
Chief Economist
Federal Home Loan Mortgage Corporation

Kevin Villani
Acting Deputy Assistant Secretary for Economic Affairs
Department of Housing and Urban Development

APPENDIX III

DESCRIPTION OF ECONOMETRIC MODELS USED TO ANALYZE HOUSING AND FOREST PRODUCTS STIMULUS PROPOSALS

To determine the effectiveness of the housing and forest products stimulus proposals and their direct and indirect costs, we contracted with a number of econometric modelers. In the housing area we contracted with DRI, RDA, James Alm and James R. Follain of Syracuse University, and William B. Brueggeman of Southern Methodist University. In the forest products area, we contracted with DRI and the U.S. Forest Service.

A description of the nature and scope of each econometric modeling effort follows.

HOUSING EFFORTS

Data Resources, Inc.

The DRI model provides analyses and forecasts of economic activity and financial conditions for the U.S. economy based on a quarterly model which forecasts final demands, aggregate supply, prices, income, interest rates, and money flows. The model is composed of 1,040 equations, with 225 exogenous variables and 980 endogenous variables. The model's monthly forecasts span a 10- to 16-quarter time horizon; its quarterly long-term forecasts span 10 to 25 years. Each forecast covers 18 sectors of the economy, including consumer spending; automobiles; housing; business fixed investment; inventories; State and local government; Federal Government; foreign trade; profits and incomes; prices, wages, and productivity; energy; employment and the labor force; industrial production; money, credit, and interest rates; mortgage finance; and flow of funds among households and business. Generally, the model is driven by two groups of key forecast assumptions--those concerning fiscal and monetary policy.

Based on key fiscal and monetary policy assumptions, DRI forecasts three basic economic scenarios: (1) a recovery scenario having the highest probability of occurring, (2) a stagflation scenario with a lower probability of occurrence and generally describing an unstable economy and/or an economy characterized as being significantly underutilized with high unemployment and low industrial production, and (3) an optimistic scenario which has a lower probability than "recovery" and generally reflects a relatively favorable economic environment.

We had DRI simulate seven policy options to stimulate single-family housing production. These proposals included (1) temporary interest reduction for home buyers, (2) permanent interest reduction for home buyers, (3) tax exempt mortgage revenue for home buyers, (4) home buyer tax-credit, (5) mortgage interest tax credit, (6) individual housing account, and (7) thrift portfolio swap of below-market mortgage originations. We also had DRI perform some preliminary simulations on some of the multifamily proposals

but opted not to complete this analysis, since other information developed through our symposia and discussions with HUD indicated that the multifamily proposals (with the exception of the section 8 pipeline proposal) would respond much slower as a countercyclical stimulus.

For each proposal, with the exception of the temporary interest reduction proposal to be discussed below, DRI simulated implementation of the policy option based on two scenarios--recovery and stagflation without monetary accommodation by the Federal Reserve. Net housing starts above trends were estimated, as well as financial impacts, interest rate changes, "crowding out" of financial activity in other sectors, budgetary implications, employment and unemployment, economic impacts on GNP, consumer prices, and the impact of the policy on housing affordability.

For the temporary interest reduction proposal, monetary accommodation was permitted for comparative purposes between changes in trend from recovery with and without accommodation. Throughout the report, "recovery" explicitly refers to DRI's baseline forecast. This comparison showed little difference in most of the important variables but did result in higher starts in 1984 and less crowding out.

For each policy simulation, DRI provided detailed forecasts by quarter for 1982, 1983, and 1984; and provided macro (economy-wide) and sectoral impact analyses.

Regional Data Associates

The RDA forecasting system consists of a model at the national level and individual models of each State and standard metropolitan statistical area. The model portrays the simultaneous interaction of demographic, housing, and financial variables, with approximately 60 equations grouped in terms of households; occupied housing stock by type of housing; housing starts by type (including mobile home placements); housing stock; vacancy rates; housing and relative prices; savings flows by type of institution; mortgage stocks, flows, and terms; and migration between States. These variables are endogeneous to the models and are determined based on assumed values for the following exogenous variables, including national population by age group, real disposable income per capita, overall consumer prices, the prime rate, AAA bond rate, and Treasury bill rates.

Five of the six exogenous variables were specified as "inputs" into RDA's model by GAO using DRI's recovery case values, including the prime rate, AAA bond rate, Treasury bill rate, real disposable income per capita, and overall consumer price index. The sixth variable, national population by age group, was acquired through traditional census sources already available to RDA.

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In general, household formation is the starting point for the demand side of the housing market. Housing demand is translated into housing starts based on causal factors for different structure type preferences--single-family houses, multifamily units, and mobile homes--all of which are complemented by the availability of financing. Prices for housing units by structure are determined by trends in the general price level and by the specific balance of demand and supply in each market. On the costs side, the supply of mortgage credit is measured both by the cost of funds (the mortgage rate) and the availability of funds. Both the cost and availability of funds are, in turn, the result of an equilibrium between demand and supply in the mortgage market. Demand for mortgage funds is determined by the amount of housing, the price of housing, and the loan-to-value ratio. Supply of mortgage finance is a function of general capital market conditions and Government support of the mortgage market.

We had RDA simulate the housing market and housing market financial effects of five homeownership policy options, noting the difference between the implementation of these policy options and RDA's "baseline" projections in the absence of the five policy options. Options included in RDA's simulations and analyses were (1) temporary interest reduction for home buyers, (2) permanent interest reduction for home buyers, (3) mortgage revenue bonds, (4) mortgage interest tax credit, and (5) home buyer tax credit.

Each simulation was written up by RDA with respect to "net" housing starts in the absence of the program from baseline--those units that could potentially be attributed to the policy if implemented. In addition, RDA estimated program costs; personal income per capita; the consumer price index; employment; unemployment; the prime rate; 91-day Treasury bill rate; AAA bond rates; average cost of funds to lenders; and other financial variables. Explicit consideration was given to household formation patterns by age cohort, type of units, house prices by type of unit, and homeownership and rental costs. Individual tables for each policy option simulation were provided along with appropriate writeups and RDA's interpretations of various policy implications.

James Alm and James R. Follain of Syracuse University

James Alm and James R. Follain of Syracuse University developed a mathematical programming model to characterize the lifecycle choices of a consumer in a world of inflation, liquidity constraints, and tax policies that encourage homeownership. The model assumes that a consumer maximizes the present value of utility over a 10-year period subject to a budget constraint and a set of liquidity constraints that exist due to imperfections in the capital markets.

Utility in any period depends upon the housing and nonhousing consumption of the household. Owner-occupied and renter-occupied housing are treated the same in the utility function. The objective function is the present value of utility in each period.

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A 10-year period is used in the model, a period roughly comparable to the average time an owner resides in a particular house. Utility in future periods is discounted by the rate of time preference as perceived by the household.

The budget constraint facing the household equates the present value of all expenditures on housing (including capital gains) and nonhousing goods to the present value of all income plus the initial endowment less taxes. A proportional income tax is assumed and the marginal tax rate is 30 percent. Exact specification is quite complex because of the ways in which mortgage payments can be made via alternative mortgage instruments and because of taxes.

Several types of liquidity constraints are present. The first limits mortgage interest payments to less than 25 percent of household income. This constraint reflects the fact that the amount a lender will loan to a household declines as the nominal interest rate increases. This constraint is likely to be binding for many households during inflationary periods and it is more likely to be binding the higher the rate of anticipated inflation. A similar constraint involves the downpayment that a household must make in order to purchase a home. The lender requires that the downpayment not exhaust the wealth of the household; that is, the household cannot borrow in order to obtain the downpayment. Also, the household's net worth must be positive in all periods; that is, the household may borrow only to purchase a home. Finally, the loan-to-value ratio cannot exceed 0.95.

Tenure choice is handled as follows. The household is allowed four choices. It can rent for the first 3 years, then own for the next 7; it can rent for the first 2 and own for the next 8; it can rent for the first and own for the next 9; or, finally, it can own for all 10 years. What differs among these four options is the specification of the budget constraint and the various liquidity constraints. The household computes the highest level of utility that can be attained for each of the four rent-own combinations and then chooses the form of tenure that gives the highest attainable level of welfare.

The income of households is assumed to remain constant in real terms. A condition is also imposed that the consumer end the 10-year period with an amount of real wealth equal to 10 percent of the real value of the income stream plus $5,000.

We had James Alm and James R. Follain simulate four groups of policy options: (1) several versions of the temporary interest reduction proposal, with and without a graduated equity mortgage provision, (2) home buyer tax credit, (3) three variants of the permanent interest reduction proposals, and (4) two alternative mortgage instruments (the graduated payment mortgage and the price level adjusted mortgage).

For each policy option, the model quantified the effects on housing demand by analyzing three income groups--$15,000, $22,500,

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and $30,000--and three inflation scenarios--7, 10, and 13 percent. The results from this analysis included the effects of the various proposals on the long-run housing demand of households that would have purchased housing in the absence of the proposals, the likely cost of each program, and the changes in tax expenditures that will result from the implementation of the various proposals. The results reported in chapter 3 are generally based upon the 10-percent inflation and $30,000 income scenarios.

William B. Brueggeman of Southern Methodist University

William B. Brueggeman of Southern Methodist University developed a model which analyzes the effects of market financing provisions through a variation of the present value framework on returns earned by investors in rental housing. Within this framework, cash outflows related to development costs (adjusted for tax considerations relevant to the development phase), after-tax cash flows from annual operating revenues less expenses, and after-tax cash flows from the sale of the property in some future year are discounted by a required after-tax rate of return until equity between inflows and outflows is achieved.

Projections were based on three scenarios of inflationary expectations. In each case, rents and property values (adjusted for economic depreciation) were assumed to increase at a rate of 6, 8, or 10 percent. Developer profits were assumed to be the difference between equity invested by the developer and the market value of the developer's equity interest after completion of the project. It was further assumed that permanent financing represents 75 percent of market value after completion of projects. Realization of profits by developers may occur as a project is completed and loan proceeds are drawn down and as projects are operated and subsequently sold. Alternatively, projects may be syndicated before or during development, in which case developers would realize profits sooner and perhaps a residual ownership interest.

To examine the sensitivity of cash flow and mortgage interest rates, several projections were carried out under the same inflation scenarios but at lower mortgage interest rates. Obviously, as the interest rate is lowered, both before- and after-tax returns on investment increase and the number of years that negative cash flows occur declines. However, it should be noted that the after-tax returns are relatively insensitive to reductions in the mortgage interest rate. This is because of the very large weight that "tax shelter" components have relative to cash flow in the determination of the return. The tax shelter component of the return (made up of accelerated depreciation, development writeoffs, and capital gains) is relatively insensitive to the mortgage interest rate; hence, financial feasibility is not enhanced as significantly as might be expected. This result assumes, of course, that investors place more weight on the tax shelter characteristics of real estate investment and relatively less weight on its cash flow characteristics.

We had William B. Brueggeman simulate six policy options for multifamily rental housing: (1) shallow tandem, (2) interest reduction loan, (3) mortgage revenue bonds, (4) investment tax credit, (5) faster production of the Section 8 pipeline, and (6) rental construction and rehabilitation grants. The results from this analysis included estimates of rates of return, cash flow patterns, and rent-to-cost ratios at which development would become feasible, given that investors desire a specific rate of return. The base case assumptions used in Dr. Brueggeman's simulations follow.

Baseline Case Cost Data

Development costs:	Percent	Financing:	
Land	9.5	Mortgage loan	75.0 percent
Direct Costs	72.0	Interest rate	17.0 percent
Soft Costs	7.0	Amortization	25 years
Interest	8.0	Term-to-maturity	15 years
Property taxes	.5		
Loan fee	3.0		
Total development cost	100.0		

Operating data:

Normal vacancy	5 percent
Operating expenses	35 percent - increasing to 45 percent over a period of analysis
Selling expenses	5.5 percent
Rent-to-cost ratio	13.7 percent
Investment period	16 years

Tax treatment:

Land - capitalized

Direct costs - capitalized and amortized over 15 years at 175 percent of straight-line

Soft costs - partially expensed, remainder capitalized and amortized over 15 years

Interest and property tax - partially expensed, remainder capitalized and amortized over 8 years

Loan fee - amortized over life of mortgage

Investor tax rate - 50 percent, capital gains rate - 20 percent

Project description - Garden apartment development, 150-250 units, average sq. ft.=750-800 per unit, suburban location in large metropolitan areas

FOREST PRODUCTS EFFORTS

Data Resources, Inc.

DRI developed the Forest Simulation (FORSIM) model as a forecasting and planning tool to aid in analyzing business problems in the solid wood industry. The FORSIM model provides users with forecasts and data on product demand, capacity, shipments, producer costs, and price levels. Associated with the model are extensive data bases on the U.S. and Canadian lumber and plywood industries; the U.S. particleboard, waferboard, oriented strand board, and hardboard industries; and U.S. timber resources. Major concepts include production variable costs; stumpage growth and prices; production, shipments, inventories, and orders; demand and capacity; product prices; imports, exports, and transportation rates; end-use consumption and usage factors; and housing starts and mobile home production.

Most of the exogenous variables in the model are obtained from DRI's National Forecasting Group. The FORSIM model translates the macroeconomic outlook as determined by the National Forecasting Group into projections for the various product markets in the solid wood industry. Also, specific information and projections on energy, transportation, and other specific elements are obtained from the appropriate DRI specialty group and are used as inputs to the model.

We had DRI simulate the impacts on wood products demand, supply, prices, and employment, when total, single-family, and multifamily housing starts are increased by specified amounts. We also had DRI simulate similar impacts for a quota on lumber imported from Canada.

DRI provided a writeup summarizing the results of each simulation followed by detailed appendixes providing a tabulation of historical and projected data as well as other assumptions and results. DRI's report was divided into four parts: (1) recovery forecast for 1982-84 based on the DRI-Macro recovery forecast of May 24, 1982, (2) stagflation alternative for 1982-84 based on the DRI-Macro "stagflation" forecast of May 25, 1982, (3) Canadian quota alternative for the period third quarter 1982 through 1984 using the recovery forecast, and (4) sensitivity analysis of wood products demand, supply, prices, and employment to specified increases in total, single-family, and multifamily housing starts for the period fourth quarter 1982 through 1984 using the recovery forecast.

U.S. Forest Service

The Timber Assessment Market Model (TAMM) is an econometric model designed by the U.S. Forest Service to provide long-run projections of output and prices of timber and timber products for the United States and its regions. Most of the model's functional

relationships were econometrically estimated with annual data covering the period from 1950 through 1976.

TAMM is an annual, spacial equilibrium model (i.e., timber and timber products supply and demand functions are estimated for each region and for each year). Outputs and prices are determined by the intersection, the economic equilibrium points, of these demand and supply functions. A demand function shows the amount of the product that will be purchased at various prices. The supply function shows the amounts of a product that producers want to sell at various prices. With supply and demand functions, there is only one price at which the amounts that consumers want to buy just equals the amount that producers want to sell.

TAMM was specifically structured to facilitate policy analysis. From the policy analyst's viewpoint, TAMM allows ready identification of policy impacts, by region. This is important for cost-benefit analyses requiring increasing specificity regarding distributive as well as allocative effects of policy alternatives.

We had the Forest Service simulate the impacts of various proposals on the lumber and plywood industries. These proposals were increased single-family and multifamily housing starts, a reduction in lumber imported from Canada, and an increase in U.S. lumber and plywood exports. The Forest Service provided detailed analyses by year for the period 1982 through 1984. These simulations were run as of June 21, 1982.

APPENDIX IV

THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

August 18, 1982

Mr. Charles A. Bowsher
Comptroller General
General Accounting Office
441 G Street, NW, Room 7000
Washington, DC 20548

Dear Mr. Bowsher:

We in the Department of Housing and Urban Development welcome the opportunity to offer comments on the Report entitled "Current Downturn in the Homebuilding and Forest Products Industries: Short Term Stimulus Program Possible, But Costly," which your office has been directed to prepare.

Members of your staff, working with R. Carter Sanders representing the Office of the Assistant Secretary for Housing and Kevin E. Villani representing the Office of the Assistant Secretary for Policy Development and Research, with the staff from those HUD offices, spent a number of hours analyzing the data and conclusions contained in the draft of the Report. We herewith present the highlights of the observations on this subject matter.

This Administration is strictly opposed to any short-term stimulus to the housing industry or any other industry. The crisis in housing is primarily a result of the current high cost of financing housing. The central problem that faces the American Public today is inflation and unprecedented interest rate levels. Short-term stimulus programs which require capital outlays by the Treasury will result in the current deficit rising further. This in turn will cause higher demand in the credit markets, which will force interest rates to be maintained at an insurmountable level.

This Administration believes that housing markets should draw more resources from private institutions such as pension funds, insurance companies, and commercial banks, while the Governmental support of housing should be precisely restricted for use by particular targeted households. Programs designed to support the construction of buildings are a costly and inefficient delivery mechanism, when measured against the mandate of providing shelter for those people who are unable to obtain it in the conventional market place.

APPENDIX IV

In summary, we also consider the proposed stimulus programs to be costly, but in addition we believe that, broadly considered, their costs greatly exceed their housing and employment benefits.

Very sincerely yours,

Donald I. Hovde
Acting Secretary

APPENDIX V

Federal Home Loan Bank Board

OFFICE OF POLICY AND ECONOMIC RESEARCH

1700 G Street, N.W.
Washington, D.C. 20552
Federal Home Loan Bank System
Federal Home Loan Mortgage Corporation
Federal Savings and Loan Insurance Corporation

August 17, 1982

Mr. Stephen Swaim
General Government Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Swaim:

This is in response to the August 9, 1982 letter from William J. Anderson to Chairman Richard T. Pratt, providing us with an opportunity to review and comment on your draft report "Current Downturn In The Homebuilding And Forest Products Industries: Short-Term Stimulus Programs Possible, But Costly". We appreciate being given the opportunity to review this material.

In general we found the report a well done summary and evaluation of alternative short-term stimulus programs. Some of the material, however, may be rather complex and difficult for nontechnicians.

The material on mortgage finance contained in Chapter 6, which is most directly within the preview of the Federal Home Loan Bank Board, was in more summary form than other parts of the report, presumably because its purpose was secondary to the stimulus discussion. The general conclusion that the system of mortgage finance that exists today could supply the funds needed to finance a revival of housing of the magnitude discussed in the report seems reasonable in the light of available information. Somewhat greater discussion and quantitative analysis of the extent to which special stimulus programs would merely divert credit from other housing lending, however, would probably be useful. Also, it might be helpful to stress somewhat more that a major reason you concluded that changes in mortgage instruments or institutional arrangements would not substantially affect housing demand was that the results of such changes take longer than the short-run focus of your report.

On a somewhat more technical note two aspects of your discussion of the role of the thrift industry in housing finance on pages 3-4 of Chapter 6 merit comments.

(a) Comparing borrowing from the Federal Home Loan Banks for only two years-1975 and 1979-causes some distortion. In 1975, demand for mortgages was relatively moderate and the savings and loan industry had just completed two years of very large cyclical borrowing from the Federal Home Loan Banks. Consequently S&Ls were repaying some of the temporary borrowings made in the two immediately preceding years in 1975. Because of this cyclical pattern in Federal Home Loan Bank advances, the swing in dollar amounts of net borrowing between 1975 and 1979 becomes misleading.

(b) The discussion of the virtual disapperance of thrift institutions frm the mortgage market during the first quarter of 1982 is somewhat misleading because it does not take into account the shift of thrift investments from mortgages into mortgage-backed securities as a part of their general asset restructuring. Mortgage-backed securities purchased or exchanged for mortgages are not considered mortgages in the statistics, but, of course, contribute to housing finance. When net acquisitions of mortgage-backed securities and mortgages by thrift institutions in the first quarter of 1982 are combined, their role in the mortgage market is larger than it would first appear.

Sincerely,

Richard C. Pickering
Deputy Director for
Research and Statistics

cc: C. Chamberlain

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