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Finding a Way Home

Notes for speech by

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There is widespread agreement on the economic goals of the United States—namely, full employment, economic growth, balance in international payments, and price stability. The economy is growing, and by some measures we are close to full employment. But by any measure we are far from balance in international payments and price stability. And unless we can demonstrate greater success in balancing our international payments and stabilizing the general level of prices, we probably will lose ground on the employment and growth fronts.

Normally there are a number of routes "home," and this is the case for economic goals as well. 'Tis said there is a long way as well as a short way; that there is a sure route and a slippery route and, according to a popular ballad, a high road and a low road. Finally, there is the "lost horse" phenomenon, in which one just wanders around and by chance may arrive "back home." We have wandered a long while, and we still are far from price stability and balance in international payments although close to home base in other economic goals.

Depreciating dollar internationally

Since 1975, our trade balance has worsened substantially because of increases in net imports of both fuel and manufactured goods. The rising net imports of fuels, from $24 billion in 1975 to $43 billion last year, are largely the result of policies that have held the price of energy about 25 percent below the world price, on average, and thus promoted consumption of foreign oil while limiting the stimulus to domestic production. Economists estimate that supply and consumption of energy are responsive enough to prices that decontrol of domestic prices would make a substantial contribution to reducing our net fuel imports within a few years. Had we not chosen the price control road when world prices were boosted sharply, we would now be much closer to a balanced energy situation.

The declining net exports of manufactured goods, from $20 billion in 1975 to $3 billion in 1977, have been largely the result of different speeds of economic expansion and domestic inflation since the 1974 economic recession for the United States and its major trading partners. Studies by Federal Reserve staff economists indicate that if all countries had grown in step, the U.S. trade deficit would have been $10 billion to $20 billion less than it actually has been.

Our merchandise trade deficit, on the order of $33 billion this year, has put downward pressure on the value of the dollar in foreign exchange markets. Until late last year the dollar's value, measured in terms of a composite of the currencies of our trading partners, had remained remarkably steady, given our widening trade deficit. Our inflation performance had been better than that of our trading partners. If investors could be confident that we would reduce our domestic inflation, they would expect our trade deficit to decline and would be willing to hold more dollars at current exchange rates; and the depreciation of the dollar would be limited.

During the last six to nine months, however, investors have found less reason for confidence in our ability and commitment to manage our economy effectively and, therefore, in the long-run stability of the dollar. They have seen U.S. inflation return to double-digit levels earlier this year while Germany, Japan, and Switzerland have achieved a slowing of inflation.

Although exchange rates fluctuate widely at times, movements over the longer term have tended to offset the effects of differing rates of domestic inflation on the prices of internationally traded goods. As long as inflation proceeds at different rates in different countries, exchange rates between currencies should be allowed to adjust fairly continuously in order to equalize the purchasing power of various currencies over internationally traded goods. The current system of managed floating probably has helped to maintain and promote relatively free flows of world trade and investment. The solution to problems associated with depreciating currencies should be found in policies that affect domestic production and prices, not in efforts to freeze exchange rates.

Depreciating dollar domestically

Inflation is our most troublesome economic problem. While inflation is not as high as the 12-percent rate following the 1973 oil embargo, we again experienced double-digit rates earlier this year; and even taking an optimistic view, the inflation rate appears to be higher now than it was before the embargo.

Inflation restricts investment in new projects and thereby reduces the growth in production per manhour and the growth of total production. Since that which is not produced cannot be consumed, inflation slows, or halts, the rising trend in per capita consumption. Investment is restricted because inflation causes greater uncertainty and increases risks. Since long-term investment projects become more uncertain for businessmen, projects that provide better hedges against inflation and projects with shorter payout periods are favored. Households, in an attempt to hedge against inflation, place more of their wealth in durable goods, houses, and other real estate in preference to deposits, bonds, and life insurance, and many borrow heavily to acquire tangible assets. This diverts the flow of savings from usual channels and boosts demand for existing tangible assets instead of financing new production capacity.

Inflation also affects investment by generating inequities in the tax system. Because of the progressive rate structure, taxes rise relative to income without anyone ever having voted for the increases. Capital gains that may be simply a product of inflation are taxed as if they are real, and the requirement that corporations use historical cost in computing depreciation for tax purposes raises the effective tax rate on corporate profits.

The real value—that is, the purchasing power—of assets held in savings accounts and other normally conservative and secure forms declines, bringing hardship to many and tending to promote speculative investment in existing tangible property.

A social malaise characterized by a lack of confidence in both government and private institutions tends to develop. Such frustration appears to be an important ingredient in the rising tax revolt at the state and local government levels and in consideration of Federal income tax reductions.

Some routes home

Given these consequences of inflation, what routes are available to us in seeking to achieve our economic goals? It is reported the Administration is undertaking a comprehensive review of all alternative policies to reduce inflation, having concluded the "jawbone" approach is relatively ineffective.

One of these is wage and price controls. But the historical record of these policies is not good. In the first place, they tend to breed spot shortages because they interfere with the orderly flow of production. Second, if flexible enough to accommodate changing needs, they are almost certain to be ineffective. Finally, they have minimal long-run effect on inflation, initially dampening the inflation rate but with this effect often being offset by a speedup of inflation after controls are lifted.

Another means to bring the inflation rate down is to impose much tighter credit conditions and a sharply reduced rate of monetary growth. This would soon drive up unemployment, and the resulting slack in the labor market would lead to smaller increases in money wages, unit labor costs, and prices. But the cost of such policy in terms of lost output and employment would be high. Experience has shown that while a slowing of money growth affects employment and output relatively quickly, a significant reduction in the rate of inflation occurs only after two to three years. It took nearly a decade of economic activity in excess of "full employment" to produce inflation in its current dimensions. It probably would take as long for even a substantial degree of slack in labor markets to unwind inflation.

Another means to reduce inflation is to reduce Federal expenditures and move aggressively toward a balanced budget. This would release additional financial resources, as well as labor, to the private sector and probably would be associated with lower interest rates and increased private investment. More spending decisions would be made by individuals and fewer by Government officials. This transition, if undertaken, should be accomplished during a period of economic expansion so as to minimize the risk of recession.

Another alternative is to reduce the various restraints on competition, public and private, that have cumulated during past years, largely as a consequence of Government policies designed to protect certain sectors from the effects of competition. With a more competitive economy, prices would be more flexible—especially on the downside—so that policies aimed at diminishing inflation through reducing the growth of demand would have less severe side effects in terms of production and employment. A policy of reducing the rate of monetary growth, for example, would have a larger and more immediate effect on prices, and less of a short-term impact on output and employment, if the economy were more competitive.

The list of Government regulations that stifle competition and make it more difficult to reconcile full employment and price stability is long. The transportation industries are prime examples. The agencies that regulate railroads, airlines, and trucking have resisted competitive pricing of services for many years. Recently, in the airline industry an important policy change has been initiated, and we are now seeing how stifling past regulation had been. The existing overcapacity in the industry has brought forth dramatic competitive price declines, and the lower prices are bringing in so much additional business that profits have increased. In a competitive environment, stable or rising prices and overcapacity are incompatible.

In agriculture, where there are many firms and it is difficult to achieve control of prices by regulation, direct Government participation in the commodity markets is utilized to avoid price declines below specified levels. It is well documented in this industry that costs, including land costs, tend to rise to levels determined by commodity prices.

The Davis-Bacon Act and other Federal legislation are designed to raise or maintain wages paid by Government contractors even though workers may be available in certain areas at lower pay scales. Government contractors must not reduce wages even in circumstances where unemployed labor may be abundant.

Further examples of regulatory problems are manifold. In the financial sector, the Federal Reserve shares with other Government agencies the responsibility to regulate interest rates on deposits. In periods of strong credit demand and high interest rates, the effect of these price ceilings is to distort savings flows, as small investors lend their money directly to ultimate users via the capital markets instead of depositing it in their local banks and other financial institutions. One of the basic functions of banks is to serve as a credit intermediary, assembling small liquid deposits and making credit available for large, less liquid loans. The price ceiling regulations interfere with this function, with considerable cost and inconvenience to small savers.

Why do we have such a regulation? Initially to constrain competition, and thereby help small banks. In recent years, to restrain competition and thereby protect thrift institutions, which have moved aggressively into accepting very liquid liabilities and acquiring very illiquid assets.

An anti-inflation program

The search for a solution to inflation is encumbered with the urgent desire that it be palatable and painless. None of the routes home are likely to be posted with those markers. And the odds are high that taking the long route in preference to a direct one may simply permit the problem to become larger and more intractable before we come to grips with it.

As I see it, the problem has four basic ingredients. *One*, too large and too rapid growth of Government spending. Elected officials have attempted to be responsive to the unlimited demands that flow from numerous interest groups. In responding to these demands, officials have raised taxes to levels that retard saving and investment and committed expenditures far in excess of revenues. The resulting deficits command large amounts of credit, which reduces credit available to the private sector and raises interest rates.

Two, too rapid growth of credit and money as the Federal Reserve has attempted to provide enough of both to promote economic growth and full employment, given the large deficit and structural rigidities in the economy.

Three, too much Government regulation of the type that restricts competition directly and enables private groups to restrict competition. This raises costs and prices and reduces efficiency, and hence reduces the total supply of goods and services available for consumption. It gives costs and prices an upward tilt and insulates them from economic conditions that would cause prices to decline in response to improved technology, large supplies, or reduced demand. Prima facie evidence that these conditions are widespread exists, for example, in labor markets where we observe sizable boosts in wage rates even when there are large numbers unemployed and seeking work; in commodity markets where we observe rising prices even when there exist substantial excess capacity and ample availability of materials; in laws that arbitrarily raise minimum wages even though employers cannot afford to hire available supplies of inexperienced and unskilled persons at current wage rates; in professional and crafts organizations and associations that limit entry and proscribe or discourage price competition among their members; in licensing and chartering procedures that restrict entry on bases other than minimum essential competence; and so forth.

Four, too much Government regulation that increases costs of doing business, the objectives or purposes of which could be achieved better by policies designed to promote, instead of circumscribe, competition.

If these are the things that have caused us to lose our economic bearings, how do we get back on track and find our way home? As in most things, diagnosis largely dictates prescription.

One, reduce Government spending. Having brought Government spending under control and moved aggressively toward a balanced budget, reduce taxes so individuals and businesses have direct control over the spending of more of their income.

Two, reduce growth rates of credit and money to rates consistent with full utilization of resources at a stable general level of prices. Such reduction should be phased in steadily over two to three years.

Three, critically review all laws, regulations, and private organizations for indications that they unnecessarily restrict competition or promote price rigidity—and take corrective actions. In my view, this is the most important part of an anti-inflation prescription. The other parts will not do the job without this part.

Four, review all Government regulations that make doing business more difficult or costly, with a view to eliminating those that are nonessential, simplifying those that are overly complex, and streamlining and reducing the administrative and compliance burdens of those retained.

I would emphasize that this prescription is not basically a call for less Government participation in and control of economic matters. It is primarily a plea that we yield unto competitive markets that which they can do better than Government, and have resort to Government only in those areas and for those purposes where the broad, overriding public interest—as contrasted with narrow, special interests—requires it. It is a plea, first and foremost, to take positive action to promote competition.

Unless we can substantially reduce "structural rigidities," our economy will continue to perform below potential and fall short of our economic goals, and we will be tempted to move to even more comprehensive and more detailed Government direction. And this would not augur well for success in containing inflation, optimizing employment and growth, or maintaining beneficial patterns of international trade and investment.

Nancy Teeters Appointed to the Board of Governors

Nancy H. Teeters, formerly assistant staff director and chief economist of the House Budget Committee, has been appointed to the Federal Reserve Board of Governors. Mrs. Teeters, the first woman to serve on the seven-member board in its 65-year history, will fill the unexpired term of former Federal Reserve Board Chairman Arthur Burns, who resigned in March. The term runs until January 31, 1984, at which time Mrs. Teeters will be eligible for appointment to a full 14-year term.

Before serving with the House Budget Committee, Mrs. Teeters was a senior specialist with the Congressional Research Service of the Library of Congress. She is best known publicly for her work as a senior fellow at the Brookings Institution, from 1970 to 1973, on an annual critique of the Federal budget. Before joining the Brookings Institution, Mrs. Teeters worked for the White House Office of Management and Budget. From 1957 to 1966 she was an economist for the Federal Reserve Board. During this period she served a year with the Council of Economic Advisers.

A native of Indiana, Mrs. Teeters graduated from Oberlin College in Oberlin, Ohio, and has a master's degree from the University of Michigan. She is one of four economists on the Board of Governors. The others are Henry Wallich, Philip Coldwell, and J. Charles Partee.

"Fed Quotes"

Brief Excerpts from Recent Federal Reserve Speeches, Statements, Publications, Etc.

"It is essential for everyone to understand that monetary policy is not developed for banks or even the limited number of member banks, so there appears to be no good reason for the nation's central bank to operate under the shackles of a voluntary membership structure. We can debate a specific monetary policy on its merits, but from any standpoint, I can see no public purpose to be served by limiting the effectiveness of the central bank. Monetary policy is made for the entire nation, not a limited sector of the banking community. All depository institutions are chartered in the public interest and all should be directly supportive of and participants in the implementation of policy."

Philip E. Coldwell, Member, Board of Governors of the Federal Reserve System (Statement before the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, July 31, 1978)

"The Board believes that simplified Truth in Lending requirements would better serve the consumer."

"The Truth in Lending Act . . . has proven to be difficult to apply to the wide variety of new credit programs developed over the past ten years.

"The Board and its staff, in trying to be responsive to questions about the day-to-day application of the act's requirements, have published approximately 1300 informal staff interpretations, 150 official staff interpretations, and 55 Board interpretations. Nor have we been alone in our efforts to provide guidance with regard to Truth in Lending; the courts, too, have issued numerous opinions.

"A large amount of Truth in Lending litigation continues to burden the courts. Unfortunately, compliance with a specific Truth in Lending requirement oftens means different things to different courts. Courts in one district may interpret a statutory requirement differently from those in another. . . . The consistent, uniform interpretation of the act has become almost an impossibility."

"Simplification, aside from its desirable focus on the most important aspects of credit costs, also should result in a savings to consumers. Creditors' costs in complying with Truth in Lending appear to be substantial and must necessarily be borne in large measure by the consumer. Significant costs are incurred in the constant review and redesigning of disclosure forms in order to incorporate statutory amendments, Board and staff interpretations, judicial activity, and State law considerations. . . . Simplification, in clarifying disclosure responsibilities, should reduce the possibility of inadvertent violations and aid in reducing creditors' compliance costs, thus serving to keep consumers' credit costs down."

Philip E. Coldwell, Member, Board of Governors of the Federal Reserve System (Statement before the Subcommittee on Consumer Affairs of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, September 6, 1978)

"The Board favors universal reserve requirements for reasons quite apart from the membership problem. Universal reserves would contribute to improving monetary management and to ensuring the stability of the payments mechanism. In doing so, the Board's bill, it should be stressed, does not authorize any supervisory role for the Federal Reserve System with respect to nonmembers. Indeed, the bill does not even require nonmember institutions to establish an account relationship with the Reserve Bank."

"We realize that universal reserve requirements have been proposed before, and that the proposal raises a number of difficult problems. The Board continues to believe, however, that they are necessary to help correct the competitive imbalances in our financial system and to assure an effective monetary policy."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System "Proposals on Financial Institution Reserve Requirements and Related Issues" (Statement before the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, July 27, 1978)

"While one would expect strong credit demands as a normal counterpart of a healthy and growing economy, a significant—and I am afraid expanding—share of recent credit growth is both the direct and indirect result of inflation."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System (Statement before the Committee on the Budget, U.S. House of Representatives, July 13, 1978)

"Resources must be freed for private sector use. Fundamental to achieving this aim is an expansion in the savings available for investment from outside the business sector. To this end, Government must have a smaller role in the economy and budget deficits need to be eliminated over time, taking into account the ups and downs in the economy. The private sector can take up the slack if, over five or seven years, the Federal Government curtails the growth of its expenditures until their ratio to GNP, which is now above 22 per cent, is reduced to the 20 per cent range. This interim goal for Federal expenditures clearly is attainable with a good measure of fiscal discipline coupled with reduced public demands for government services.

"As spending is brought under control, government will move from its position as a substantial net borrower of funds in credit markets. Such a change would moderate demand pressures on credit markets as well as relieve some of the pressures on prices that arise from passing on high and rising taxes. Resources will be more readily available to meet needs in the private sector. Easier credit market conditions, less inflation, and greater availability of resources should help ensure adequate residential construction activity to meet the Nation's housing needs—needs that are now prey to a boom and bust syndrome that profits no one."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System (Statement before the Joint Economic Committee of the U.S. Congress, June 29, 1978)

Federal Housing Agencies: How Effective Are They?

By Sydney Smith Hicks

Just as the post-World War II baby boom reached the age when many in the group wanted to buy houses, the U.S. housing industry experienced in 1973 and 1974 its worst postwar downturn. Housing starts fell to a low of about 1 million units in the first quarter of 1975, less than half the 2.4 million units in the fourth quarter of 1975. The cyclical variability of housing is not a new phenomenon. Prior to every postwar business cycle peak, housing starts have peaked and then declined. Thus over time, concern about the variability of housing in the United States has risen. This concern has spawned an array of Government programs designed to reduce the variability of housing, as well as increase the general availability of housing over the business cycle.

Besides providing tax incentives and a number of direct spending programs in support of housing, the Federal Government has created a number of agencies to assist in financing the housing industry. The major purpose of these agencies is to expand the flow of credit to housing. At the present time the Federal housing credit programs directly lend $72 billion and guarantee mortgage loans of about $154 billion.

In line with the national desire for more houses, these housing agencies have experienced dramatic growth over recent decades. For example, the Federal National Mortgage Association (FNMA) financed its operations in 1960 with $2.2 billion of debt. By the first quarter of 1978, FNMA's outstanding debt was $32.6 billion.

In addition to increasing the number of homes, these agencies also can pursue policies to limit extreme variations in the number of homes built over the business cycle. However, the record to date shows the contrary. Some of the agencies expand their activities when housing starts are strong and reduce their activities when housing starts are weak.

The implications of this seemingly perverse behavior are not as serious as might first appear. A substantial amount of research questions whether these agencies have any significant impact on either the number of homes being built or variations in the number. Despite these ambiguous findings, the general public and some economists continue to believe in the positive effects of agency activity on housing.

To the extent these agencies do assist housing, and that they do so when the rest of the economy is approaching full employment, inflationary tendencies will be worsened. Unfortunately, many housing agencies *do* expand their activities when the economy expands. Consequently, they may accentuate the business cycle, exacerbating the problems of inflation and unemployment attendant at business cycle peaks and troughs, respectively.

Owned agencies are involved primarily in guarantee programs, while sponsored agencies make direct loans

TABLE 1. Federal and Federally Sponsored Agencies Active in Housing Credit Programs

(Millions of dollars. Amounts outstanding as of March 31, 1978)

Agency	Direct loans	Guar-antees
Government-owned credit agencies		
Federal Housing Administration (FHA)	$ 3,259	$90,241
Veterans' Administration (VA)	951	35,512
Farmers Home Administration (FmHA)	913	13,354
Government National Mortgage Association (GNMA)	3,177	(1)
Government-sponsored credit agencies		
Federal home loan banks (FHLB's)	21,278	0
Federal Home Loan Mortgage Corporation (FHLMC)	[2]3,121	0
Federal National Mortgage Association (FNMA)	34,832	0

1. GNMA-mortgage-backed securities, though guaranteed by GNMA, are backed by VA-insured and FHA-guaranteed mortgages. The ultimate liability is with the VA and FHA.
2. Includes $1,443 million of VA-insured and FHA-guaranteed mortgages.
SOURCE: U.S. Treasury Department.

Federal agencies grow dramatically

Federal participation in the mortgage markets is part of the total picture of Federal credit programs.[1] As of March 31, 1978, direct Federal loans outstanding totaled approximately $188 billion for all Federal credit programs, while loan guarantees totaled another $201 billion. Of these amounts, approximately $72 billion financed housing-related direct loan activities, while $154 billion was for housing-related loan guarantees. Moreover, 94 percent of the housing-related loans and 90 percent of the housing-related guarantees were made by only a few Government-owned and Government-sponsored agencies (Table 1).

The major role of the Government-owned agencies is to administer loan guarantee programs; only a modest amount of direct lending is undertaken by these agencies. The loan guarantee programs are intended to enhance the flow of funds to housing by increasing the marketability of mortgages. Both the Federal Housing Administration and the Veterans' Administration have standardized the mortgage instrument and have imposed construction standards for the collateral. (See the accompanying box, "Federal Agency Creation Spans the Decades.") The loan guarantee programs have grown steadily over time and have displayed little cyclical variation.

The Government-sponsored agencies attempt to stimulate the flow of funds to housing by various direct loan programs; these agencies are not involved in any guarantee programs. (See the box.) These agencies generally obtain their funds by issuing bonds, which are usually sold at interest rates very close to the rates on Treasury debt. The market views the agencies' debt as virtually as safe as Treasury debt, in that most of these agencies buy Government-guaranteed assets (and occasionally use the guaranteed assets as collateral) or lend to strictly regulated institutions or have authorization to borrow from the Treasury if the need arises.

Since the sponsored agencies' programs to assist housing are so different, one way to measure the relative magnitudes of the programs is to compare the amount of money borrowed to finance the individual agencies. The sponsored agencies have experienced dramatic growth (Table 2). For example, over the 20-year period beginning in 1955,

1. A brief summary of direct loans and guarantees under all the Federal credit programs is provided in the Appendix. The "direct loans" category includes both loans made to individuals or institutions and purchases of assets (like mortgages). The "guarantees" category includes loans undertaken by individuals, corporations, or institutions that are insured against default by the Government or an agency.

Sponsored agency financing has grown rapidly

TABLE 2. Nominal and Real Government-Sponsored Agency Debt

(Millions of dollars. Averages of monthly data)

Item	1955	1960	1965	1970	1975	1978-Q1
Nominal debt levels						
Federal home loan banks	$427	$1,276	$4,659	$ 9,831	$19,699	$19,531
Federal Home Loan Mortgage Corporation	*	*	*	*	1,549	1,768
Federal National Mortgage Association	*	2,170	1,808	13,295	28,573	32,642
Real debt levels[1]						
Federal home loan banks	697	1,858	6,267	10,759	15,498	13,313
Federal Home Loan Mortgage Corporation	*	*	*	*	1,218	1,205
Federal National Mortgage Association	*	3,159	2,433	14,536	22,455	22,251

1. Nominal debt levels deflated by the implicit price deflator for gross national product (1972 = 100).
* Either an insignificantly small amount or zero.
SOURCES: Board of Governors, Federal Reserve System.
U.S. Department of Commerce.
Federal Reserve Bank of Dallas.

nominal debt of the Federal home loan banks (FHLB's) increased 4,500 percent; adjusted for the effects of inflation, FHLB debt still grew 2,100 percent.

Not only have the sponsored agencies grown, but they and the owned agencies have grown more rapidly than the traditional sources of mortgage funds; consequently, their share of total mortgage funds supplied has increased (Chart 1). The mortgage holdings of the owned and sponsored agencies increased from 4 percent in 1949 to 9 percent in 1977. Mortgage pools or trusts, which are guaranteed by owned and sponsored agencies, have been increasing their share only since 1970. That year they held less than 1 percent of the mortgage debt; by 1977 they held 6 percent. From 67 percent of the mortgage market in 1949, financial institutions increased their share to 78 percent in 1965. Since that time, their proportion has dropped back to 71 percent. Individuals and others have experienced a long-run decline in their share of holdings, from 28 percent in 1949 to 14 percent in 1977.[2]

2. "Others" includes mortgage companies, real estate investment trusts, state and local credit agencies, state and local retirement funds, noninsured pension funds, credit unions, and U.S. agencies for which amounts are small or separate data are not readily available. Of course, some of these investors may be buying mortgage-backed securities in the "mortgage pools or trusts" category.

Agency activity generally not counter to the housing cycles

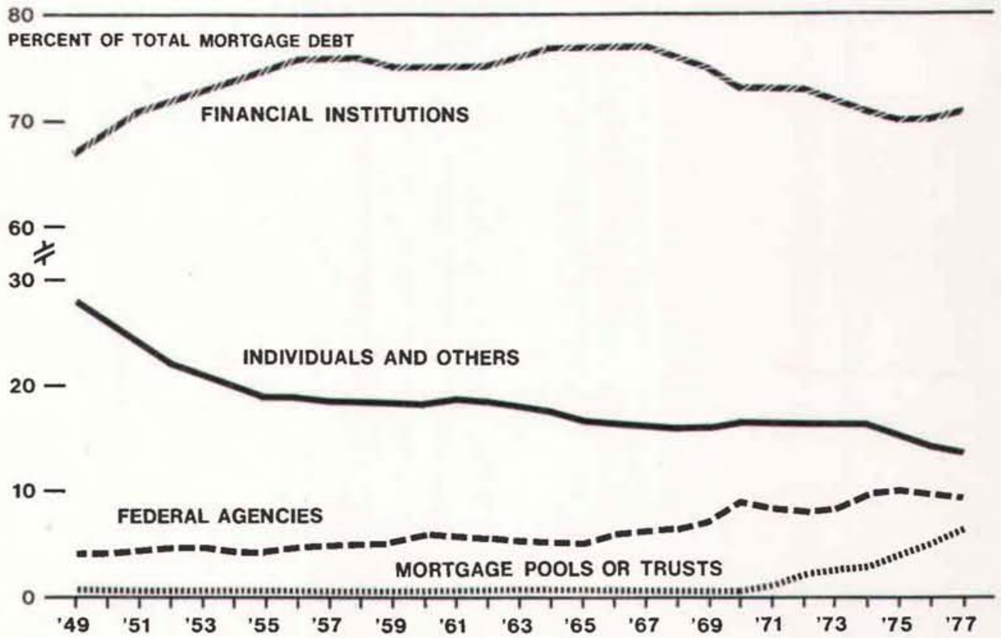
Besides attempting to promote more housing, some agencies attempt to smooth the cyclical volatility of housing. Countercyclical housing policy would imply that agencies increase their mortgage market support when housing is weak and reduce it when housing is strong. Only the sponsored agencies—FHLB's, the FNMA, and the FHLMC (Federal Home Loan Mortgage Corporation)—display significant cyclical behavior in their support activities, as measured by changes in the volume of debt issued (Charts 2-4). This debt is adjusted for the effects of inflation and then called real debt.[3]

In the first three postwar peak-trough periods in housing starts, support activities of the FHLB's generally coincided with the housing cycle rather than displaying sustained movement counter to the housing cycle (Chart 2). To the extent there was support, it tended to be early in the housing downturn. Countercyclical changes in FHLB debt did occur once; the changes were positive before and after the trough in housing starts in the first quarter of 1970. However, in the last housing cycle the FHLB's again reverted to the tendency to be active early in the downturn and to be withdrawing support while housing was still weak in 1975.

3. The real volume of debt is displayed in the charts because the financing behavior of the three agencies is compared to housing starts and, subsequently, to real economic activity.

Federal agencies have grown relative to other suppliers of mortgage debt

CHART 1. Market Shares of Owners of Mortgage Debt



SOURCES: Board of Governors, Federal Reserve System. Federal Reserve Bank of Dallas.

The volatility of FHLB support increased rather dramatically in the late 1960's and into the 1970's as compared with earlier periods. No doubt this was partly the result of rising market interest rates and the joint administration of interest rate ceilings on deposits by the Federal Home Loan Bank Board and the Federal Reserve. Deposit ceilings were maintained below market rates of interest; thus, funds flowed out of both commercial banks and savings and loan associations into money market instruments. Attempts by the savings and loan associations to rebuild liquidity led to increased borrowing from the FHLB's and, subsequently, more debt issue by the FHLB's.[4]

4. Some economists may argue that current changes in FHLB debt finance mortgage commitments made by savings and loan associations some months prior to the current period. Thus, current FHLB support (as measured by changes in debt) actually stimulated housing starts in prior months. If this is so, then FHLB activity would be even more procyclical to housing than Chart 2 shows.

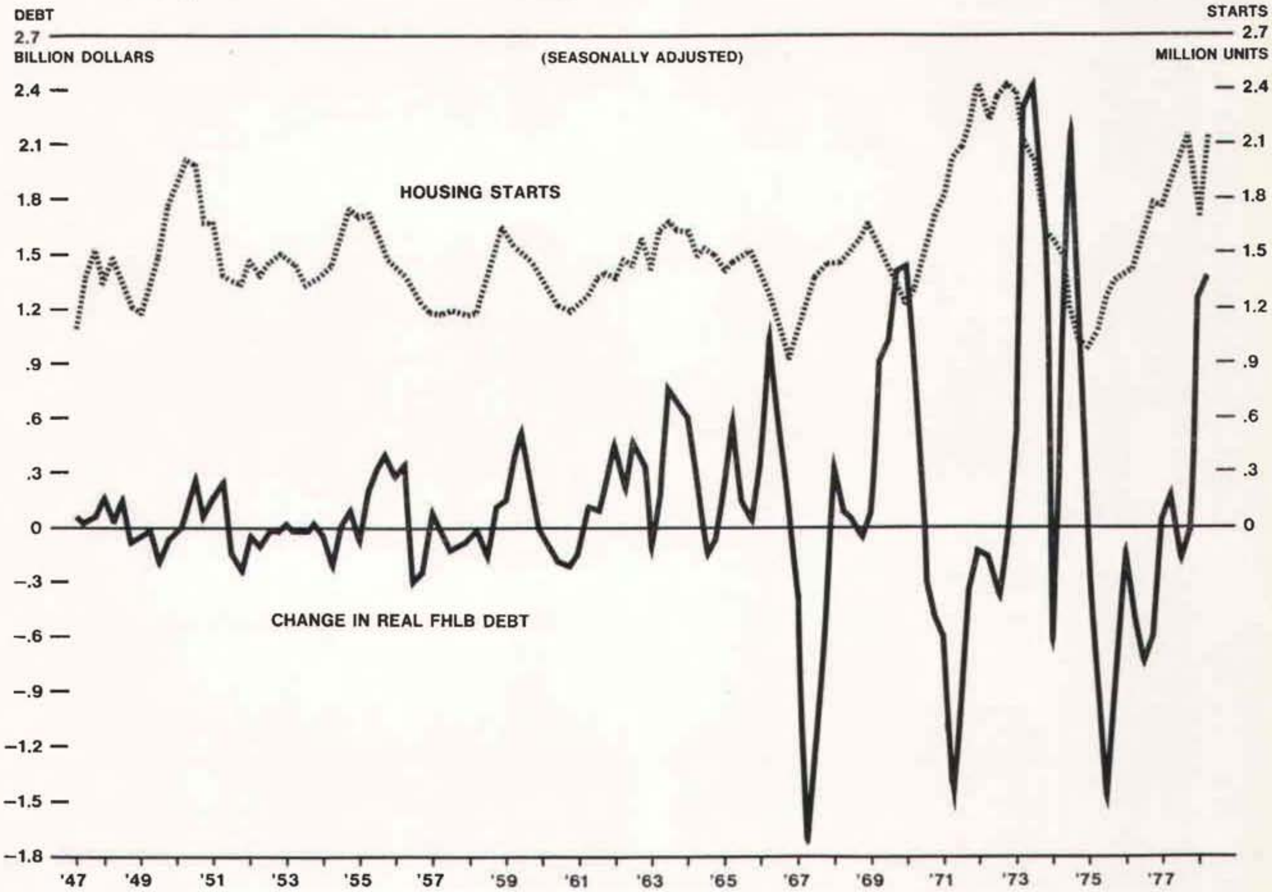
The sponsored agencies have not always provided countercyclical housing support, as is evident when the changes in real debt are used as indexes of sponsored agency activity in the housing market.

Compared with the FHLB's, FNMA did mount more sustained countercyclical housing policy in the late 1950's and early 1960's, but FNMA's activity also tended to be early relative to the housing trough (Chart 3). As with the FHLB's, FNMA activity in 1970 was appropriately counter to the housing cycle.

From the fourth quarter of 1969 to the present, the changes in real FNMA debt have trended downward. In the early 1970's, housing starts were very strong, so the smaller increases in FNMA debt were appropriate. However, after the housing peak in the last quarter of 1972, starts declined

FHLB activities show no consistent pattern counter to the housing cycle . . .

CHART 2. Changes in Real FHLB Debt Versus Housing Starts



SOURCES: Board of Governors, Federal Reserve System.
U.S. Department of Commerce.
Federal Reserve Bank of Dallas.

for nine consecutive quarters. FNMA injected a modest amount of funds in the first quarter of 1973, but its support increased beyond that during only three quarters of the decline in housing. After housing starts plummeted to less than 1 million units in the first quarter of 1975, changes in FNMA support vacillated around zero while housing was still relatively weak.[5]

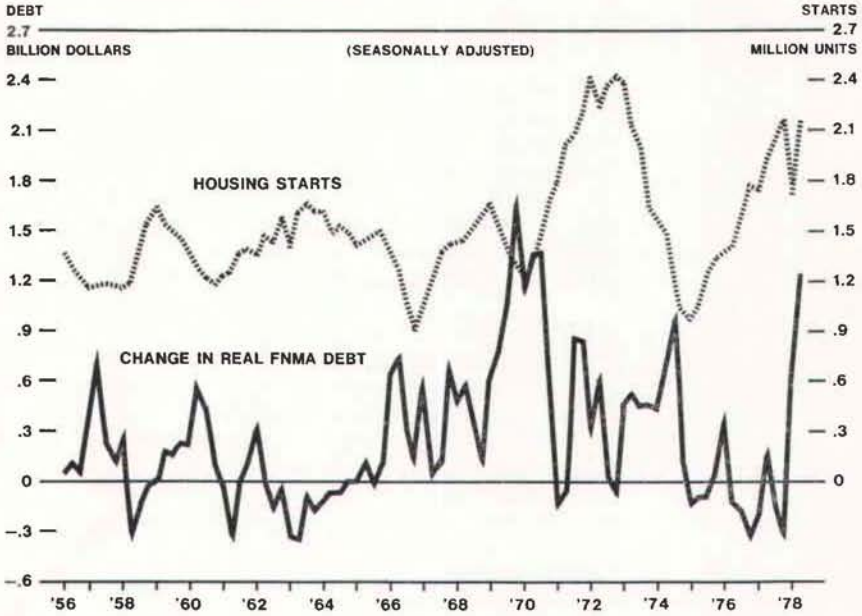
The FHLMC, the newest agency, is much less significant than FNMA or the FHLB's in terms of the volume of support it adds (Chart 4). Nevertheless, during the last housing cycle the FHLMC added funds when housing was strong and withdrew funds when housing was weak, contrary to "proper" countercyclical housing policy.

In summary, the sponsored agencies have not always provided countercyclical housing support, as is evident when the changes in real debt are used as indexes of sponsored agency activity in the housing market. Since all the borrowed funds ultimately affect the mortgage market, the changes in real debt of the FHLB's, the FNMA, and the

5. Some economists may argue that FNMA has its effect on housing starts when FNMA auctions its commitments. Only when these commitments are used will FNMA need to issue debt. Thus, current changes in FNMA debt would affect housing starts in prior months. If this is so, then FNMA activity would be even more procyclical to housing than Chart 3 indicates.

. . . as is also true of activities of the FNMA and the FHLMC

CHART 3. Changes in Real FNMA Debt Versus Housing Starts



NOTE: The FNMA series covers secondary market operations only.
SOURCES: Board of Governors, Federal Reserve System.
U.S. Department of Commerce.
Federal Reserve Bank of Dallas.

CHART 4. Changes in Real FHLMC Debt Versus Housing Starts

NOTE: The seasonal adjustment factors are based on only seven years of data and, thus, are tentative. However, the seasonally adjusted data generally behave in a manner similar to the unadjusted.
SOURCES: Board of Governors, Federal Reserve System.
U.S. Department of Commerce.
Federal Reserve Bank of Dallas.

FHLMC can be summed to obtain the net sponsored agency effect relative to the housing sector (Chart 5). In only one case (the first quarter of 1970) did the net sponsored agency effort strengthen as housing starts weakened and weaken as housing starts strengthened. In general, the activities of the sponsored agencies have not been counter to the housing cycle.

Effects of the agencies uncertain

Although sponsored agency activity is far from countercyclical, this only becomes a problem if, in fact, agency activity can affect the amount of housing. Surprising as it may seem, there is some doubt as to whether all this activity has *any* significant effect on the number of houses being built.

Though the literature contains diverse approaches to the study of the impact of housing agencies on housing, only results of studies that have estimated housing start equations are summarized here (Table 3). Each study's equations contained different explanatory variables and were estimated over different sample periods by different authors.[6] Some studies conclude that federally sponsored housing agencies do not increase housing starts from what they otherwise would have been; other studies show agency programs to be

6. The majority of the authors use FNMA purchases of mortgages or FHLB advances. When FNMA purchases a mortgage or the FHLB's give advances (loans) to their members, these agencies must issue debt or sell equity; the major portion of their funds are obtained by debt issue. For an excellent summary of the empirical findings on this topic, see Leo Grebler, "An Assessment of the Performance of the Public Sector in the Residential Housing Market: 1955-1974," in *Capital Markets and the Housing Sector: Perspectives on Financial Reform,* ed. Robert M. Buckley, John A. Tuccillo, and Kevin E. Villani (Cambridge, Mass.: Ballinger Publishing Co., J. B. Lippincott Co., 1977), pp. 311-46.

Federal Agency Creation Spans the Decades

Government-owned agencies

The **Federal Housing Administration** (FHA) was established in 1934. Its primary purpose is to guarantee, or insure, mortgages against default, thus protecting the lender against loss. To qualify for the FHA guarantee, a property must meet certain construction standards. By bringing some degree of standardization to the collateral and the mortgage instrument, FHA has helped to increase the liquidity of insured mortgages. Only when a default occurs and the property cannot be liquidated for a value sufficient to cover the mortgage will FHA have to issue debt in order to cover the lender. Relative to the amount of insured loans (as in Table 1), direct loans made by the FHA are very small.

The **Veterans' Administration** (VA) was created in 1944 to aid ex-servicemen in a variety of ways, including assistance with housing. The housing-related function of the VA is similar to the function of the FHA, in that its primary role is in guaranteeing, or insuring, mortgages. Although the VA is authorized to lend directly to borrowers, it has made little use of this authorization.

The **Farmers Home Administration** (FmHA) operates under initial authorization passed in 1921 and 1949 and is part of the Department of Agriculture. The purpose of the agency is to assist rural areas by means of direct loans and loan guarantees. Only 34 percent of its direct loan funds are for housing purposes, while 53 percent of its loan guarantees are housing-related. The FmHA makes loans with funds borrowed from the Treasury and from the Federal Financing Bank.[1] The agency originates loans and sells participations in mortgage pools.

The **Government National Mortgage Association** (GNMA or "Ginnie Mae") was created in 1968. The agency assumed the assets and liabilities, and operation, of the management and liquidation functions and the special assistance functions of the Federal National Mortgage Association (discussed in the following section). To this point in time, the mortgages in GNMA-guaranteed pools and trusts have been ultimately insured or guaranteed by the VA and FHA. Regularly scheduled payments of principal and interest from a mortgage pool, as well as any prepayments of principal, are guaranteed to the security holder by the GNMA; however, the final mortgage guarantee rests with the VA and FHA. GNMA finances its activities by utilizing both appropriated and borrowed funds.

Government-sponsored agencies

The **Federal home loan banks** (FHLB's) were created in 1932. All federally chartered savings and loan associations must purchase stock in the Federal Home Loan Bank System; state-chartered savings and loan associations may join if they so desire. One purpose of this system is to provide liquidity to the member institutions through loans. To obtain funds for such lending activities, the FHLB's generally issue debt.

The **Federal Home Loan Mortgage Corporation** (FHLMC or "Freddie Mac") was created in 1970 and is under the control of the Federal Home Loan Bank Board. The purpose of the FHLMC is to buy mortgages during periods of tight money. It may buy conventional mortgages, thus stimulating a secondary market for those instruments. Additionally, it may buy VA-insured or FHA-guaranteed mortgages, thus increasing the liquidity of those instruments.

The **Federal National Mortgage Association** (FNMA or "Fannie Mae") was created in 1938 as a Government-owned agency. In 1968 the association became a privately owned Government-sponsored agency. The Department of Housing and Urban Development (HUD) appoints 5 of the 15 directors of the agency.[2] Prior to 1968, FNMA operated a secondary market in mortgages and had management and liquidation functions. Since 1968, FNMA has only operated a secondary market in mortgages.[3] FNMA auctions commitments to supply mortgage funds. If a commitment is "taken down," FNMA issues debt to purchase the mortgage.

1. The Federal Financing Bank was created in 1974 to coordinate agency borrowing and to incur debt for the purpose of lending to Government-owned agencies.

2. There has been some disagreement (which now seems resolved) between HUD and FNMA over the extent of control HUD should have. See "HUD Plans to Unveil Today Final Rules Exerting More Control Over Fannie Mae," *Wall Street Journal*, August 14, 1978, p. 10.

3. The management and liquidation functions were shifted to GNMA.

effective. The empirical results are certainly mixed.

Researchers who believe agencies increase housing tend to believe that the impact is in the short run and that the long-run effect of these agencies is negligible. In the short run, provision of funds to the mortgage market supposedly forces mortgage rates lower relative to other market interest rates. However, the provision of funds by an agency must be financed. When the agency sells debt, market interest rates on closely substitutable debt (for example, Treasury debt) rise.

Subsequently, these higher market rates cause individuals to divert funds from thrift institutions in order to take advantage of the higher rates on bills and bonds. The higher market rates also cause financial institutions (such as insurance companies, commercial banks, and mutual savings banks) to shift their funds out of mortgages and into the bills and bonds with higher rates. Moreover, the higher rates may reduce the demand for housing as an investment because alternative debt

Empirical findings are mixed regarding agency effects on housing

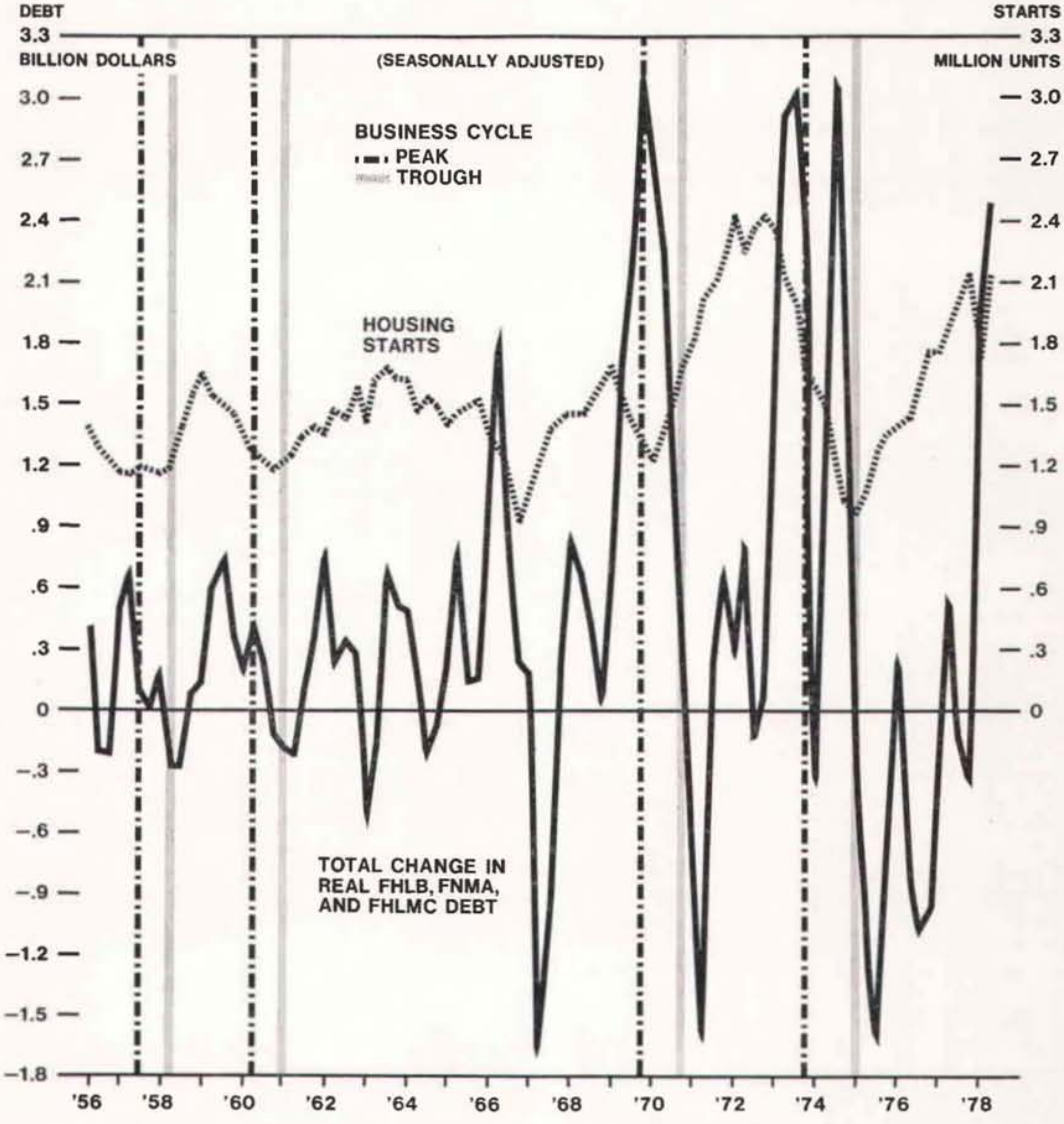
TABLE 3. Impact of Agency Variables in Housing Start Equations

Author, period covered	Variable tested	Results
1. **Arcelus and Meltzer** 1915-40; 1948-68	Real government debt	Negative and significant.
2. **Brady** Third quarter 1960-second quarter 1970	FNMA purchases FHLB advances	FNMA: Negative and insignificant for total and conventional housing starts; positive and significant for VA and FHA starts. FHLB: Positive and significant for total and conventional housing starts; negative and insignificant for VA and FHA starts.
3. **Duesenberry and Bosworth**	FNMA purchases	Short-run positive effect; long-run zero effect.
4. **Huang** Second quarter 1953-fourth quarter 1965	FNMA purchases FHLB advances	FNMA: Positive and significant for VA housing starts but not for FHA starts. FHLB: Positive and significant (at 90-percent level).
5. **Jaffee** June 1950-December 1969	FNMA mortgage holdings FHLB advances	FNMA: Negative and insignificant. FHLB: Positive and significant.
6. **Jaffee and Rosen** Midsixties-December 1976	FNMA commitments	Positive but weak.
7. **Sparks** 1949-64	FNMA net purchases	Positive and significant.

1. Francisco Arcelus and Allan H. Meltzer, "The Markets for Housing and Housing Services," *Journal of Money, Credit, and Banking* 5 (February 1973): 78-99. The exact composition of the "real government debt" variable was not detailed. However, Arcelus and Meltzer treat FNMA and FHLB debt like government debt in interpreting their results for agencies. For a critique see Craig Swan, "The Markets for Housing and Housing Services, A Comment," *Journal of Money, Credit, and Banking* 5 (November 1973): 960-72.
2. Eugene A. Brady, "An Econometric Analysis of the U.S. Residential Housing Market," in *National Housing Models: Application of Econometric Techniques to Problems of Housing Research,* ed. R. Bruce Ricks (Lexington, Mass.: D. C. Heath & Co., 1973), pp. 1-47.
3. James Duesenberry and Barry Bosworth, "Policy Implications of a Flow-of-Funds Model," *Journal of Finance* 29 (May 1974): 331-47. Instead of housing starts, Duesenberry and Bosworth used residential construction (simulation period 1969-71).
4. David S. Huang, "Effect of Different Credit Policies on Housing Demand," in *Study of the Savings and Loan Industry,* directed by Irwin Friend and submitted to the Federal Home Loan Bank Board, 4 vols. (Washington, D.C.: Government Printing Office, 1969), 3:1211-39.
5. Dwight M. Jaffee, "An Econometric Model of the Mortgage Market," in *Savings Deposits, Mortgages, and Housing: Studies for the Federal Reserve-MIT-Penn Economic Model,* ed. Edward M. Gramlich and Dwight M. Jaffee (Lexington, Mass.: D. C. Heath & Co., 1972), pp. 139-208.
6. Dwight M. Jaffee and Kenneth T. Rosen, "Estimates of the Effectiveness of Stabilization Policies for the Mortgage and Housing Markets," *Journal of Finance* 33 (June 1978): 933-46.
7. Gordon R. Sparks, "An Econometric Analysis of the Role of Financial Intermediaries in Postwar Residential Building Cycles," in *Determinants of Investment Behavior,* ed. Robert Ferber, Universities-National Bureau Conference Series, no. 18 (New York and London: Columbia University Press for National Bureau of Economic Research, 1967), pp. 301-31. The FNMA variable was part of a joint variable composed of other sources of mortgage funds.

With only one exception, aggregate agency activities have not run counter to the housing cycle

CHART 5. Total Changes in FHLB, FNMA, and FHLMC Real Debt Versus Housing Starts



NOTE: Prior to the second quarter of 1971, the series was composed of FHLB and FNMA debt only; subsequently, the series has also included FHLMC debt.

SOURCES: Board of Governors, Federal Reserve System.
U.S. Department of Commerce.
Federal Reserve Bank of Dallas.

instruments now yield more than they did initially.[7]

The net long-run results for the mortgage rate, the volume of mortgage funds, and housing starts are theoretically ambiguous. In studies that attribute some short-run positive effects to the agencies, the effects on the financial markets of financing the agency activities usually are given little weight.

Because sponsored agency activity to support housing has tended to increase as the total economy approached business cycle peaks and decrease as it approached troughs, the inflationary tendencies of the U.S. economy have been accentuated.

Agencies may accentuate business cycle problems

Even though the evidence is fairly conclusive that agency activity is not timed to smooth the housing cycle, the possibility remains that such activity can affect the amount of housing. To the extent it does, it may also have broader effects on the general business cycle itself.

Most business cycle peaks are characterized by relatively high interest rates and high rates of inflation. Among expenditure categories, housing is one of the most interest-sensitive; consequently, housing starts tend to decline as interest rates increase and the business cycle peak approaches. Before each of the six post-1947 business cycle peaks, housing starts peaked 3 to 13 quarters before the total economy. In the two most recent cycles, housing starts reached their peak and declined from three to four quarters before the peaks in total economic activity (Chart 5).

According to prior housing start studies, agencies may have some short-run positive effect on the level of housing starts. However, the agencies do not operate in such a way as to have well-defined activities counter to the housing cycle. To the extent any countercyclical housing activities can be identified in the aggregate, the sponsored agencies do tend to increase their activity early in the housing downturn but generally do not sustain that activity throughout the downturn (Chart 5). Thus, with respect to three out of four business cycle peaks since 1956, the sponsored agencies reached relative peaks in their activity at, or within one quarter of, the peaks in total economic activity.

The financing of agency activity initially tends to alter the structure of interest rates by lowering mortgage interest rates and raising other market interest rates. Because housing is more interest-sensitive than the other categories of spending, increases in agency activity may stimulate housing while other expenditures are not substantially reduced. Consequently, total spending at the business cycle peak may increase above the level it would otherwise have been. Given that resource bottlenecks usually occur at business cycle peaks, inflation may be worsened. If the Federal Reserve responds to the increased inflation by raising the general level of interest rates, the inflation generated by agency activity could be reduced. However, mortgage interest rates would then be higher, which would depress new housing construction.

Conclusion

Though a significant financial commitment has been made to the housing agencies, the evidence regarding the potential effects of the agencies on the level and cyclical instability of housing starts is inconclusive. Rather surprisingly, sponsored agency support often weakened as housing weakened and strengthened as housing strengthened—just the reverse of countercyclical housing policy.

Obtaining resources for these housing agencies has not been costless. The direct costs of the sponsored agencies' activities are recognizable and equal the dollar amount of agency bonds issued. The less visible costs of these programs are their potential effects on inflation and unemployment at business cycle peaks and troughs, respectively. Because sponsored agency activity has tended to increase as the total economy approached business cycle peaks and decrease as it approached troughs, the inflationary tendencies of the U.S. economy have been accentuated.

In summary, it is not clear that the sponsored agencies are increasing the level of housing and/or reducing its volatility. Thus, it certainly is not obvious that maintaining or increasing the level of resources flowing to these housing agencies will contribute to the goal of a less volatile housing industry and/or more housing for the nation.

7. Some authors have suggested that the agencies may ultimately have a negative impact on housing starts, since the actual stock of houses after the agency activity is larger than the desired stock of houses. See Dwight M. Jaffee and Kenneth T. Rosen, "Estimates of the Effectiveness of Stabilization Policies for the Mortgage and Housing Markets," *Journal of Finance* 33 (June 1978): 936.

Appendix

DIRECT AND GUARANTEED LOANS OUTSTANDING UNDER FEDERAL CREDIT PROGRAMS

(Millions of dollars. Amounts outstanding as of March 31, 1978)

Agency	Direct loans[1]		Guarantees[1]	
1. Wholly owned Government enterprises payable in dollars				
Office of the President	$ 14,648		$ 4,400	(653)
Agriculture Department	16,118	(913)	25,094	(13,354)
Commerce Department	660		5,328	
Defense Department	10		*	
Health, Education, and Welfare Department	5,017		7,653	
Housing and Urban Development Department	11,177	(10,605)	105,853	(104,624)
Interior Department	327		113	
Justice Department	154		*	
State Department	42		*	
Transportation Department	401		2,196	
Treasury Department	3,962		*	
General Services Administration	51		862	
Veterans' Administration	2,678	(951)	35,512	(35,512)
Total	55,245	(12,469)	187,011	(154,143)
2. Wholly owned Government enterprises payable in foreign currencies				
Office of the President	2,002		*	
Treasury Department	18		*	
U.S. Information Agency	1		*	
Total	2,021		—	
3. Wholly owned independent agencies				
Community Services Administration	14		*	
District of Columbia	1,289		*	
Export-Import Bank	11,408		4,454	
Federal Home Loan Bank Board: Federal Savings and Loan Insurance Corporation	48		*	
Interstate Commerce Commission	105		28	
National Credit Union Administration	*		5	
Small Business Administration	4,300		5,700	
U.S. Railway Association	365		*	
Rural Electrification Administration	9,985		3,124	
Total	27,514		13,311	
4. Privately owned Government-sponsored enterprises				
Banks for cooperatives	6,800		0	
Federal intermediate credit banks	13,588		0	
Federal land banks	22,927		0	
Federal home loan banks	21,278	(21,278)	0	
Federal Home Loan Mortgage Corporation	3,121	(3,121)	0	
Federal National Mortgage Association	34,832	(34,832)	0	
Student Loan Marketing Association	318		271	
Total	102,865	(59,231)	271	
Summary totals				
1. Wholly owned Government enterprises payable in dollars	$ 55,245	(12,469)	$187,011	(154,143)
2. Wholly owned Government enterprises payable in foreign currencies	2,021		—	
3. Wholly owned independent agencies	27,514		13,311	
4. Privately owned Government-sponsored enterprises	102,865	(59,231)	271	
TOTAL	$187,645	(71,700)	$200,593	(154,143)

1. Amounts in parentheses cover housing-related programs only.
* Denotes an insignificantly small amount, zero, or an unknown amount.
SOURCE: U.S. Treasury Department.

Several Actions Taken on Regulation Z

The Board of Governors has recently dealt with several problem aspects of Regulation Z by amending and proposing amendments to the complex Truth in Lending regulation.

One of the amendments, effective August 31, allows creditors to use more than one page in disclosing payment schedules for transactions where monthly payments vary in size. Previously, the regulation required all such disclosures to be made on one side of a single page.

The Board adopted another Regulation Z amendment, also effective August 31, 1978, to simplify percentage rate calculations for transactions with minor irregularities in the repayment schedule. The change allows creditors making graduated-payment mortgage loans to count initial payment periods of up to 62 days as if they were regular.

Moreover, the Board has published for comment a new Regulation Z interpretation that would require banks to disclose any interest forfeiture on a time deposit when that deposit is used as security on a loan. The interest reduction is necessary when the rate charged on loans, required by Federal law to be at least 1 percentage point more than the rate paid on deposits, exceeds a state's usury ceiling. In such a case, the rate paid on the deposit must be reduced.

An amendment that became effective July 26 could establish a new credit source for consumers. The amendment waives the notice requirement of Regulation Z for individual transactions under certain open-end credit plans that are secured by a borrower's residence. The regulation requires creditors to notify customers of their right to cancel credit arrangements within three business days when their homes are used as collateral. This "right of rescission" requirement has tended to prevent creditors from offering open-end credit, such as through credit cards or overdraft checking, that is secured by personal residences. Therefore, the Board has relaxed the regulation and waived the notice requirement in open-end transactions when the creditor and the seller are not the same party.

Under the new rules, a creditor is required to notify customers at least once a year, rather than each time a credit transaction occurs, of their "right to rescind." Notifications must also be given when an open-end credit plan is first opened, the credit limit is increased, the terms of the account are changed, and a security interest in a home is added to an existing open-end credit arrangement.

In connection with this amendment, the Board issued an interpretation of Regulation Z that provides sample disclosure statements creditors may use to satisfy the requirements of the new rules.

Reserve Requirement Eliminated on Foreign Borrowing

Large U.S. banks will be able to compete more effectively with foreign-owned banks as a result of the elimination of the 4-percent reserve requirement on foreign borrowings of U.S. banks.

The Federal Reserve Board reduced from 4 percent to zero the reserve requirement on foreign borrowings of member banks, primarily Eurodollars, from their foreign branches and other foreign banks. The 1-percent reserve ratio on foreign branch loans to U.S. borrowers was also eliminated. The reduction in reserve requirements was effective October 5, 1978.

The Board said its action "is intended to encourage member banks to substitute Eurodollar borrowings for domestic borrowings as a source of funds. Such increased Eurodollar borrowings should improve the demand in Euromarkets for dollar-denominated assets."

The reserve requirements embodied in Regulation M, "Foreign Activities of National Banks," were imposed in 1969 to discourage bank borrowing abroad because it was being used to circumvent the Federal Reserve's tight money policy. During the 1960's the Federal Reserve was using Regulation Q—which at that time applied to all deposits, including large certificates of deposit (CD's)—to fight inflation by driving market rates above ceiling rates set by the regulation. Since depositors could earn a higher return elsewhere, they allowed their large CD's to mature, then withdrew the funds. Faced with this decline in deposits, U.S. banks entered the Eurodollar market to meet the credit needs of their customers. Banks borrowed heavily from their foreign branches, which were not subject to Regulation Q and could pay whatever was required to obtain funds. Outstanding CD's dropped dramatically, and Eurodollar borrowing increased substantially. By June 25, 1969, U.S. bank liabilities to their foreign branches had risen to $13.6 billion.

To discourage banks from using the Eurodollar market so heavily, the Federal Reserve imposed reserve requirements on foreign borrowings of member banks. Since 1969 the reserve requirements have ranged from 4 percent to 20 percent. Because U.S. banks have had to maintain these reserves while their foreign-owned counterparts did not, U.S. banks have been at a competitive disadvantage. With the elimination of reserve requirements on foreign borrowings of member banks, competitiveness of U.S. banks should improve.

Migration Changes the Face of Agriculture

By Don A. Riffe

Last year, only 1 person out of 28 was a farm resident. Farm residents have declined from 30 percent of the total population in 1920 to about $3^{1}/_{2}$ percent in 1977. In the early seventies, estimates indicated that the rate of decline in the farm population might be slowing. However, after a brief period of relative stability, the farm population again appears to be declining rapidly. There were approximately 12 percent fewer farm residents in 1977 than in 1975, compared with a decline of only about 9 percent in the first five years of this decade.[1]

The long-term downward trend in the farm population has traditionally been associated with the ongoing mechanization of agriculture and increasing pressures for occupational change. More recently, a pronounced decrease in the number of farm children may be attributed, at least partially, to a drop in the national birth rate. Over time, migration and birth patterns have affected certain segments of the farm population more than others, so that many characteristics of farm residents have changed. Agriculture, in general, has undergone so many changes that farms and farmers are no longer as easily identifiable as they once were.

1. Farm population estimates for a single year should be viewed only as rough approximations. These and other farm population data are based on estimates in *Current Population Reports*, Series P-27, prepared by the U.S. Department of Commerce, Bureau of the Census, in cooperation with the U.S. Department of Agriculture.

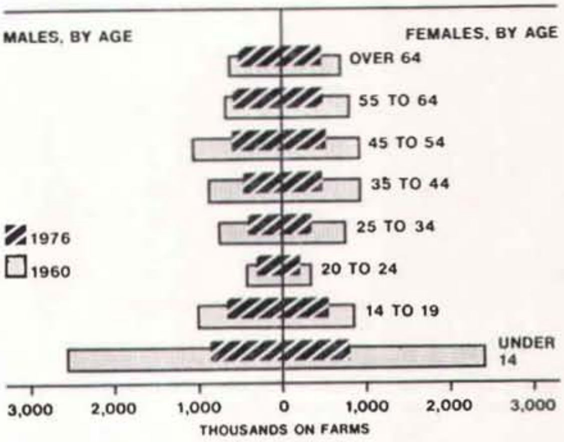
The farm population defined

Discussion of the farm population is of little value without knowledge of the standard used to determine farm residency. And the problem of determining who should be counted in the farm population is not as simple as it may seem at first glance. An individual growing a thousand acres of grain is obviously a farmer, but should he be counted in the farm population if his residence is in town? How large must a vegetable garden become to be called a farm?

To deal with such problems, the Bureau of the Census and the U.S. Department of Agriculture use this definition in estimating the farm population: "Farm population consists of all persons living in rural territory on places of 10 or more acres if as much as $50 worth of agricultural products were sold from the place in the reporting year .... It also includes those living on places of less than 10 acres if as much as $250 worth of agricultural products were sold from the place in the reporting year."[2] With a few minor exceptions, "rural territory" consists of areas other than towns of 2,500 inhabitants or more. The farm population includes all resident members of the farm household.

The definition is designed to include nearly all agricultural production in the United States. Thus, farm population estimates include a number of people operating very small enterprises that do not conform to the traditional "family farm" concept. Since 35 percent of all U.S. farms had total sales under $2,500 in 1977, it appears that farm population estimates are heavily influenced by this group. Under a slightly narrower farm definition, a substantial proportion of the current farm population might be classified as rural nonfarm residents.

Migration from U.S. farms has been greatest for under-20 age groups



SOURCE: U.S. Department of Commerce, Bureau of the Census.

Trend away from metropolitan areas

The broadly held belief that most farm migrants move directly to large urban areas may be a misconception in the seventies. Although the farm population has been declining, the nonmetropolitan population has not. Reversing a post-World War II trend, nonmetropolitan areas—essentially, counties without a city of 50,000 inhabitants or more—experienced a 9-percent increase in population between 1970 and 1977. Nonmetropolitan growth since 1970 has undoubtedly created more jobs in rural areas, and many farm migrants prefer to remain rural residents.

Some farm "migrants" may simply be reclassified as nonfarm residents when their land is put to a nonagricultural use. Others find nonfarm employment in their own communities. A number of farm families are not counted in the farm population because they live in small towns rather than on farms. But no matter where migrants go, their departure from farms reveals some characteristics common to those who stay.

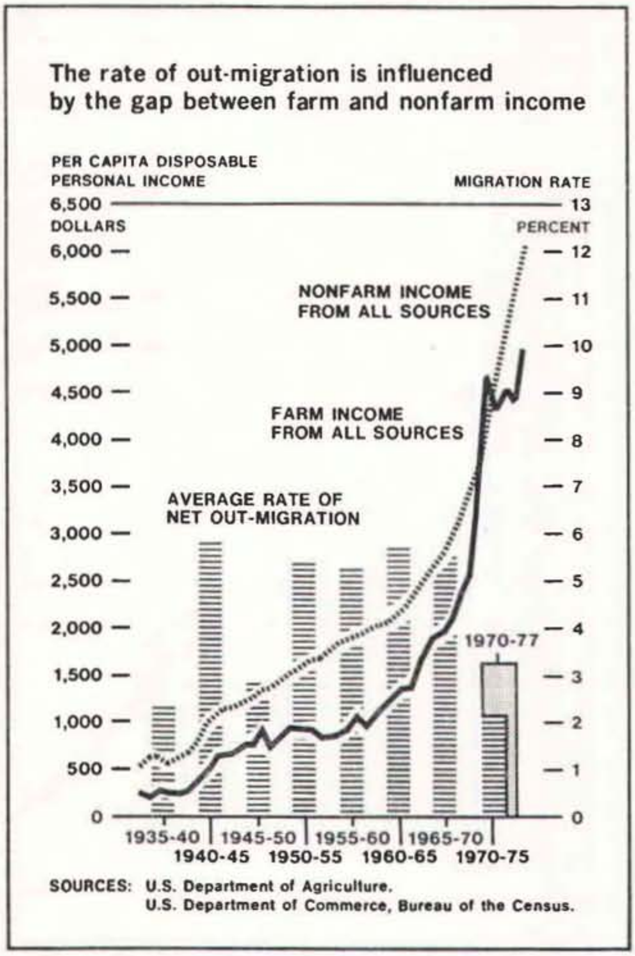
Farming dominated by males

One distinctive characteristic of the farm population is the ratio of males to females. It is apparent that more women migrate from farms than do men. There were 109 males on farms for every 100 females in 1976, while there were only 93 males per 100 females in the nonfarm civilian population. In general, it appears that women leave farms in relatively large numbers before reaching their 20th birthday. In the group of farm residents under 14 years of age in 1976, there were 110 males for every 100 females. In the 20-to-24 age group, there were 128 males on farms per 100 females. The male-female ratios in these age groups were about the same in 1960.

An explanation offered by the Census Bureau is that more females migrate from farms because of the predominantly masculine nature of farm work. Another view is that opportunities for women to have more than a subsidiary role in agricultural enterprises have been limited by factors other than the physical demands of farming. Such factors include limited availability of credit to women and unfavorable inheritance tax laws.

Another striking feature of the farm population is the age structure. The number of farm residents considered to be farm operators in the 1974 Census of Agriculture was equal to about a fourth of the farm population. Forty-four percent of these farmers were age 55 or over. Only 13 percent were under age 35, with the average age being 51.7. By contrast, about 16 percent of the U.S. civilian la-

2. In 1975, a new farm definition was announced by the Agriculture Department and the Census Bureau. Under the new definition, a farm is defined as "any place located in rural territory from which agricultural products worth $1,000 or more were sold, or would normally be sold, in the reporting year." However, no data have been reported yet under this definition.



bor force was 55 or over. Forty-seven percent of the total labor force was under 35.

Migrants have tended to leave the farm before entering the 20-to-24 age group. In 1960, there were nearly 5 million farm residents under the age of 14. Sixteen years later, in 1976, the entire 14-to-34 age bracket totaled less than 2.5 million. More than half of the farm residents under 14 years of age in 1960 had migrated from farms by 1976—a number roughly equal to a third of the entire 1977 farm population.

The number of children on farms has declined at a much faster rate than the rest of the farm population. Farm residents under 14 years of age declined 38 percent from 1970 to 1977. Those 14 or over declined 13 percent during the same period. Except for the under-14 group, the various age categories have represented a fairly constant proportion of the farm population since 1960 (all have declined in numbers).

Small-scale farms most numerous

U.S. farms average approximately 400 acres in size, but the diverse nature of farms makes acreage a relatively useless measure of size. For this reason, farms are commonly grouped according to the value of annual sales.

Apparently, most farm residents live on farms with relatively small annual sales. Roughly 58 percent of all farms had total sales under $10,000 in 1977. A number of these farms are the primary source of income for the people operating them, but part-time farmers account for a growing proportion of the farm population. Thus, in many cases, farm sales may reflect only a portion of the farm family's income from all sources.

Farmers who are unable to increase efficiency through technological improvements and large-scale production often find themselves at a competitive disadvantage. Those depending on a relatively inefficient farming operation as the primary source of income are especially vulnerable to low or variable commodity prices. Nonwhite minorities, especially blacks, in agriculture have historically been associated with small-scale tenant farming of tobacco and cotton in the South. The trend in agricultural production has been toward large mechanized farms, which has meant fewer tenant-operated farms, fewer small farms, and less total farm labor required. Since minorities have had a disproportionately large representation in the smaller-scale farming operations, a disproportionate number have sought employment outside agriculture. Nonwhite minorities on farms totaled about 397,000 persons in 1977, down approximately 53 percent from 1970.[3] Minorities comprised only about 5 percent of the farm population last year, compared with almost 9 percent in 1970.

District farmers older, and more have nonfarm occupations

According to the 1974 Census of Agriculture, 48 percent of the farm operators in Eleventh Federal Reserve District states were engaged in something other than farming as a principal occupation. This compared with only 37 percent nationwide. Similar data for farm operators are not available for 1977, but for all farm residents there has been a trend away from agriculture as the primary source

3. In the 1970 census, blacks comprised 87 percent of the nonwhite farm population.

Off-farm income allows many farm residents to remain on small farms

Item	1977 income per farm operator family, by farm sales classes: $100,000 and over	$40,000 to $99,999	$20,000 to $39,999	$10,000 to $19,999	$5,000 to $9,999	$2,500 to $4,999	Less than $2,500
Number of farms (Thousands)	162	348	321	311	302	304	958
Net farm income before inventory adjustment	$38,310	$18,502	$ 9,993	$ 4,987	$ 2,696	$ 1,508	$ 1,518
Off-farm income	9,636	6,011	6,956	9,466	12,179	14,559	15,077
Total income from farm and off-farm sources ...	$47,946	$24,513	$16,949	$14,453	$14,875	$16,067	$16,595

SOURCE: U.S. Department of Agriculture.

of employment. The average age of Eleventh District farmers also appears to be higher than the average for all U.S. farmers. In 1974, almost 49 percent of the District's farmers were age 55 or over, compared with 44 percent nationally. Only 11 percent were under age 35, compared with 13 percent for the United States.

The rate of net out-migration of the farm population in District states has probably been higher than the national average rate since 1970. The West South Central Division (Census Bureau classification)—consisting of Texas, Oklahoma, Louisiana, and Arkansas—experienced an annual net out-migration rate of 5.1 percent between 1970 and 1976. This was exceeded only by the rate of 5.7 percent for the South Atlantic Division.

One apparent reason for the relatively high out-migration is that the District's most populous state, Texas, has had a fairly low average level of net income per farm. Also, rapid growth in nonfarm industries has provided alternative opportunities for many farm families. For the period from 1970 to 1976, average realized net income per farm in Texas was 36 percent below the U.S. average. By contrast, in the District's least populous state, New Mexico, average realized net income per farm was 60 percent higher than the U.S. average.

Farmers earn less from farming than from other sources

Per capita personal farm income from farming was $2,341 in 1977, while per capita personal farm income from nonfarm sources was $3,162. Only half of the employed farm resident labor force was primarily engaged in agricultural production. The smaller the farm, in terms of total sales, the higher the probability that the farmer is employed in a nonfarm occupation. This is evidenced by the fact that total income per farm operator family in 1977 was greater for farms with annual sales of less than $2,500 than for farms with annual sales between $10,000 and $20,000. The gap between farm and nonfarm income appears to have been a major reason for net out-migration from agriculture, but it may also eventually retard out-migration as more and more farmers acquire substantial income from nonfarm sources.

Even with outside employment, per capita farm income from all sources has exceeded income of nonfarmers only once in the past 40 years. The income gap widened substantially in the fifties and sixties, which was a period of heavy out-migration, but began to narrow in the early seventies. The rate of net out-migration slowed considerably as farm income remained near nonfarm levels. When the gap almost doubled in size between 1975 and 1976, net out-migration rates began to climb. However, the relationship between out-migration and the income gap may not be as strong as the figures suggest, since other factors also influence migration decisions.

Nonfarm jobs may slow long-term out-migration

Government programs designed to bolster commodity prices, provide disaster payments, and guarantee loans to farmers undoubtedly reduce the economic pressures for immediate movement out of agriculture. In the fifties and sixties, however, farm programs appeared not to reduce long-term out-migration. In some instances, Government programs may have actually lowered the number of farmers by creating a barrier to entry. By reducing some of the risks in farming, Government programs may have enabled a number of farmers to specialize and expand through the purchase of land and other productive inputs. As land prices have risen, entry of new farmers has become more difficult.[4]

The number of farm residents employed in nonfarm occupations has not declined as rapidly as the rest of the farm population. Thus, nonfarm employment may eventually do more to slow the rate of decline in the total number of farm residents. Farm residents employed in agriculture declined 16 percent from 1970 to 1976, while farm residents employed in nonagricultural industries increased about 2 percent.

Although larger, specialized farms may be able to produce more efficiently, part-time farmers operating on a smaller scale are exposed to less total risk by being diversified between farm and nonfarm activities. Also, it appears that a growing number of people moving to rural areas—and being counted as farm residents—farm more as a hobby than as a business. Thus, as farm residents whose primary source of income is a relatively inefficient farming operation diminish in numbers, the rate of out-migration should become less responsive to the gap between farm and nonfarm income.

Years of net out-migration from agriculture have left fewer than 8 million people on farms in the United States. The decline has disproportionately affected nonwhite minorities, teenagers, and, to a lesser extent, women. Following a long-term trend, technology continues to lower labor requirements in agriculture. However, pressures for occupational change and out-migration may ease in the future as a growing proportion of the farm population comes to depend on nonfarm income.

4. Luther Tweeten, *Foundations of Farm Policy* (Lincoln: University of Nebraska Press, 1970), p. 326.

New Film Available

A new educational film describing the purposes and functions of the Federal Reserve System has been distributed to all Reserve banks. Entitled "The Fed . . . Our Central Bank," the film emphasizes the monetary policy functions of the Federal Reserve and the services available from the Fed to commercial banks.

The 20-minute, 16-mm film is available free of charge to banks, high schools, colleges, and other audiences. Requests for the film should be sent to the Bank and Public Information Department of this Bank, (214) 651-6261.

Loans, Deposits, and Net Income Up in 1977 at Eleventh District Member Banks

Member banks in the Eleventh District experienced sharp growth in loans, deposits, and net income in 1977, especially in the last half of the year.

Total loans at District member banks rose 14.2 percent last year. Loans to commercial and industrial firms increased $1.5 billion, or 15.6 percent, and real estate loans increased nearly $1.3 billion, or 33.2 percent. Consumers continued to borrow heavily in 1977, and their outstanding debt to member banks in the District rose $1.0 billion.

Total deposits at member banks in the District expanded 12.1 percent last year—the fastest rate since 1972—despite a small decline in the first half of the year.

Net income of the banks rose $79 million, or 18.9 percent, to reach $499 million in 1977. Total operating income was up 15.2 percent last year, somewhat less than the 17.7-percent growth of the previous year.

Copies of comparative statements of condition and income of member banks in the Eleventh District are available from the Bank and Public Information Department of this Bank, (214) 651-6267.

New state member bank

Citizens Bank and Trust Company of Baytown, Texas, Baytown, Texas, located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, was admitted September 21, 1978, as a member of the Federal Reserve System. The bank has a capital structure of $7,891,000, consisting of capital stock of $2,000,000, surplus of $2,000,000, undivided profits and reserves of $2,891,000, and capital notes of $1,000,000. The officers are: John C. Echols, Chairman of the Board and Chief Executive Officer; Hazel C. Echols, Vice Chairman of the Board; Conrad W. Magouirk, President; Carl Brandon, Vice President; E. Reginald Brewer, Vice President; William J. Gidley, Vice President and Trust Officer; Ted H. McCall, Vice President; Lynn McCage, Vice President and Comptroller; Beatrice Horton, Vice President; Ralph H. Kunz, Vice President; Richard D. Scrivner, Vice President; Jess Taylor, Vice President; Mike Wilson, Auditor; Michael G. Barrow, Trust Officer; Wynnell Brinkley, Cashier; Mary F. Fayle, Assistant Vice President; Janet Grigsby, Assistant Vice President; Thelma Hamilton, Assistant Vice President; Carol Harrison, Assistant Vice President; Gayle Guidrey, Assistant Cashier; Shirley Archer, Assistant Cashier; Bobbie Fortenberry, Assistant Trust Officer; and William Ketchum, Assistant Comptroller.

New nonmember bank

Rose Capital Bank, Tyler, Texas, a newly organized insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business October 6, 1978.

Ad Guidelines Issued for Six-Month Money Market Certificates

Advertising guidelines for banks and thrift institutions offering the six-month money market savings certificates pegged to the Treasury bill rate have been issued by the three Federal regulatory agencies. The guidelines require that advertising clearly and conspicuously state that a particular rate is applicable only to certificates issued during a specified week.

The new certificates of deposit (CD's), first issued on June 1, have interest rates pegged to the average auction discount rate payable on six-month Treasury bills. When the CD's are issued, their interest rate is determined by the rate on six-month Treasury bills of the preceding week. Therefore, the rate on the CD's varies, depending on when they are issued. This has made advertising of the new certificates difficult. The guidelines offer this wording as appropriate: "Had you bought this bank's six-month money market certificate on Thursday, July 6, 1978, we would now be paying you 7.44% interest."

The guidelines were issued by the Federal Deposit Insurance Corporation, the Federal Reserve Board, and the Federal Home Loan Bank Board.