



In July 1956, the United States began the most ambitious highway construction program in history—the modernization of over 41,000 miles of trunk highways within the space of 13 years. Although this country is the foremost motorized nation in the world, highway construction and improvement have not kept pace with the growth and development of motor traffic. Efficient transportation is hindered by miles of narrow, unsafe highways, by congested city streets, and by suburban roads which are inadequate for the traffic flows they carry.

Until the early part of this century the Federal Government confined its highway activities to educational and research programs, but the Federal-Aid Road Act of 1916 provided grants to the states for the improvement of rural roads on which the mails were transported. The money was allocated one-third on the basis of area; one-third on population; and one-third on post-road mileage. The states, for their part, matched the funds dollar for dollar, set up adequate highway departments, and maintained the roads. In 1921

an interstate system of principal roads outside incorporated areas (which represented about 7 percent of total rural mileage at that time) was designated, and Federal aid was limited to this network of major roads.

Expansion of Federal aid

Federal highway expenditures were boosted sharply in the 1930's as a means of providing public relief during the depression. The primary purpose of highway construction in that period was to provide employment, and for the first few years of the decade the requirement for matching funds was relaxed. In 1936 a new Federal-aid road system was set up—the secondary, or farm-to-market, road program. During the 1930's, the contribution of the Federal Government to total funds spent on construction of the state highway systems rose to 40.5 percent.

At the beginning of the twentieth century, the United States had about two million miles of streets and roads, less than 1 percent of which was paved. By 1941, the total network had increased by more than one million miles,

and over one and one-half million miles had been surfaced. The nation had gone a long way toward getting out of the mud. But there was still the formidable task of providing adequate highways for the millions of improved, high-speed vehicles which now used the roads. The number of cars, trucks, and buses had risen from 3.6 million in 1916 to 37.1 million in 1941, and most of the traffic was concentrated on city streets and major roads which represented only a fraction of total mileage. The nation was facing a serious urban congestion problem, which was aggravated by the interruption of highway improvements during World War II.

The Highway Act of 1944 extended Federal road aid to urban areas, and the National System of Interstate and Defense Highways was officially set up. In 1954 the central government's share of the costs for the interstate routes was raised from the traditional 50 percent to 60 percent. This was increased to 90 percent¹ by the Highway Act of 1956, which completely outlined and authorized a vast program—41,000 miles of controlled-access superhighways spanning the nation, linking 90 percent of all cities with populations over 50,000, and designed to handle 20 percent of total motor vehicle traffic.

Financing the interstate system

The states obtain a large part of the funds needed for highway construction and maintenance from user taxes on gasoline, tires, and motor vehicles. Most states have laws against diversion of such tax money for other uses. But prior to 1956 Federal highway user taxes were simply deposited in the general funds, and money was then appropriated by Congress for grants to the states. When the Federal-Aid Highway Act of 1956 was passed, a special trust fund was set up to finance expenditures on the interstate system. The Fed-

eral excise taxes on motor fuels, gasoline, tires, highway vehicles, and stocks of motor vehicles were increased for the period extending from July 1956 to July 1972.

The revenue section of the act contained a clause known as the Byrd Amendment, which stated that expenditures in any given year must not exceed the money available in the trust fund. When cost estimates were revised upward this year, this pay-as-you-build provision threatened to stretch the program out to 16, or even 20, years. In order to insure completion of the project before 1975 and to stimulate the economy during the present recession, Congress amended the highway bill in April of this year. The Byrd Amendment was suspended for fiscal years 1959 and 1960, and apportionments were increased for both the interstate and the regular Federal-aid road systems.

Impact of the interstate program

By the early 1970's, when the interstate project is finished, more will have been changed than just the surface of the highways. Past experience with new expressways suggests that the interstate program will have very important effects on urban planning and on industrial expansion and relocation. Some individuals and communities will suffer economic losses from relocation of highways and facilities; but, on balance, the program should result in increased land values, revitalization of urban shopping centers as through traffic is rerouted, and better industrial and urban distribution patterns. Furthermore, the trucking industry should be greatly stimulated by this program. Schedules will be shortened, costs reduced, and new markets opened.

Another significant result expected of the project is a decrease in accidents. On the basis of studies showing that traffic fatalities are greatly reduced on controlled-access roads, engineering estimates have been published which predict that perhaps as many as 4,000 lives per year will be saved by the interstate

States in which public lands represent more than 5 percent of the total state area can receive up to 95 percent of the cost of improving interstate roads. All Twelfth District states qualify for this extra aid.

superhighways. Besides making motor travel safer, the program will also expedite traffic, thus saving time and money for both the average motorist and the commercial vehicle. It has been estimated that the savings in time, operating cost, and reduced accident damage made possible by the interstate system will amount to about \$2 billion per year.

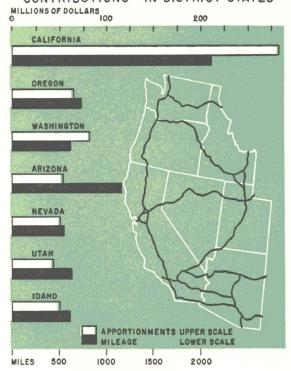
The increased convenience, comfort, and safety of the American motorist will be longterm results of the program. But in the next few years the economy will feel the impact of the construction program itself and its concomitant demand for labor and materials such as steel, cement, explosives, lumber, aggregates, and petroleum products. During the current recession the program acts to support the economy by supplying a more or less constant market for materials and labor. By the same token, during a boom the program would also furnish competition for materials and labor and hence contribute in some degree to inflationary pressures. The shortage of engineers which threatened to delay the program at first has been circumvented to some extent by the use of computing machines, photogrammetry, and improved management procedures; and the downturn in business activity has eased the serious problem of a structural steel shortage. If a rise in the volume of construction of bridges, overpasses, and other special road structures should coincide with a spurt in other heavy construction, however, structural steel might again be in short supply.

Current status of program

The highway construction program officially began in July 1956, with the signing of the Federal-Aid Road Act which provided funds for the first three years of the project. As of April 30, 1958, \$5.0 billion in Federal funds had been apportioned among the states. As Table 1 shows, \$3.5 billion has been ob-

CHART 1

INTERSTATE HIGHWAY SYSTEM
PROJECTED MILEAGE AND FEDERAL
CONTRIBUTIONS 'IN DISTRICT STATES



¹Funds apportioned through fiscal 1959.
Source: U.S., Congress, House, Committee on Public Works,
Report of Factors for Use on Apportioning Funds for the
National System of Interstate and Defense Highways, 85th
Cong., 2nd Sess., House Doc. 300.

ligated.¹ Of this sum, \$1.4 billion was for preliminary engineering and right-of-way acquisition; construction contracts for roads which have been "advertised, put under way, or completed" amount to \$2.1 billion. Another \$1.2 billion has been programmed only, that is, the money has been set aside or earmarked for specific projects not yet started. These figures include the 10 percent of the cost of the interstate roads which is borne by the states. In addition, there is an unprogrammed balance of \$1.2 billion in Federal funds. As for actual construction in place, from the inception of the project in July 1956, through April 1958, work on 1,454 miles of

¹ Authorizations (or obligations) represent the total cost of programs now under way and are the best indicator of progress on the project. One construction trade journal has compared obligations figures to contract awards in other engineering projects.

TABLE 1 STATUS OF INTERSTATE AND DEFENSE HIGHWAY SYSTEM **AS OF APRIL 30, 1958**

(Amounts in millions of dollars)

Area			Authorized			Unprogrammed Balance ⁴			
	Preliminary Engineering and Right-of-Way Acquisition Total Federal Cost Funds		Construction Contracts Total Federal Cost Funds		s² Miles	Total Cost	Federal Funds	Miles	
Arizona	\$ 11	\$ 10	\$ 19	\$ 19	123	\$ 19	\$ 18	91	\$ 10
California	351*	95	174	158	164	4	4	5	25
Idaho	5	4	11	10	35	12	11	49	27
Nevada	15	14	8	7	20	6	5	14	26
Oregon	9	8	36	33	155	2	2	6	23
Utah	12	11	8	8	21	24	23	53	6
Washington	22	20	36	31	122	12	11	17	20
Twelfth District	425	163	292	265	640	79	74	236	137
United States	\$1,392	\$1,012	\$2,098	\$1,822	4,027	\$1,158	\$1,039	1,982	\$1,156

Funds authorized (obligated) are state expenditures approved by the Bureau of Public Roads.

Funds previously programmed and now committed for construction work; includes contracts advertised but not yet awarded, contracts awarded but not yet under way, and contracts completed. These figures do not include work authorized prior to July 1, 1956, as do the figures in Table 2.

Funds committed for specific projects in a program which defines the location, general nature, and estimated cost of each project.

Federal funds apportioned to each state but not yet committed to projects in any way. These figures include the funds apportioned in April 1958.

Preliminary engineering and right-of-way acquisition account for two-thirds of the total programmed funds in California. That state has a unique and efficient procedure for purchase of rights-of-way. A revolving fund supplies money for proposed highway sites, even before construction funds are appropriated. Thus, the land can be bought well in advance, and the revolving fund is reimbursed when the appropriation is made for that specific project. This procedure forestalls construction or other developments on land scheduled for highway use. Such improvements would increase the price of the property and delay the actual process of road construction, and there would be a social loss involved in removing them.

Note: Details may not add to totals because of rounding.

Source: United States Department of Commerce, Bureau of Public Roads.

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interstate routes had been completed at a total cost of \$352 million. Another 2,714 miles, representing a total cost of \$1.5 billion, are under construction.¹

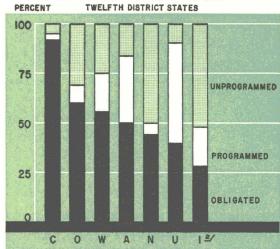
Twelfth District states, which have 17 percent of the total United States mileage in the system, received \$639 million, or about 13 percent, of the Federal funds allocated through fiscal 1959. As of April 30, 1958, \$717 million had been obligated—\$425 million for preliminary engineering and right-of-way and \$292 million for construction contracts.² Another \$79 million is programmed only, and \$137 million in Federal funds is still uncommitted. Since July 1956, 216 miles have been completed in District states at a cost of \$75 million; and 445 miles, representing an outlay of \$218 million, are under way.

Thus far, 10.3 percent of allocated mileage is under way or completed in the District, compared with 10.8 percent in the nation as a whole. The District rate of obligation, however, is well ahead of the nation's: Twelfth District states have obligated 67 percent of the Federal funds apportioned, while the corresponding national figure is 57 percent. There is a good deal of variation among states in the District with regard to progress on the system, as Chart 2 shows.

Is the program on schedule?

In the nation as a whole, apportionment, programming, and obligation of funds are on schedule. All the money voted by Congress through fiscal 1959 has been apportioned. Over one-third of this sum has been obligated; and another one-third has been programmed, that is, committed to some specific project. Less than one-third is still uncommitted. But there is little visible evidence of

CHART 2 PROGRESS IN USE OF FEDERAL FUNDS FOR INTERSTATE SYSTEM ***



¹As of April 30, 1958. ²California, Oregon, Washington, Arizona, Nevada, Utah, Idaho. Source: United States Department of Commerce, Bureau of Public Roads.

the program thus far. Neither the construction industry nor the supplying industries (equipment, steel, cement, etc.) have been noticeably stimulated. Nor has the increase in employment been so great as some observers had forecast. The number of employees engaged in highway and street construction did increase by 13 percent from 1955 to 1956, but the 1956-57 gain was only 3 percent.

There has been some misunderstanding of the rate at which the program would develop. The average lag from apportionment of funds to expenditures, that is, to completion of the individual project, is estimated by the Bureau of Public Roads to be 24 months. The first year's apportionment was about \$1.2 billion, which, considering the estimated lag, should be spent by mid-1958. According to budget estimates, by mid-1958 \$2.7 billion will have been paid out of the trust fund. Much of this, of course, is being spent for groundwork (preliminary engineering and right-of-way acquisition) which is not immediately obvious, although it is an essential part of the program. Highway construction will continue to pick up at a brisk pace in the next two years.

¹Before the passage of the 1956 Act, some work on the interstate routes had already been started, with Federal funds authorized in previous years; and these figures include such projects. Not all the mileage listed as under construction or completed represents the total improvement scheduled; for example, mileage on which grading contracts are under way or completed is included, although paving remains to be done. Only 46 miles of finished road were actually ready for traffic at the start of 1958. ²These figures include the state matching funds.

For example, contract awards in 1957 were 20 percent higher than in 1956, and an 18 percent increase is forecast for 1958.

Joint Department of Commerce-Department of Labor forecasts for public construction made before the 1958 Highway Act was passed indicate that expenditures for new construction in place on the interstate system will amount to \$850 million in 1958, more than tripling the 1957 figures. Thus, for the second year in a row, the interstate system will account for the major part of the rise in new highway construction, which stood at \$4.5 billion in 1956, \$4.8 billion in 1957, and is expected to reach \$5.5 billion in 1958.

It is now anticipated that a peak of \$6.7 billion will be reached in a few years, since the program has been stretched to 15 or more years and expenditures for roads financed solely by the states have started a downward movement. According to testimony by Federal Highway Administrator Bertram D. Tallamy before the Senate Public Works Subcommittee early in 1957, there will be a steady but gradual increase in demand for materials

and equipment throughout the program rather than the sharp rise to a peak in the mid-program years (1960-65) and subsequent decline which was originally anticipated.

Possible roadblocks ahead

The experience of the first two years has raised several problems. Congress has already discovered that the cost of road building has gone up. When the program was first planned, it was estimated that \$25 billion of Federal funds and nearly \$3 billion of state funds would be spent on the interstate system alone. In a report to Congress at the beginning of 1958, Secretary of Commerce Weeks announced that the cost to the Federal and State Governments of completing the mileage now planned would be approximately \$34 billion. Adding to this the sum already apportioned would mean that the total Federal share would be about \$34 billion and the states' share about \$3.7 billion. This 37 percent increase in cost estimates is the result of both rising construction costs and a larger volume of work. The index of average bid prices has

TABLE 2

ACTIVE AND COMPLETED WORK ON INTERSTATE SYSTEM¹
AS OF APRIL 30, 1958

	Co	onstruction in Progress		Co	nstruction Completed	
Area	Total Cost (millions	Federal Funds of dollars)	Miles	Total Cost (millions	Federal Funds of dollars)	Miles
Arizona	\$ 13	\$ 12	79	\$ 3	\$ 3	52
California	144	130	139	41	26	43
Idaho	8	7	26	1	1	9
Nevada	7	7	20	2	2	6
Oregon	18	17	86	13	11	57
Utah	6	5	15	3	3	13
Washington	22	19	80	11	9	35
Twelfth District	218	197	445	75	52	216
United States	\$1,528	\$1,304	2,714	\$352	\$242	1,454

¹ Work on the interstate system authorized prior to July 1, 1956, is included. Some of the mileage provides only part of the total improvement; for example, grading contracts, which will subsequently be followed by paving contracts.

Note: Details may not add to totals because of rounding.

Source: United States Department of Commerce, Bureau of Public Roads.

risen 14.3 percent from the low in the second quarter of 1955 to the fourth quarter of 1957. In addition, the most recent estimates for the 1975 traffic volume which the system is expected to accommodate are up 15 percent. The decision of Congress that local needs be given "equal consideration with the needs of interstate commerce," in so far as practicable, made necessary a 63 percent increase in special structures, such as grade separations, interchanges, and frontage roads. For the present, however, the Administration has not asked for an increase in the taxes which finance the project. Another, more detailed, cost estimate must be submitted in January 1962, and it will be clearer then whether more revenues will be needed.

Meanwhile, the question of apportionment of funds through fiscal 1962 has been settled by Congress. Apportionments for the first three years of the program were based on a modified area-population-rural mileage formula, but the Highway Act of 1956 specifies that allocations after fiscal 1959 should be based solely on what percentage of the system remains to be completed in each state, so that the project may be finished simultaneously in all states. According to this formula, about 17 percent of the money necessary to improve the 38,500 miles now allocated will be spent in the Twelfth District, 10 percent of the total in California. The Federal-Aid Highway Act of 1958 authorized use of this "needs" formula in fiscal 1959 and 1960. Apportionments in future years will depend on further review of the cost report submitted by the Bureau of Public Roads last January.

Another controversial question is the matter of reimbursement to the states for portions of the interstate system which were completed or put under construction before the start of the expanded Federal-aid program, specifically, between August 2, 1947, and June 30, 1957. In a report to Congress this January, the Bureau of Public Roads declared that

10,859 miles¹ of the system were eligible for reimbursement. Of this total, 24 percent is in Twelfth District states, primarily California.

The total cost of reimbursement to the Federal Government would be about \$5 billion, of which \$2.6 billion is for toll roads. There is certain to be a long and stormy period of congressional discussion on this matter, particularly over toll road reimbursement. Very little of the eligible District mileage consists of toll roads, however.

Spending on other Federal-aid road systems

In this session of Congress, legislation was passed which increased appropriations for the so-called ABC system (primary, secondary, and urban roads) from the present \$875 million annual rate to \$900 million in fiscal year 1960, and to \$925 million in fiscal 1961. As a special stimulus to employment, the legislators also made a supplemental appropriation of \$400 million for fiscal 1959 to be apportioned immediately for projects which must be completed by December 1, 1959. Furthermore, the Federal share of costs on roads built with this special appropriation is to be 66% percent, and the states need provide only 331/3 percent. If some states find that they cannot meet even this requirement, they may borrow up to two-thirds of the funds they need from the Federal Government. The borrowed money would then be deducted from the states' regular apportionments for the fiscal years 1961 and 1962.

Conclusion

The participation of the Federal Government in the nation's road problems has increased steadily during this century. The interstate highway program is not distinguished merely by its large dollar volume. The 1956 legislation marks several major changes in public philosophy with regard to roads. First, the large percentage of Federal funds is

Only 1,955 miles of this were fully completed as of September 1957.

a measure of the new importance of the central government in the highway field. The necessity for uniformity and standardization has even divested the states of much of the administrative control of the system. Secondly, this is the first pay-as-you-go Federal highway program. The funds with which the Government reimburses the states come from a special extra-budget trust account fed by excise taxes on highway users. When the project is completed, the nation should have a modern network of major roads designed to handle the volume of motor traffic anticipated in 1975. Maintenance and administration will be the responsibility of the individual states, but it is unlikely that the trend of increasing Federal attention to highways will cease then. All the traffic needs of the 1970's cannot now be foreseen. New automotive designs, new population and industrial concentrations, new forms of transportation, perhaps, could make large sections of the interstate system obsolete within a few years after their completion. Moreover, unless proper attention is given to the special problems of city traffic and urban planning, the nation may still face a serious urban congestion problem.

The interstate system is but a small fraction of our total road mileage, all of which must be maintained and improved. Even when the current program is complete there will still remain a large, unsatisfied backlog of highway needs. Long-range forecasting is notoriously hazardous; but the outlook is for a high level of outlays on roads, supported strongly by the Federal Government, far into the last decades of this century.

Housing Demand

THE nature of the long-run forces affecting home building has changed very little in the past ten years. These forces are the growth in the number of families and independent individuals, the size of families, income relative to building costs, and the size and condition of the housing stock. Housing standards, migration, and attitudes toward home ownership, while important, are less significant. In the short-run, however, the effects of population and income factors may not be apparent. During any given year, the long-run forces may be overshadowed by the availability of materials and labor, conditions in the mortgage market, or Government regulations.

The potential demand for housing can be visualized as a reservoir, into which flow the net increases in families or independent individuals, families or individuals whose homes are removed from the housing stock, and increases in the number of people per family. (Chart 1) The outlet from the reservoir is the construction of new units. Difficulties in estimating some of the current inflow and the backlog left over from previous periods make it hard to measure the volume in the reservoir, and it is also difficult to determine how many units may move toward the outlet because the income and cost conditions which induce people to improve their housing status are not easily gauged.

CHART 1 RESERVOIR OF HOUSING DEMAND -INCOME COST RELATIONSHIP BACKLOG OF DEMAND

- ¹ Increases in size of families.
- ² Increases in number of families.

 ³ Homes removed from the housing stock.

Long-run conditions in the postwar period have been exceedingly favorable for home building. The low rate of construction in the 1930's, the restrictions on building during World War II, and a rapid rise in both family formation and income contributed to a substantial backlog of demand at the war's end. Postwar continuation of rising incomes and a high rate of family formation tended to prevent a significant shrinkage in the backlog for several years. Yet, as Table 1 shows, there was considerable variation in outlays for new housing units from time to time.

The importance of short-run factors in the past decade is demonstrated by the fact that

TABLE 1 CHANGES IN RESIDENTIAL CONSTRUCTION OUTLAYS AND RELATED FACTORS IN THE POSTWAR YEARS

Percent Change	II 1948- II 1949*	1949- 1950	III 1950- III 1951	III 1951- I 1954	1954- 1955	III 1955- III 1957
Residential Construction Outlays	15	+80	24	+12	+46	-19
Gross National Product	+ 1	+14	+17	+ 8	+11	+11
Non-residential Construction Outlays	0	+17	+37	+13	+31	+17
Disposable Personal Income	+ 1	+10+	+12	+11#	+ 8	+11
Thousands Annual Rate of Increase in Number						
of Families	1,415	657	588	360	791	885

Source: United States Department of Commerce, Office of Business Economics, Survey of Current Business, and Bureau of the Census,

^{*}Current Population Reports (P-20).

Time interval spetween designated quarters.

Time interval disposable personal income fell 2 percent from the 1st to the 4th quarter of 1949.

Disposable personal income fell 1 percent from the 4th quarter of 1951 to the 1st quarter of 1952, and 0.3 percent from the 3rd to

residential building did not exactly parallel either income or family formation. The sharpest declines in home construction occurred during periods of rising personal income, and some of the increase in spending on new houses came while personal income was declining. In addition, the timing of some phases of residential construction since 1945 has been different from that of non-residential building, gross national product, and the reference cycles selected by the National Bureau of Economic Research. (Chart 2)

The special role of mortgage credit in the postwar period

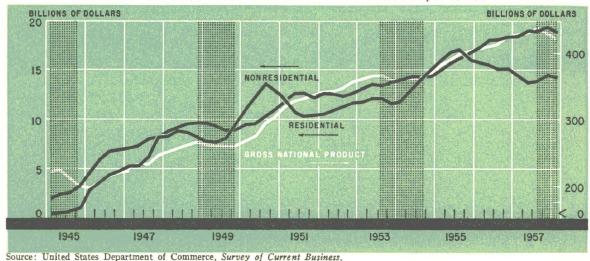
At the close of World War II the long-run factors favorable to home building were reinforced by Government programs insuring (Federal Housing Administration) or guaranteeing (Veterans' Administration) private mortgages. Down payments were low and maturities long. The FHA program was more restrictive than that of the VA, but substantially easier than conventional mortgages and more lenient than FHA terms during the 1930's. The absence of much expansion in other credit demands and the considerably lower level of interest rates on other loans and

investments immediately after the war made lenders eager to acquire mortgages.

The dual force of strong housing demand and a plentiful supply of mortgage money on easy terms led to a substantial expansion in home building as materials and manpower became available. The new stimulus—low downpayment, long-term, fixed interest mortgages—also appears to have been a primary cause of short-run swings.

Government-backed mortgages have not been uniformly attractive to lenders in the years since the war. While interest rates on FHA and VA mortgages have been changed only infrequently, rates on many other types of loans (and particularly on securities) have fluctuated widely. In periods of rising credit demand from other sources, the upswing in interest rates has usually turned lenders away from mortgages with a fixed return. Even those lenders who retained some interest in acquiring Government-insured or guaranteed loans were willing to do so only if builders would sell the paper at a discount. These conditions, which did not exist prior to World War II, have had a marked effect on residential construction. The very lenient terms permitted by the VA program, and to a lesser ex-

CHART 2
HOUSING OUTLAYS AND GROSS NATIONAL PRODUCT, 1945-58



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FEDERAL RESERVE BANK OF SAN FRANCISCO

tent by the FHA, provided an opportunity for home ownership to many families who could not have qualified under the mortgage plans of earlier periods. At the same time, since a large proportion of houses sold since the war has been financed by mortgages with Government backing, fluctuations in the availability of credit have strongly influenced housing activity. Chart 3 shows a fairly consistent inverse relationship since World War II between the number of housing starts and the return on long-term Government securities.

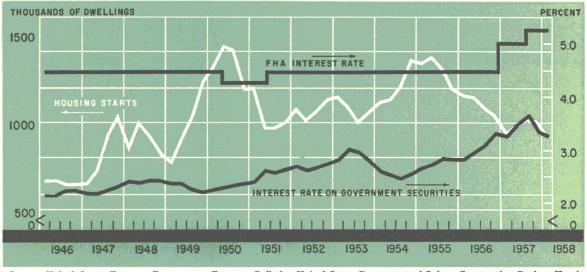
Although conditions in the mortgage market, as long as demand has been strong, have at times caused outlays for residential construction to move in an opposite direction from business conditions, the relationship of construction to gross national product has not been completely inverse. There is a lag in this relationship because lenders are willing to commit themselves heavily when investment in mortgages is attractive, and builders, therefore, obtain commitments in large blocks. This gives them a backlog of mortgage financing against which to operate when money tightens and commitments become difficult to obtain.

While credit factors have been conspicuous in affecting home building, the swings in credit availability have occurred in a period in which the long-run factors make for high potential demand. When low down-payment long-term mortgages have been available there has been a large reserve of spending units seeking to take advantage of favorable financing.

The outlook

Since the end of World War II, about 13 million housing units have been completed, and 11 million new households have been formed. During the same period, a large but unknown number of housing units has been demolished and others have been created by converting existing structures into multiple units. The important clue to the reduction in the postwar backlog of housing demand is provided by the decline in the number of married couples without their own households from 2.9 million in 1947 to 1.3 million in 1957. In addition, family and household formation are expected to run at lower levels in the next few years than in the recent past —as a result of the low birth rates during the

CHART 3
INTEREST RATES AND HOUSING STARTS, 1946-58



Source: United States Treasury Department, Treasury Bulletin, United States Department of Labor, Construction Review, Housing and Home Insurance Agency, Annual Reports.

depression, the number of people reaching marriageable age will be smaller.

Restraint on demand may also stem from the income-cost relationship. Between 1940 and 1950, per capita disposable income increased more rapidly than did the price of the average housing unit. Since 1950, the price of the average house has risen 45 percent, compared with a 29 percent rise in per capita disposable income. This disparity has tended to narrow the housing market. Builders have catered to a rising level of tastes and perhaps to higher income brackets, as has been evident in the construction of larger and better equipped houses in recent years. Land and building costs, as well as real estate taxes in many suburban areas, have also risen sharply.

On the other hand, in 1957, a year in which these less favorable factors were present and credit for FHA and VA mortgages was in unusually limited supply, the nation built almost one million privately-owned residences. The number of middle income families (\$4,500-\$10,000 per year) has been steadily growing,

and those in this income range buy a large proportion of the new homes built each year. Stringency in the mortgage market in 1956 and 1957 may also have added to the backlog of demand.

The most recent Survey of Consumer Finances reveals that the number of spending units planning to purchase homes has dropped substantially from a year ago. In 1954, another recession period, the number of homes actually purchased was almost a record, despite a low level of planned buying at the beginning of the year. An easier mortgage market and more lenient terms and aids to financing in the Housing Act of 1958 could become important sustaining factors in any improvement in residential construction that may take place this year. However, the current reservoir of potential demand and the growth forces likely to be generated by population changes seem more moderate than in the past decade. Any increase, therefore, is likely to be less spectacular than those of 1949-50 and 1954-55.

United States Gold Losses in 1958

CINCE February of this year, the United States gold stock has fallen more than \$1 billion. This is the second largest reduction for any four-month period since 1946, exceeded only by the December 1950-March 1951 decline. (Other substantial gold losses occurred in August-November 1950 and December 1952-March 1953.) This current outflow of gold has aroused a great deal of comment in the press and has produced various interpretations of the reasons for the purchases, including the view that foreign countries are speculating on a rise in the official United States gold price. The sales have also awakened fears that the gold loss is endangering the United States monetary base and exerting a contractionary influence on the credit situation.

If the record of the previous year is examined, however, current gold losses can be viewed in perspective. During the first half of 1957 many foreign countries were under severe balance of payments pressures resulting from the Suez crisis, continued inflation abroad, and unusual import requirements for grains and raw materials stocks. The gold and foreign exchange position of some countries reached such a critical stage that the International Monetary Fund was called upon for financial assistance. The Fund supplied dollars to the countries in difficulty and a large part of this money was obtained by selling gold to the United States. Purchases from the International Monetary Fund accounted for threefourths of the 1957 increase in the United States gold stock. New problems arose in the late summer and early fall, when the British pound came under strong speculative pressure, causing the drain on reserves of the United Kingdom and some continental European countries to reach almost alarming proportions. Decisive action by the countries concerned was successful in halting the outflow,

and the situation began to stabilize late in the year. In the second half of 1957, authorities in many foreign countries also succeeded in controlling or dampening inflationary pressures.

The elimination of inflationary forces and the reversal of the capital flight that had accompanied the speculative pressure on sterling have led to a significant improvement in the balance of payments of many countries that were hard-pressed last year. In view of these favorable developments it is not surprising that foreign countries are replenishing their gold holdings. Many countries ordinarily keep most of their foreign exchange reserves in the form of gold and they have been using the opportunity to build up gold holdings to more "normal" levels.

The United States' loss of \$1,188 million in gold through May of this year does not greatly exceed the \$1.1 billion increase of gold stocks in 1956 and 1957. Again, the heavy gold loss by the United States in 1950-51 was followed by a period in which a large part of the gold was regained. These fluctuations in the United States gold stock are only natural in a system of international trade and payments which includes gold as a part of the payments mechanism.

Recent gold withdrawals would have resulted in a tightening of the money supply if they had not been offset by various Federal Reserve System measures. The loss of gold has not reached significant levels as far as the gold requirements of our money supply are concerned. According to law, the Federal Reserve System must maintain a ratio of not less than 25 percent in gold certificate reserves against outstanding deposit and Federal Reserve note liabilities. The System, however, generally operates with a ratio well above the minimum; the ratio is currently almost double the minimum requirement.

Economic recession in the United States is not always accompanied by an outflow of gold. For example, in the 1948-49 downturn, the pattern of the immediate postwar years continued as foreign countries sold gold to the United States, but at a greatly reduced rate, to finance their payments deficits and to build up their dollar balances. In the 1953-54 recession, foreign countries had a favorable payments position and purchased gold from the United States, although at a slower rate than in the period immediately preceding the recession. United States private capital move-

ments and Government nonmilitary grants and loans were able to offset the surplus on the United States current account. The situation last year, on the other hand, was unlike 1953-54 because foreign countries experienced large gold losses during the first three quarters of 1957. Insofar as the recent changes increase the gold and dollar holdings of countries whose reserves had been rather small in relation to their foreign trade requirements, they tend to improve international liquidity and thus to facilitate continued expansion of international trade.

FEDERAL RESERVE BANK OF SAN FRANCISCO

BUSINESS INDEXES — TWELFTH DISTRICT1

(1947-49 average = 100)

Year			dustrial proc	duction (phy	uction (physical volume) ²			Total nonagri- cultural Total mf'g	Car- loadings	Dep't store	Retail food	Waterborne foreign trade ³ , 6		
and month	Lumber	Crude	Refined	Cement	Lead*	Copper ³	Electric power	employ- ment	employ- ment	(num- ber) ²	sales (value) ²	prices 8, 4	Exports	Imports
1929 1933 1939 1949 1950 1951 1952 1953 1954 1955 1956	95 40 71 100 113 113 116 118 116 124 116 106	87 52 67 99 98 106 107 109 106 106 105 101	78 50 63 103 103 112 116 122 119 122 129 132	54 27 56 100 112 128 124 130 132 145 156 149	165 72 93 101 109 89 87 77 71 75 79	105 17 80 93 113 115 113 111 101 118 129 126	29 26 40 108 119 136 144 161 172 192 210 224	99 103 112 118 121 120 127 134 138	55 97 105 120 130 137 134 143 152 157	102 52 77 94 98 100 100 100 96 104 104 96	30 18 31 98 107 112 120 122 122 132 141 141	64 42 47 100 100 113 115 113 112 114 118	190 110 163 85 91 186 171 140 131 164 195 230	124 72 95 121 137 157 200 308 260 308 443 575
1957 April May June July August September October November December	110 108 109 103 104 101 101 102 99	101 101 101 101 101 102 101 101	132 138 131 133 137 135 132 131	154 157 152 162 160 169 161 146 139	82 83 78 69 75 75 76 63 62	135 126 130 113 115 127 126 125 125	228 229 239 238 233 217 223 222 216	138 138 139 138 138 138 138 137	158 158 159 159 158 156 155 152 151	103 99 100 94 97 93 84 95 93	137 141 148 141 144 141 134 139 139	117 117 118 118 119 119 119 118 119	298 283 252 188 210 173 199 210 178	534 698 511 770 572 607 684 582 610
1958 January February March April	106 104 101 95	100 97 95 94	122 114 119 119	135 112 112 129	62 64 60	123 125r 122	223 221 226	137 136 136 135	150 149 148 146	94 86 87 87	132 135 137 142	121 121 123 125	163	393

BANKING AND CREDIT STATISTICS-TWELFTH DISTRICT

(amounts in millions of dollars)

	Con	dition Itoma of	all member b	a m leaff			Member ban	k reserves and	related Items		Bank
Year	Con	attion items of	all member b	апка•	Bank rates on		Factors affect		debits		
and Loan month and	Loans and discounts	U.S. Gov't securities	Demand deposits adjusted ⁷	Total time deposits	short-term business loans ⁸	Reserve bank credit ⁹	Commer- clal ¹⁸	Treasury ¹⁰	Money In circu- lation?	Reserves ¹¹	Index 31 cities ^{3,18} (1947-49 = 100) ²
1929 1933 1939 1950 1951 1952 1953 1954 1955 1956	2,239 1,486 1,967 7,093 7,866 8,839 9,220 9,418 11,124 12,613 13,178	495 720 1,450 6,415 6,463 6,619 6,639 7,942 7,239 6,452 6,619	1,234 951 1,983 9,254 9,937 10,520 10,515 11,196 11,864 12,169 11,870	1,790 1,609 2,267 6,302 6,777 7,502 7,997 8,699 9,120 9,424 10,679	3.35 3.66 3.95 4.14 4.09 4.10 4.50 4.97	- 34 - 2 + 2 + 39 - 21 + 7 - 14 + 2 + 38 - 52 + 31	0 - 110 192 -1,141 -1,582 -1,912 -3,073 -2,448 -2,685 -3,259 -4,164	+ 23 + 150 + 245 +1,198 +1,983 +2,265 +3,158 +2,328 +2,757 +3,274 +3,903	- 6 - 18 + 31 - 14 + 189 + 132 + 39 - 30 + 100 - 96 - 83	175 185 584 2,026 2,269 2,514 2,551 2,505 2,530 2,654 2,686	42 18 30 115 132 140 150 154 172 189 203
1957 May June July August September October November December	12,694 12,911 12,912 12,945 13,178 13,064 13,185 13,178	6,315 6,249 6,319 6,313 6,293 6,433 6,357 6,619	11,210 11,310 11,407 11,329 11,561 11,570 11,770 11,870	9,995 10,155 10,188 10,220 10,301 10,417 10,304 10,679	5.21	+ 56 - 29 - 49 + 50 - 109 + 76 + 14 - 18	- 261 - 374 - 426 - 175r - 424r - 322 - 298 - 454	+ 209 + 402 + 320 + 322r + 470r + 159 + 447 + 480	+ 54 + 20 + 6 + 39 - 30 - 8 + 37 - 23	2,526 2,483 2,457 2,592 2,581 2,517 2,652 2,686	200 203 205 197 204 200 202 217
January February March April May	13,106 13,002 12,860 12,979 12,977	6,573 6,884 7,075 7,605 7,546	11,601 11,305 11,225r 11,570 11,292	10,761 10,992 11,183 11,406 11,530	4.95	- 16 + 12 - 62 + 43 + 11	- 258 - 427 - 180 - 391 - 203	+ 180 + 298 + 253 + 371 + 154	- 137 + 17 + 11 - 2 + 90	2,662 2,520 2,530 2,574 2,456	211 203 198 206 193

Adjusted for seasonal variation, except where indicated. Except for department store statistics, all indexes are based upon data from outside sources, as follows: lumber, California Redwood Association and U.S. Bureau of the Census; petroleum, cement, copper, and lead, U.S. Bureau of Mines; electric power, Federal Power Commission; nonagricultural and manufacturing employment. U.S. Bureau of Labor Statistics and cooperating state agencies; retail food prices, U.S. Bureau of Labor Statistics and cooperating state agencies; retail food prices, U.S. Bureau of Labor Statistics; carloadings, various railroads and railroad associations; and foreign trade, U.S. Bureau of the Census.

* Daily average.

* Not adjusted for seasonal variation.

* Los Angeles, San Francisco, and Seattle indexes combined.

* Commercial cargo only, in physical volume, for Los Angeles, San Francisco, San Diego, Oregon, and Washington customs districts; starting with July 1950, "special category" exports are excluded because of security reasons.

* Annual figures are as of end of year, monthly figures as of last Wednesday in month.

* TDemand deposits, excluding interbank and U.S. Gov't deposits, less cash items in process of collection. Monthly data partly estimated.

* Average rates on loans made in five major cities.

* Changes from end of previous month or year.

* Minus sign indicates flow of funds out of the District in the case of of commercial operations, and excess of receipts over disbursements in the case of Treasury operations.

* Debits to total deposits except interbank prior to 1942. Debits to demand deposits except U.S. Government and interbank deposits from 1942.

* Perliminary.

* Perliminary.

* Perliminary.

* Revised.