

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT DECEMBER 1969



# URBAN HOUSING MARKET ANALYSIS

U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

728.1 ; 308 HCSU 1969

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# FOREWORD

This booklet of the Department of Housing and Urban Development furnishes guidelines to help communities evaluate their own housing needs. This service is part of the Federal response to urban needs and is geared to what the President calls "improving the quality of life for every American."

To upgrade the urban environment, to strengthen the economic structure of the community, it is essential to analyze the housing market, urban land use, and related community development.

Market analysis techniques are tools for improving the quality of urban life. Market analysis takes into consideration such factors as employment, population, incomes, household growth, vacancies, occupancy turnover, rent levels, and sales prices. With this information, localities can increase their ability to plan not only their housing needs, but also local expenditures such as schools, streets, water and sewer facilities, recreation areas and neighborhood facilities for the enrichment of human lives.

The housing market analysis technique developed by the Federal Housing Administration of the Department of Housing and Urban Development over the last two decades pioneered the guidelines for this publication. As a special service to communities these techniques have now been modified and adapted to use at the local level.

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## INTRODUCTION

THE basic approach and many of the L techniques incorporated in this guidebook are those used in the housing market analyses conducted by the Federal Housing Administration of the Department of Housing and Urban Development. Without the many years of development of techniques by FHA market analysts, this guide would not have been possible. A number of the techniques incorporated in the guide are not as complex nor as refined as those used by the Federal Housing Administration. Recognizing, however, that others may not be as well experienced or apprised of the availability of new housing market data as FHA market analysts, the guide emphasizes the continual maintenance of historical data as a help to all in analyzing the market. It also should be noted that FHA market analyses are directed primarily to the private market, while this guide directs attention to both the private market and that part of the market requiring direct public assistance.

The handbook should be regarded as a housing market analysis guidebook requiring the conformance to detailed procedures prescribed therein as well as the use of discretion and judgment. While the guide may prove beneficial to many agencies which have occasion to submit proposals or documents to the Federal Government related to housing and community development, use and conformance to the guide is not to be regarded as justification of any such proposals or documents. The manual therefore only serves as a tool and guide to housing market analysis.

Throughout the guide the Binghamton Standard Metropolitan Statistical Area has been used as an illustrative example of how to do a housing market analysis. Actual data and assumed data are used and are so distinguished in the text. The Binghamton SMSA was chosen because it is a medium size SMSA with a moderate growth rate. Also it did not have any atypical characteristics such as being a governmental center like Washington, D.C., a tourist oriented community such as Atlantic City, New Jersey, or a regional center such as Atlanta, Georgia.

The contents of this guide have been prepared for use by local redevelopment agencies, planning organizations, local housing authorities, residential research committees, and other groups which desire and have the competence to carry out the studies necessary to determine the potential effective demand for new housing construction within their local housing markets. The housing programs, plans, and proposals of these groups often are related directly to the rate and volume at which such new construction can be successfully marketed and absorbed. It is important to note that this guide is somewhat complex and will require relatively extensive understanding and skill in housing market analysis if maximum benefits are to be derived from the manual. For most persons versed in housing and community development, whether it be as a planning consultant, mortgage lender, builder, or redevelopment official, this skill and understanding can be developed in varying degrees through study of a guide such as this and through the actual experience of undertaking a housing market analysis.

## Definition, Use and Limitations of Housing Market Analysis

Housing market analysis is a method wherein a variety of pertinent social and economic characteristics of a cohesive economic area are analyzed in order to estimate the need and the effective demand for new housing by tenure and by sales price and rent ranges for a given period. A housing market analysis assumes that such housing would be competitive in terms of quality, price, and location. Although housing market analysis is not an exact science, it is

## nevertheless a valuable tool for decisionmaking inasmuch as it provides a reasonably sound estimate of the need and the effective demand for housing during a given period. While a housing market analysis may include some submarket estimates, it does not attempt to evaluate the marketability of specific housing developments. The function of a housing market analysis is to provide a framework of reference which will enable builders, lenders, and other persons and groups to make more rational decisions on such specific housing proposals. While a housing market analyst can usually be of assistance in evaluating specific proposals, this is a function which cannot be based only on a general housing market analysis.

For the community or groups not interested in carrying out a complete housing market analysis, this guide can still be gainfully utilized in the development of critical local housing market indicators. These would include obtaining and classifying such information as employment data, housing starts, displacements and demolitions, number and character of unsold units in the inventory, and vacancies. To the extent that these can be related to locality data furnished by the decennial census publications, the above indicators will prove even more useful. Even though these indicators will not serve as a basis for current and projected populations and household estimates, nor enable a refined estimate of prospective housing demand to be made, they will, nevertheless, provide important background, in many instances, to assist in making rational decisions related to the local housing market.

The materials developed in connection with the preparation of a local housing market analysis have additional and extended uses beyond the estimates of housing absorptive capactities. An integral part of the analysis considers population and household growth. and this information is useful in planning such local capital expenditures as school, street, water and sewer facilities. Information obtained with respect to vacancies, occupant turnover, and characteristics of new construction is extremely valuable to agencies concerned with relocation of displacees resulting from governmental actions. Local industrial development organizations would be able to describe current and prospective housing resources more accurately in discussing new plant locations with prospective industrial in-migrant firms.

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## Data Collection and Time Span

For communities or groups which undertake the more comprehensive housing market analysis described in this guide, as well as those who limit themselves to selected market indicators, it is strongly recommended that they develop a system of collecting and organizing data on a continuing and regular periodic basis. Publishing these data would tend to assure more widespread use of the data and perhaps sustain the demand for the continuing process of data collection and organization. In addition, with a "time series" organization of pertinent data, the task of housing market analysis is facilitated. Although it is not essential, a community or group which undertakes a housing market analysis should schedule it during the months of April, May, September or October, in order to help avoid, particularly in the field of employment data, variations that may be due to seasonal influences.

For communities in which a regular housing market analysis is undertaken, it is suggested that housing demand projections be made for a period of one to three years. In most local economies, it should be possible in cases to make a projection for about a three-year period. If significant substantive changes occur during that period, it may be necessary to do a shortened market analysis to make any necessary revisions. Until more experience is developed, the analyst may wish to limit the first few market analyses to a one or two year projection. In some communities, it may be possible to make projections for as long as five years. Such communities would usually be urban areas in which growth rates tend to be reasonably predictable and in which there are few complex market problems.

## Use of Census Benchmark Data

The 1960 decennial census data on population and housing are essential for carrying out the type of housing market analysis described herein. The modest cost of these publications recommends their purchase and retention for the continued use of the researcher. Data from the 1950 Census are also utilized generally for comparative purposes with 1960 data and to indicate trends from 1950 to 1960. Local public or college libraries will probably have these back volumes for ready reference. The 1950 and the 1960 Census publications which would be utilized in the local housing market analysis operation are listed in the Appendix.

The Current Population Reports (P-20, 23, 27, 60 and 65 series) of the Bureau of Census provide a variety of information including annual changes in family income by race, by regions, and by urban and rural aggregates; estimates of state populations and projected estimates; mobility; household size; school enrollment; and occasionally techniques of population estimation. These reports, which are listed in the Appendix, provide the data which enable the researcher to keep abreast with national and regional trends which, in turn, are most useful in developing a better analysis of local dynamics.

## SECTION 1: DEFINITION OF THE HOUSING MARKET AREA

SINCE people generally work within a reasonable commuting distance of their place of employment, the boundaries of a housing market area would normally encompass those geographical areas in which there is an identifiable relationship between place of work (nonfarm) and place of residence. This would usually consist of the central city containing principal population concentrations and places of work and the built-up surrounding territory. The surrounding territory may contain as great as or greater populations than the central city, and in some cases, it may also contain numerous job opportunities. This built-up area, generally identified by density of population, constitutes the "urbanized area."

The use of the "urbanized area" as a geographical definition of housing market has its practical limitations in housing market analysis operations. The size and extent of the urbanized area is constantly changing; the quasi-rural area in 1950 in numerous instances had become by 1960 the compact suburban residential development. Secondly, delineation of the urbanized area will generally not conform to boundaries of counties and incorporated places, and the great bulk of Census data are available only on the basis of such jurisdictional identification. In order to obtain sufficient data and comparability of data, housing market areas are almost always identified in terms of such political civil divisions as cities and counties or combinations thereof.

## Defining Housing Market Areas in Metropolitan Areas

1. Almost all of the principal housing market areas in this country may be considered synonomous and coterminous with the definitions of the Standard Metropolitan (Statistical Areas.

2. Practically all SMSA's contain a city of 50,000 or more population and usually consist of one or more counties except in New England, where townships are used in defining these SMSA's.

3. The composition of each SMSA is described and shown on maps for each state in Chapter A of each State Volume I of the 1960 Census of Population.

Within the larger SMSA's there frequently will be several submarket areas. An example would be the New York City SMSA, containing some 11 million population. Here, the diversity of and time and cost differentials in commuting facilities, as well as the sub-concentrations of employment opportunities, recommends that the overall housing market be considered for some purposes from the standpoint of several smaller submarkets, each of which, incidentally, might be substantially larger than SMSA's in other parts of the country.

These submarkets may be encountered, as well, in medium and smaller-size SMSA's, where geographical barriers, historical development, and employment concentrations have tended to reduce the normal daily movements between places of work and residence. This separation is frequently only relative inasmuch as the prevalence of automobile ownership and availability of good roads generally facilitate ready commutation. It would not be an unwarranted procedure, and in fact is frequently highly desirable, to develop separate demand estimates for these submarkets. These, however, must be related to the housing demand estimate for the larger market areas; failure to do so may introduce strong elements of distortion and bias into the submarket analysis. Local transportation or other local planning studies may prove useful in defining these submarkets.

The analyst should also recognize that the various programs aimed at serving the lowincome market may well be confined to specific political jurisdictions which have residency requirements, thus precluding the mobility of a low-income population for market purposes.

NOTES

## Defining Smaller Housing Market Areas

For non-SMSA's, the definition of an appropriate housing market area requires careful judgment. The housing market area usually can be defined in terms of (1) a county or (2) an urban place and surrounding built-up minor political divisions, which may be districts, townships, census county divisions, or some other type of political jurisdiction.

Since the bulk of Census data are available by incorporated places and by counties, a large proportion of a housing market analysis using the latter definition will have to be developed in terms of the incorporated place under study and the county. These data along with the data available for minor civil divisions enable the development of a reasonably sound housing market analysis.

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Even smaller urban areas will have experienced considerable decentralization of growing populations, despite the availability of vacant ground within the principal urban place, either through historical process or via annexation activities. An example of this phenomenon would be in Gettysburg, Pennsylvania, where the 1960 population of 7,960 was 35 percent above the 1940 population. On the other hand, the population of the three surrounding townships increased 51 percent during the same 20 year period.

Although the refinement and availability of pertinent Census housing market data decrease with size of the community, this is compensated, in most cases, by the less complex marketing problems presented in such communities. Accordingly, these data deficiencies should not discourage housing market analysis in smaller communities.

## SECTION II: ECONOMIC BASE

**POPULATION** and household growth in a housing market area are to a large extent influenced by the availability of area job opportunities. If jobs are plentiful, household heads will tend to remain in the area, and the excess of births over deaths will result in natural population increases. A high level of job opportunities will also make that area a target for in-migrant workers, who will either bring their families with them or will form new households. These in-migrants will, in turn, enlarge the population base for natural increases.

Therefore, in order to assess the demand for housing during the next one to three years, it is necessary to consider previous, current and prospective economic conditions and trends. The employment data, along with an analysis of the prospects for the economic growth of the community, can serve as a basis for the projection of employment levels during the estimated demand period.

The analysis of economic conditions can be made with varying degrees of depth and precision. The care with which such an analysis is carried out will, in turn, determine the degree of confidence which the researcher can have in his employment projections.

Broad insights into the economy of small and medium-size localities often can be obtained from local officials who frequently have regular contact with leading area employers. These officials may have fairly reliable information with respect to the previous, current and prospective levels of employment among these principal firms, as well as prospective industrial plant in-migration and out-migration. On the other hand, their knowledge frequently may be deficient regarding such specifics as ratios of male and female workers, hourly rates of earnings, and the variations in hours worked. Furthermore, they may not be conversant with employment volumes, wages and work force characteristics among smaller non-manufacturing enterprises.

For purposes of housing market analysis, it is necessary to secure more precise and specific data than is ordinarily obtained on a "hearsay" basis from these public officials.

## Census Labor Market Data

Census data are an important source in obtaining an insight into the condition and trends of the local economy. Census data, however, are not truly interchangeable with labor market data prepared by the state office of the Bureau of Employment Security (BES) inasmuch as they describe employment characteristics only of residents of the political division reported by the Census, whereas BES data report employment characteristics of persons working in the labor market area. When comparing Census employment data with BES data, two opposing elements of bias are present: the first is reflected by employees residing within the Census reporting jurisdiction who work in another locality outside the labor market area, and the second is represented by residents of other communities, outside the labor market area, who work in the Census reporting locality. For SMSA's having a population of 250,000 or more, these data are available in the Subject Reports of the 1960 Census of Population.<sup>1</sup>

<sup>1</sup> U.S. Census of Population: Volume II. Subject Reports. Journey to Work. Final Report PC (2)-5B. Available for \$3.50 from U.S. Government Printing Office, Washington, D.C. 20402. Unpublished data are available for smaller areas.

TABLE 1 Employment and Unemployment in the Binghamton, New	York
Standard Metropolitan Statistical Area, 1950-1960	

Classification	1960	1950	Increase Number	1950-60 Percent
Labor Force	86 891	78.249	8.642	11.0
Linemployed	3 256	3 495	-239	-6.8
Percent of Labor Force Unemployed	3 7	4.5	200	
	0.1			
Total Employed	83,635	74,754	8,881	11.9
Agriculture	1,477	2,586	-1,109	-42.9
Forestry and Fisheries	8	10	-2	20.0
Mining	76	29	47	162.1
Construction	3,894	3,549	300	8.5
Manufacturing	37,944	34,404	3,540	10.4
Furniture, lumber and wood products	821	1,052	-231	-22.0
Primary metals	305	460	-155	-33.7
Fabricated metals	921	501	420	84.8
Machinery, except electrical	10,645	7,400	3,245	43.9
Electrical machinery	1,593	377	1,216	322.5
Motor vehicles & equipment	57	140	-83	-59.3
Transportation equipment, except motor vehicles	1,908	744	1,164	156.4
Other durables	5,384	3,342	2,042	61.1
Food and kindred products	1,474	1,240	234	18.9
Textile mill products	81	332	-251	-75.6
Apparel & other textile products	372	636	-264	-41.5
Printing, publishing and allied products	1,760	1,176	584	49.7
Chemicals & allied products	251	195	56	28.7
Other nondurables and nonspecified	12,372	16,809	-4,417	-26.3
Railroad and railway express	732	1,285	-553	-43.0
Trucking service and warehousing	1,028	778	250	32.1
Other transportation	484	572	-88	-15.4
Communications	724	514	210	40.9
Utilities and sanitary services	1,048	994	54	5.4
Wholesale trade	1,936	2,097	-161	-7.7
Food & dairy product stores	1,773	2.084	-311	-14.9
Eating and drinking places	2,114	2,326	-212	-9.1
Other retail.	7,142	6,859	288	4 2
Finance, insurance and real estate	2,508	1.826	682	37 3
Business services	677	411	266	6.5
Repair services.	698	917	219	23.9
Private households	1.245	1,166	70	6.8
Other personal services	2,000	2.017	-17	-0.8
Entertainment and recreation	433	667	-234	-34.6
Hospitals*	3,410	1	1	01.0
Medical and other health services*		3 326	11	1
Welfare, religious & nonprofit organizations*	1.068	,010	1,756	36.9
Other professional & related services*	2.042	1 439		1
Education:		1,100	-	1
Government	3 144	1 0-3+	1 477	64.0
Private	619	1,024	1,4//	04.8
Public administration	2 620	0 050	10/	04.5
Industry not reported	2,789	2,000	011	28.1
	2,100	007	2,221	391.7

These 1960 and 1950 data are comparable only when combined.

Source: Census of Population, 1960, 1950.

For assessing longer term employment trends, the data contained in Table 1 are most useful. They are available in the Census of Population publications for 1950 and 1960.<sup>2</sup> (The numerical and percentage changes will have to be computed by the analyst.) Data contained in Table 1 are available for all SMSA's, urbanized areas, urban places having a population of 10,000 and more, and for counties. These data are also available for urban places having populations of 2,500 to 10,000, but a number of the Standard Industrial Classification categories have been consolidated in these smaller areas.

In many instances reports containing local employment data and projections that have been prepared under the Federally-aided Urban Planning Assistance Program will be available at the local level for the use of the market analyst.

Census data have the obvious advantages of comprehensive and detailed coverage and, probably, somewhat greater accuracy than BES reports. However, since they are obtained only every 10 years, they suffer from rapid loss of currency. Recognizing these limitations, the analyst can employ the Census data most profitably in ascertainment of long-term trends, while depending upon the current local BES reports for short-run trend analysis.

## **Exports** and Imports

Without doing an economic base analysis, an analyst may nevertheless benefit from the concept of economic base analysis and utilize a technique approaching this concept. Economic base analysis treats each local economic area as though it were a separate nation which must obtain a favorable balance of trade between its export and import

<sup>2</sup> Reference tables are to be found in the following Census sources:

Area	1960 Census of Population Volume I, Series PC(1)-C*	1950 Census of Population Volume I, Series P-A*
1. SMSA's, urbanized areas and urban places of 10,000	Table 75	Table 35.
or more. 2. Urban places of 2,500 to	Table 81	Table 39.
<ol> <li>Counties</li> <li>Counties</li> <li>Nonwhite population for selected SMSA's, urban-</li> </ol>	Table 83 Table 78	Table 43. Table 36**
ized areas and urban places of 10,000 or more. 5. Nonwhite population for selected counties.	Table 88	Table 44**

See Appendix.

\*Summary data only.

activities. Activities which have their markets outside of the locality are export activities inasmuch as they bring money from outside the community into the community. Such activities are referred to interchangeably as "export," "basic," or "primary activities." Generally such activities consist of manufacturing, processing or extraction of materials for sale outside of the community. There are other activities in particular communities which fall into this category. Government in Washington, D.C., advertising in New York City, and insurance in Hartford, Connecticut are considered "basic" to the extent that they bring in outside money, and their increases in employment will support additional employment of a strictly locality character.<sup>3</sup>

Table 2 shows the percentage distribution of those employed and reporting industry of employment in the United States and in the Binghamton SMSA in 1960. The percentage not reporting industry of employment was distributed proportionately among those employed and reporting industry of employment. The percentage distribution of employment in the United States reflects the distribution that is required to meet the demand for goods and services in the United States and for export, as a whole. In order to meet the national demand most communities, due to location and resources available, specialize in some activities to a greater degree than others. Consequently, the distribution of employment in most localities will differ from the national average.

Specialization in the Binghamton SMSA has been in manufacturing. As shown in Table 2, 469 persons per thousand workers in the Binghamton SMSA are employed in manufacturing contrasted with 282 per thousand nationally. Moreover, within the manufacturing sector it has specialized in machinery other than electrical and other nondurables, primarily leather products. Binghamton, therefore, is a *net* exporter of manufactured goods, since when the grand total of exports and imports of manufactured goods is completed for a given period, Binghamton

<sup>&</sup>lt;sup>3</sup> For further explanation of the concept of basic and nonbasic employment in economic base analysis, see, Charles M. Tiebout, The Community Economic Base Study, published December 1952 by Committee for Economic Development, 711 Fifth Ave., New York 22, N.Y., 86 pages, price \$1.50. A related recommended study of Committee for Economic Development is The Changing Economic Function of the Central City, by Raymond Vernon, 92 pages, price, \$1.00. Additional references on the concept of the economic Base Include Homer Hoyt, "The Utility of the Economic Base Method in Calculating Urban Growth," Land Economics, Series of nine articles beginning in the August 1953 issue through February 1955, and the final article in the February 1956 issue.

 TABLE 2.—Percentage Distribution of Total Employment by Industry

 Reported for United States and Binghamton SMSA, 1960

Industry Group	United States	Binghamton SMSA	Deviation of Binghamton from U.S. Average
Employed and Reporting Industry	100.0	100.0	
	6.0	1.8	-5.1
Agriculture	0.5		-0.1
Forestry and fisheries	1.0	0.1	-0.9
Mining	6.2	4.8	-1.4
Construction	98.9	46.9	+18.7
Manufacturing	18	1.0	-0.8
Furniture, lumber and wood products	2.0	0.4	-1.6
Primary metals	2.0	1.1	-1.0
Fabricated inetals	2.1	13.2	+10.7
Machinery, except electrical	2.0	2.0	-0.4
Electrical machinery	1 2	0 1	-1.2
Motor vehicles & equipment	1.0	2.3	+0.7
Transportation equipment, except motor vehicles	2.0	6.6	+4.4
Other durable goods	2.2	1 1 8	-1.1
Food and kindred products	1.5	0.1	+1.4
Textile mill products	1.0	0.5	+1.4
Apparel & other textile products	1.9	2.0	+0.3
Printing, publishing and allied products	1.9	0.3	-1.0
Chemical and allied products	1.0	15.2	+12.5
Other nondurables and nonspecified	4.0	10.0	_1 7
Transportation	4.0	2.5	_0.6
Railroad and railway express	1.0	1.0	-0.0
Trucking service and warehousing	1.0	1.3	-0.2
Other Transportation	1.0	0.0	0.5
Communications and Utilities	2.9	2.2	-0.7
Communications.	1.4	0.9	-0.0
Utilities and sanitary services	1.0	1.0	-0.2
Trade	10.9	10.0	-2.5
Wholesale trade	3.5	2.4	-1.1
Food & dairy product stores	2.7	2.2	-0.5
Eating and drinking places	2.9	2.6	-0.3
Other retail trade	9.8	8.8	-1.0
Finance, Insurance and Real Estate	4.4	3.1	-1.3
Services	21.0	18.9	-2.7
Business services	1.2	0.8	-0.4
Repair services.	1.4	0.8	-0.6
Private households	. 3.1	1.6	-1.5
Other personal services	. 3.1	2.5	-0.6
Entertainment and recreation	. 0.8	0.5	-0.3
Education services:	1		
	4.1	3.9	-0.2
	1.3	0.8	-0.5
wenare, rengious & nonpront organizations.	1.3	1.3	
nospitals	2.7	4.2	+1.5
Public Administration	2.6	2.5	-0.1
r abac Aunimistration	.  3.2	3.3	-1.9
	1	1	1

Source: 1960 Census of Population.

will still produce a net excess of manufactured goods which must be exported.

The community is likewise a net importer of agricultural products since the proportion of the employed labor force engaged in agriculture is substantially below the national average. Being in the dairy belt, the com-

munity probably produces dairy products for export as well as local consumption, but on balance, it is a net importer of food products.

It is also important to recognize what Binghamton is not. This is best shown by comparison with a different functional type economic area such as Atlanta, Georgia.  

 TABLE 3.—Percentage Distribution of Total Employment by Major Industry Groups Reported for the United States, Atlanta SMSA and Binghamton SMSA, as of the 1960 Census

Industry Group	United States	Atlanta SMSA	Binghamton SMSA
Industry and Reporting Industry	100.0	100.0	100.0
Agriculture, forestry & mining Construction Manufacturing Transportation Communications and Utilities Trade Finance Services Government	8.0 6.2 28.2 4.6 2.9 18.9 4.4 21.6 5.2	$1.2 \\ 7.0 \\ 23.2 \\ 6.4 \\ 3.3 \\ 22.4 \\ 6.5 \\ 24.2 \\ 5.8 $	$     \begin{array}{r}       1.9 \\       4.8 \\       46.9 \\       2.9 \\       2.2 \\       16.0 \\       3.1 \\       18.9 \\       3.3 \\     \end{array} $
	1000		

Source: 1960 Census of Population.

As confirmed by the data in Table 3, the Atlanta, Georgia, SMSA is a major regional center for the southeastern sector of the United States. In terms of proportion of employment, it is above the national average in the categories of transportation, communications, trade, finance and services. As the state capital and location for a number of Federal offices, it is above the national average in terms of government employment. As a rapidly growing metropolitan area, it is not surprising to find that it is also above the national average in terms of persons employed in construction. Atlanta is a net exporter of these broad categories in the sense that as a regional center it provides services for persons and organizations outside the metropolitan area itself. The Binghamton SMSA by contrast is below the national average in all of these categories. Its primary economic strength lies within the manufacturing sector.

The foregoing does not mean that the economic structure of an area will not or cannot be modified. It is important, however, to recognize the composition of a local economy and how it compares nationally. This will enable a more realistic appraisal of economic growth potential.<sup>4</sup> An increase in employment in the service sector does not necessarily mean that a community is becoming a service center. National trends indicate a notable increase in the service sector relative to manufacturing. In almost all communities, rising *real* incomes enable people

<sup>4</sup> For further general treatments of economic growth, see Ferloff, Harvey S., How a Region Grows, published 1953 by the Committee for Economic Development, 711 Fith Avc., New York 22, N.Y., price \$2.25, 147 pp. Also, see Guiding Metropolitan Growth, also published by the Committee for Economic Development and published in August 1960, price \$2.00, 56 pp. to increase their expenditures for such services as health and education.

#### Current Labor Market Data

The researcher can obtain ready access to current published employment data, which are detailed and accurate, and which provide a reliable basis for short-run prognoses of future employment levels. These are the Monthly Labor Market Letters which are prepared by the state offices of the Bureau of Employment Security (BES), affiliates of the U. S. Department of Labor. These reports contain information regarding total employment, manufacturing employment by industry groups, unemployment, percentage of unemployed, and average weekly earnings of manufacturing production workers. In these reports the current figures for major reporting industry components are compared with data of the previous month and with the corresponding month of the previous year. The reports also contain a narrative section which briefly sketches a broad prospectus of employment conditions for the next two or three month period. These reports are available for labor markets in the nation's Standard Metropolitan Statistical Areas, and they can usually be obtained upon request by any persons or groups who have a legitimate need for them.

In addition to the above SMSA coverage, the state employment agencies survey and publish data for numerous smaller labor market areas. These data, however, are usually obtained semi-annually, and frequently may not be published. If unpublished, the data are ordinarily available upon request. The general coverage for these smaller areas will usually be the same as for the larger

labor market areas, but the data will often be less detailed and comprehensive.

The previously mentioned two or three month projections of labor market conditions contained in the BES Monthly Labor Market Letters are obviously insufficient for the housing market analyst who is considering a marketing period of, say, one to three years. As a minimum requirement, the analyst would wish to have economic base projections and housing market time spans of coincident duration. In numerous instances he may find it additionally advantageous to fit his market estimates into an economic base projection of even longer duration.

In order to ascertain these longer-run developments, the analyst must determine area economic base trends, and this requires a "time series," or historical perspective of local employment patterns, that is, number and types of jobs, dating back at least to the most recent decennial Census. In some instances local trends may be readily discernible on the basis of developments within the last several years; in other localities, the emergence of trends has been far more gradual. Such a time series, however, will help reveal the internal dynamic changes which have occurred within the local economy, indicating which sectors of the local economy have been growing, diminishing or remaining stable. This information, plus analysis of the growth outlook for the maior industrial segments of the local economy. provides a basis for judgment as to the direction and rate of change in employment in the area in the future.

These historical employment data can be obtained from the records of BES offices. It is important to find out if the historical data have been revised and if there have been any changes in the definition of employment groupings. Frequently, these records will be in the form of annual average figures which provide an easy basis for comparability purposes. In many labor market areas for which data are assembled on a less-than-monthly basis, average annual figures are not available. In this latter instance, the analyst may draw comparisons for the month of May (or some other suitable month) in successive years. In most localities the month of May reflects a minimum seasonal bias.

The BES data, in addition to providing information with respect to numbers employed and unemployed, are equally useful in showing the internal dynamics of the local

labor market. The employment data are broken down by Standard Industrial Classification (SIC) groupings which have general use and applicability in practically all types of employment reporting and analysis. The extent to which the data are broken down will depend upon the characteristics of the local manufacturing base. For example, if a locality has very heavy employment in nonelectrical machinery, but that employment is, in turn, further distributed among earthmoving equipment, machine tools, and small gasoline engines, separate appropriate SIC categories may be utilized for each activity. In another locality where total non-electrical machinery production accounts for only a small part of area employment, there will probably be no further breakdown of the major industry grouping.

Table 4 illustrates the type of data that can be obtained from labor market letters prepared by the state Bureau of Employment Security. For the year of the decennial Census, 1960, an annual average should be used, if possible, or a month such as April or May which is near the time of the decennial Census. In this example, the annual average for 1960 was obtained. Since the market estimate is as of January 1, 1964, the 1963 annual average is used for the current employment figure. (If the market estimate were being made as of May 1, 1964, the BES data as of April 1964 would be used. Since an annual average which covers a 12 month period would tend to mitigate the effect of unusual month-to-month changes. any analysis of employment data for a particular month should, if possible, take into consideration the annual average for the previous full year.)

The employment figure shown in Table 4 for the 1960 Census, 83,600, is significantly less than the BES figure for that year, 88,300. Again, it must be noted that the Census figure reflects only the employment of residents of the SMSA. The labor market figure reflects a number of nonresidents who work in the SMSA. The contents of this table are covered further in the subsequent discussion on how to make an employment projection.

## How to Make an Employment Projection

There are numerous variables which make estimates of future employment levels subject to error. The analyst, for example, will probably be unable to anticipate changing TABLE 4.-Labor Market Data for Binghamton SMSA, 1960-1963

	Bureau of H Securit	Employment y Data <sup>1</sup>	1960
Classification	1963 Average (1,000's)	1960 Average (1,000's)	Census (1,000's)
Labor Force	94.6	92.5	86.9
Unemployed	4.5	4.2	3.3
Percent Unemployed	4.8	4.5	3.7
Employed	90.1	88.3	83.6
Non-Agriculture Wage & Salary	79.2	77.7	279.3
Non-manufacturing Industries	42.6	38.0	41.4
Contract Construction	2.9	3.3	3.9
Transportation & Utilities	3.9	3.9	4.0
Wholesale & Retail Trade	13.3	12.4	13.0
Finance, Insurance & Real Estate	2.5	2.3	2.5
Service & Miscellaneous	8.1	7.0	³ 15.4
Government	11.5	9.1	<sup>3</sup> 2.6
Manufacturing	36.6	39.7	37.9
Durable Goods.	21.6	22.5	21.6
Metals & Machinery	15.2	15.5	13.5
Other Durables	6.4	7.0	8.1
Nondurables	4 15.0	17.3	16.3
All Other Non-Agriculture	8.6	7.7	<sup>5</sup> 2.8
Agricultural Employment	2.3	2.9	1.5

<sup>1</sup>Labor Market Letters, New York State Bureau of Employment Security.

<sup>2</sup> Census data include self-employed as well as non-agricultural wage and salary employment.

<sup>3</sup> A number of service industries such as education and state hospitals may be classified as government employment by BES, but are not so classified in the Census.

\*The actual reported employment figure was 13,600. For purposes of illustration in this guide, a figure of 15,000 was assumed and other figures relating to employment and labor force were adjusted accordingly. The figures were adjusted in order to present a more typical housing market analysis.

\* The Census category of "No Industry Reported" was put in the category of "All Other Non-Agriculture" employment.

national defense requirements which might eliminate a major employment source in a specific locality or result in increased employment. He cannot anticipate plant consolidations and mergers, or development of new industry which might have a major impact on local employment. His inability to foresee such changes, however, should not discourage him from making employment prognoses. The above-mentioned changes represent "exceptions" rather than the rule, and in most localities economic changes are slow in manifesting themselves. Once having evidenced themselves, their influences and effects may prevail over a long period of time, e.g., the shift of cotton textiles from certain New England to Southern localities; or the use-change from cotton and wool to synthetics, also causing local employment dislocations; and the deterioration of anthracite coal mining with the shift to such domestic heating fuels as gas and oil.

An awareness of long-term trends provides a valuable framework of reference for predicting short-run changes in local employment conditions. Insights into long-term and and short-term developments can be obtained from the data, exemplified by Tables 1 through 4 which, in this instance, cover the Binghamton, New York SMSA. (The comparison of 1950 and 1960 employment in Table 1, shows that there was an increase of 2,221 jobs in which the industry was not reported. This was apparently due to a change in the Census enumeration technique. Since this amounts to about 25 percent of the total increase in employment of 8,881 jobs from 1950 to 1960, there is some loss of comparability between 1950 and 1960 data.)

The following will illustrate how these Census data, plus an overview of the community which may be obtained from several strategic interviews with locality representatives, can provide insight into the long-range economic dynamics of this SMSA.

 The central city of Binghamton suffered a population decline of 5.9 percent between 1950 and 1960, while the entire SMSA (Broome County) increased its pop-

ulation by 15.1 percent during the same period. In this respect, the growth pattern of Binghamton during the 1950's conformed to the pattern of many SMSA's suburban growth, partly at the expense of the central city.

- 2. In the Binghamton SMSA employment increased by 11.9 percent during 1950-1960 or an average of 1.2 percent per year (Table 1). This is only 3.2 percentage points less than the 15.1 percent SMSA population increase. Unemployment was not excessive during either 1950 or 1960, and it is therefore obvious that labor force growth was accommodated by increased job opportunities. From 1960 to 1963, however, employment increased by only 0.7 percent per year (Table 4). BES data for 1950 to 1960 and/or local interviews would be required to determine whether the slowdown in the rate of employment increase was taking place during the 1950's or if this has occurred only since 1960.
- 3. Agricultural employment declined significantly, in accordance with national trends, suggesting perhaps increased farm productivity and a reduced number of farms. Relatively high wage rates within metropolitan areas as well as shifts in land to other uses tends to accelerate this trend in such areas.
- 4. Manufacturing employment increased 10 percent over the decade. However, the dynamics within this change appear more important than the overall increase. In the field of durable goods, including fabricated metals, electrical machinery, and transportation equipment (excluding motor vehicles) employment increased by 65 percent during the decade. This was sufficient to offset substantial losses in nondurable goods manufacturing. In the category of "other non-durables," employment decreases totaled 4,400 jobs, or a 26.3 percent decline. The principal manufacturing activity in this category was leather products, not indicated separately in the Census data, but readily ascertained from local interviews.

From 1960 to 1963, however, employment in manufacturing declined by 8 percent, a reversal of the 1950 to 1960 trend. Despite this decline, manufacturing still remains the primary source of employment.

5. Following national trends which reflect growing employment in service trades and occupations, B i n g h a m t o n employment showed large gains in these sectors during 1950-1960. Employment in finance, insurance, and real estate increased by 37 percent. In the field of health, education, welfare, government, and related services, employment increased 42 percent. Despite these increases, the proportion of the employed labor force in these categories in Binghamton remained below the national level. From 1960 to 1963, the BES data indicate that the non-manufacturing sector made a gain of 12 percent.

In conjunction with Census data, the researcher can obtain ready access to published employment data, which present detailed estimates that provide a reliable basis for short-run prognoses of future employment levels. These are the Monthly Labor Market Letters which are prepared by the state offices of the Bureau of Employment Security (BES), affiliates of the U.S. Department of Labor. The current reports are preliminary and are usually subject to revisions. These reports, nevertheless, remain valuable for short-term forecasting, but the revised final data should be obtained for purposes of historical analysis. These reports contain estimates of total employment, manufacturing employment by industry groups, unemployment, percentage of unemployed, and average weekly earnings of manufacturing production workers. In these reports the current figures for major reporting industry components are compared with data of the previous month and with the corresponding month of the previous year. The reports also contain a narrative section which briefly sketches a broad prospectus of employment conditions for the next two or three month period. These reports are available for labor markets in the nation's Standard Metropolitan Statistical Areas, and they can usually be obtained upon request by any persons or groups who have a legitimate need for them.

For purposes of housing market analysis, employment projections for the next 2 to 3 years will usually be based on employment trends of the last 3 to 5 years. Such a projection, however, would have to be modified by current and/or expected significant changes in the local economy.

In the case of Binghamton, it is assumed that there will be no radical changes in the local economy over the next few years and that the employment growth rate of 0.7 percent per year (determined from Table 4) which has taken place from 1960 to 1963 will continue during the forecast period, January 1964 to January 1967. This would result in an employment increase of approximately 2,000 jobs.

It is necessary to stress again, however, that housing markets cannot be studied at long distance, and the framework of Census data must be additionally covered with local field surveys. In addition to the foregoing sources, additional guidance can often be secured from local industrial development commissions, Chambers of Commerce and university business research bureaus. There may be some instances where the analyst may find it necessary to obtain first-hand information at the plant level itself. This latter contact should be avoided if data are available from secondary sources such as the local state employment service office. Cooperation from industry is usually greater when duplication of contacts for the same information is avoided.

#### SECTION III: HOUSING STARTS

ONE of the most essential ingredients for effective housing market analysis is a knowledge of new housing construction activity within the market area. Not only does this provide a basis for estimating the housing inventory during intercensal years, but its availability by separate civil jurisdictions will furnish insight into housing market growth patterns, e.g., suburbs vs. central city, or northern suburbs vs. southern suburbs. Housing starts information will also shed light on the internal dynamics of the local housing supply, such as changing ratios of home ownership and tenant occupancy.

Data for actual housing starts are difficult to obtain. Inasmuch as there is normally a high correlation between building permits which are issued and the ensuing construction, however, these permit data are used instead. Practically all localities which issue building permits provide these data to the U.S. Department of Commerce, which, in turn, publishes the data. It should be noted, however, that for some localities building permits do not cover all construction, and supplementary estimates of starts may be necessary.

## Permit Data for Individual Places

Permit data for individual permit issuing jurisdictions are published by the Bureau of the Census in Construction Reports, Building Permits, New Dwelling Units Authorized by Local Building Permits, Series C-40. The monthly publication contains permit information on most localities which issue building permits for at least 50 units a year (20 or more units in jurisdictions within 10 of the less populous states.<sup>5</sup>). The annual summary of this report shows the number of units authorized in all known and reporting permit issuing places and by type of structure in places where permits were issued for multifamily structures.<sup>6</sup>

#### Permit Data for Metropolitan Areas

Permit data for individual metropolitan areas (including a breakdown for inside and outside the central city) are available in another Census report entitled Construction Reports, Building Permits, New Residential Construction Authorized in Permit-Issuing Places, Series C-42.7 For 99 SMSA's and all states, the Bureau of the Census publishes a monthly breakdown of building permits by 1-family, 2-4 family and 5-or-more family units, by public housing contract awards and by valuations, based on data from 3,014 permit issuing places. The annual summary covers all SMSA's and data from all reporting permit issuing places within those SMSA's.

Because of the time lag involved in the issuance of the foregoing reports, the analyst may wish to obtain the latest permit data available directly from the permit issuing sources. Also, where the reporting unit is large, for example, an entire county, the analyst may be interested in determining dynamics within that specific county. In such instances the reporting clerk may be willing to break the data down further by locality and minor civil division, which will enable a more precise analysis of growth trends.

For local planning purposes some urban centers such as the Washington, D.C. suburbs of Arlington County and Alexandria, Virginia, maintain permit data by Census tracts. Since some housing data are available by Census tracts in the 1960 Census, subsequent maintenance of permit data by

<sup>&</sup>lt;sup>5</sup> Alaska, Idaho, Maine, Mississippi, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Wyoming.

<sup>&</sup>lt;sup>a</sup> This report may be obtained from the Bureau of the Census, Washington, D.C., 20233. Annual subscription in 1965 was \$3,00. Localities are listed by Standard Metropolitan Statistical Areas including major jurisdictions within the SMSA as well as nonmetropolitan areas.

<sup>&</sup>lt;sup>3</sup> Available from the Bureau of the Census, Washington, D.C. 20233. Annual subscription in 1965 was \$1.00. See Appendix for listing of 99 SMSA's.

Census tract enables a locality to be apprised of intercensal trends by such areas. Although data by minor civil divisions and Census tracts is most useful and may be helpful in housing market analysis, a breakdown of permits for an area less than the size of the housing market area is not essential for the housing market analysis technique outlined in this manual.

A low volume of building in any single jurisdiction should not discourage the analyst (or the reporting clerk) from maintaining and publishing these figures in an orderly and periodically regular fashion. Small numerical periodic additions to a relatively modest housing supply base can, over a period of years, have a substantial impact, imposing serious problems with respect to school, water and sewer facilities upon the local governing bodies.

In summary, the market analyst should obtain building permit data for the entire housing market area in terms of private residential permits, broken down by single family and multiple family units, and public housing contract awards. In order to develop inventory estimates, it is necessary for the analyst to develop time series data back to the beginning of 1960. (The Housing Census was taken as of April 1960 but including building permit data for the first three months of 1960 will help compensate for the time lag between issuance of building permit and start of construction.) As indicated before, a breakdown of permit data by jurisdictions within the housing market area would be useful, but is not essential.

## Units Authorized in Binghamton SMSA

TABLE 5.—Housing Units Authorized by Permits in Binghamton SMSA, 1960-1963

Year	Total Units	1– Family	2–4 Family	5– or–more Family	Multi- family Percent
1960 1961 1962 1963	706 993 662 1,370	648 676 512 570	44 71 54 97	14 246 96 <sup>1</sup> 703	8 32 23 58
Total	3,731	2,406	266	1,059	36

<sup>1</sup> Includes 92 public housing units. Source: Construction Reports, Building Permits, U.S. Bureau of the Census, Series C-42.

Table 5 shows the number of units authorized by permits in the Binghamton SMSA from 1960 through 1963, including

92 public housing units. Since public housing serves the lower income segment of the population, the volume of new public housing is usually not considered in evaluating the private housing market. It is important, however, to include public housing starts in determining the current size of the housing inventory. The 3,731 units authorized for the four-year period 1960-63 indicates an average of 933 units per year. This is below the rate of housing units built during the 1950's. The data on the year built from the 1960 Census of Housing indicates that an average of 1,300 units per year were built in the Binghamton SMSA from 1950 through 1959: the rate of building was about the same during the first part of the decade as during the latter part." In the previous section, the slowdown in the rate of economic expansion during the 1960-63 period as compared with the 1950-1960 period was noted. This slowdown appears to be reflected in the volume of housing production during the 1960-63 period as compared with the 1950-59 period. The foregoing housing permit data will be used in subsequent sections in making a current housing inventory estimate and a current population estimate.

The following discussion on localities other than Binghamton illustrate the various ways in which data on housing permits by jurisdiction and type of structure can be presented and utilized in evaluating local housing conditions.

## Techniques of Presenting Building Permit Data

Table 6 illustrates the presentation of housing units authorized by permits by major political jurisdictions in the Detroit, Michigan SMSA during the period 1950-1960. From this table it is observed that the number of housing units authorized in the SMSA has shown a general decline; but equally important, that there have been significant shifts of new residential construction activity within the market area.

Sources for year structure built:

Атев	1960 Census of Housing Volume I-HC(1) Series States and Small Areas
1. SMSA's, Constituent Counties Places of 50,000 or more and Ur- banized Areas.	Table 14.
<ol> <li>Places of 25,000 to 50,000</li></ol>	Table 20. Table 23. Table 20. Table 28.

TABLE 6.—Housing Units Authorized by Permits by Area in the Metropolitan Area, 1950 to 1960

	Wayne County		Oakland	Macomb	Total, Metro-
Year	Detroit	Bal. of County	County	County	politan Area
1950	12,781 6,628 5,240 5,523 2,812 1,785 2,106 2,012 1,983 509 352	$\begin{array}{c} 16,105\\ 11,171\\ 10,220\\ 12,374\\ 16,139\\ 16,631\\ 12,228\\ 10,266\\ 9,059\\ 8,676\\ 5,148\\ \end{array}$	9,614 8,171 7,242 8,667 12,709 11,073 9,973 7,550 6,486 5,141 4,000	5,205 $3,877$ $4,230$ $6,644$ $8,609$ $9,813$ $6,912$ $4,795$ $5,353$ $5,803$ $5,400$	43,705 29,487 26,932 33,208 40,269 39,302 31,219 24,623 22,881 20,129 14,897

Source: Detroit Regional Planning Commission.

Wayne County, containing the central city of Detroit, showed an 81 percent decrease in new housing unit authorizations during the decade, and its share of total SMSA starts declined from 66 percent to 37 percent. Within the City of Detroit, new housing construction came to a virtual halt by the end of the decade, while Macomb County enjoyed, perhaps, the most consistent new construction program. The foregoing numerical data can be utilized to depict internal housing market dynamics with even greater emphasis; use of percentages or index numbers would emphasize even more strongly the relative decline of the central city growth vis-a-vis the suburban areas.

Table 7 illustrates another manner in which housing permit data can be utilized. Housing units have been identified as to type, i.e., one family, two family, and three or more family structures. This provides insight into the nature of inventory additions to the area housing supply, rental units vs. sales units. Taking into account local building patterns, it can ordinarily be assumed that most two-or-more unit structures will be for rental occupancy. Exceptions to the foregoing would be cooperative rental projects, which, in effect, represent a form of home ownership, as would condominium projects. These types of building activity have been rather limited in most housing markets, and their presence could ordinarily be identified by adequate footnotes. In many areas two-family dwellings contain an owneroccupant; in some areas both units are used exclusively for rental purposes. The housing inventory report to the 1960 Census indicates that 88 percent of the occupied multifamily units constructed from 1950 through

TABLE 7.—Housing Units Authorized by Type of Structure Detroit Metropolitan Area, 1953 to 1961<sup>1</sup>

Уеаг	One-Family	Two-Family	Three Or More	To	tal	Single- Family	Multi- Family
	<b>,</b>		Family	Number	Percent	Percent	Percent
1953 1954 1955 1956 1957 1958 1958 1959 1960 1961	28,930 37,050 37,829 29,710 21,271 20,933 19,134 13,802 13,043	512 928 436 352 292 270 116 182 139	$\begin{array}{c} 3,766\\ 2,291\\ 1,037\\ 1,157\\ 3,060\\ 1,678\\ 879\\ 1,126\\ 1,237\end{array}$	$\begin{array}{c} 33,208\\ 40,269\\ 39,302\\ 31,219\\ 24,623\\ 22,881\\ 20,129\\ 16,260\\ 14,419 \end{array}$	100 100 100 100 100 100 100 100 100	87 92 94 95 86 91 95 92 90	13 8 6 5 14 9 5 8 10

<sup>1</sup> Breakdown by type of structure not available prior to 1953. Source: Detroit Regional Planning Commission.

1959 in the United States were renteroccupied, and for inside SMSA's the proportion was 87 percent.

Most of the recently built single family units will be for owner-occupancy. The housing inventory shows that 88 percent of the single family units built and occupied in the United States during the 1950's were owner-occupied, and for inside SMSA's, the proportion was 91 percent.

Table 7 would indicate, therefore, that the overwhelming bulk of new construction was represented by additions to the ownership inventory. Over the nine-year period covered by Table 7, the depicted construction would have tended to reduce the proportion of rental units in the housing inventory of the Detroit SMSA below the 38 percent reported in the 1950 Census. This is borne out by the 1960 Census of Housing, which indicates that only 29 percent of the housing supply was occupied by renters.

A directly opposite trend is noted in the case of new construction activity in the San Francisco SMSA, as shown in Table 8. Here, there is evidence of a growing trend for multifamily rental housing construction. A trend such as this would, in turn, suggest changing patterns of land use, increased densities, and use of different building materials, as well as possible utilization of new or different sources of mortgage financing.

It is also useful to obtain housing permit data which cover a shorter-range period, especially when the analyst is interested in determining whether short-run movements are consistent with, or represent a departure from the longer-range movements. For example, from Table 7, if the analyst early in 1958 compared 1956 and 1957 data, he would have detected a sharp upsurge in the proportion of new construction represented by multifamily housing.

Sometimes, month-to-month changes are valuable for discerning trends. For example, in Table 9, it is noted that permit activity in the Washington, D.C., SMSA of 1961 lagged behind the similar period for 1960 in practically all types of structures. However, in November 1961, one-family unit authorizations accelerated sharply. The analyst would want to ask "What might account for this sharp reversal of trend? Is this increase indicative of a basic change in the housing market?"

TABLE 8.—Private Housing Units Authorized by Type of Structure in San Francisco SMSA, 1955 to 1959

Year	N	Multiples as a Per-		
	Single	Multiple	Total	cent of All Units
1955	27,145	4,175	31,320	13
1956	17,266	4,498	21,764	21
1957	11,666	6,510	18,176	36
1958	14,931	9,424	1 24,355	39
1959	17,769	10,850	2 28,619	38

## <sup>1</sup> Does not include 100 public housing units. <sup>2</sup> Does not include 405 public housing units.

Source: Bureau of the Census,

## TABLE 9.—Current Housing Units Authorized by Type of Structure in Washington, D.C., SMSA—November 1961

		Number of Housing Units Authorized			
Period Covered	Total	1-Family	2-Family	3 or more Family	
November 1961	2,325	1,053	14	1,258	
November 1960	2,098	663	30	1,405	
Change from year ago (percent)	+11	+59	-53	-46	
1st 11 months 1961	18,697	10,423	66	8,208	
1st 11 months 1960	25,078	12,014	50	13,014	
Change from year ago (percent)	-25	-13	+32	-37	

Source: Bureau of the Census.

 
 TABLE 10.—Current Housing Unit Authorizations by Area in Washington, D.C., SMSA—Third Quarter 1961

	Number of Housing Units					
Area	3rd Quarter 1961	3rd Quarter 1960	Change from 3rd Quarter 1960–1961			
			Number	Percent		
Washington, D.C., SMSA	7,397	5,212	+2,185	+42		
Washington, D.C.,: Montgomery County, Md Prince Georges County, Md Alexandria, Va Arlington County, Va Fairfax County, Va Falls Church, Va	330 1,516 3,419 308 426 1,317 81	170 1,592 1,624 342 286 1,193 5	$\begin{array}{r} +160 \\ -76 \\ +1,795 \\ -34 \\ +140 \\ +124 \\ (1) \end{array}$	$ \begin{array}{r} +94 \\ -5 \\ +110 \\ -10 \\ +49 \\ +10 \\ (') \end{array} $		

<sup>1</sup> New construction usually consists of a few single family units. Of the 81 housing starts in the 3rd quarter of 1961, however, 75 were multifamily units. . Source: Bureau of the Census.

In Table 10, housing permit data are broken down by separate civil divisions within the Washington, D.C., SMSA, and the data are for comparable periods (quarters) in 1960 and 1961. These data enable the analyst not only to assess the current volume of construction in each jurisdiction within the SMSA, but also to detect changes from the corresponding period of the previous year. The most obvious conclusion drawn from this table is that, numerically and proportionately, Prince Georges County in Maryland showed the largest increase in building activity, in fact, accounting for the bulk of building activity increases in the SMSA over the comparable period of the

previous year. Given this factor, the analyst would wish to check further to determine the extent to which this volume could be attributed to multifamily construction or single family housing. In this instance multifamily construction in Prince Georges County had increased 147 percent over the previous year and single family construction was up 82 percent. In further investigation. the analyst might ask, "What factors in Prince Georges County would account for these developments? Are these short term trends or are they indicative of sector shifts in the local housing market?" Needless to say, analysis of historical data would be vital in interpreting short run trends.

#### SECTION IV: DISPLACEMENT AND DEMOLITIONS

HOUSING market analysis and projection of housing demand require a review of demolitions which are taking place under the interstate highway programs, urban renewal, various municipal construction programs and through private action. From the standpoint of market analysis, these demolition activities directly affect the magnitudes and character of the housing inventory, and the market demand for additional housing to accommodate the displaced families. In order to make a population estimate and a housing demand estimate in accordance with subsequent guide instructions, reasonable estimates of the number of housing units demolished and scheduled for removal will be necessary.

For a community in which there is a significant magnitude of current and prospective demolitions, these displacements will impose a relocation problem in which the housing market analyst may be additionally involved as a "resources specialist." In this capacity, the analyst is concerned with comprehensive estimates of displacement for purposes of: (1) assessing the adequacy of the city's housing resources to meet anticipated displacee housing requirements; (2) assisting in the planning and execution of an effective relocation plan; (3) and, when necessary, developing recommendations to obtain special housing aid and assistance programs such as low-rent and moderate-income housing. While many communities (or public agencies in the community) will not have legal responsibility for relocating all types of displaced families, overall displacee needs should be considered, inasmuch as all such families will actively compete for available housing resources.

For purposes of housing market analysis, it only is essential to know the number of dwelling units that have been and will be demolished during a given period of time. For purposes of relocation and estimating the demand for new housing by displacees, more detailed information is needed on the characteristics of the displacees.

## **Estimating** Displacement

The types of programs which cause family displacement and structural demolitions are numerous and they will vary by individual communities. Even though activity under any single program may be comparatively modest, the cumulative effect from all programs may be quite substantial. From the standpoint of local relocation programs, even a small magnitude of displacement may, nevertheless, involve a disproportionately large scope of problems, inasmuch as these clearance programs frequently affect the multi-problem families, whose lower income, race, age, family size, or unemployed status greatly restrict their opportunities in the competitive private housing market.

Significant forms of actions leading to displacement and demolitions would include the following:

- 1. Urban renewal activity, either in the form of clearance, or in the form of rehabilitation which may indirectly cause displacement because the higher rents and/or reduced intensity of occupancy of the rehabilitated units will exceed rent-paying capabilities of their occupants.
- 2. Public housing activity, primarily in the form of site clearance for construction of new resources, and to a limited extent as a result of eviction of families whose increased incomes (after admission) no longer qualify them for continued occupancy. This may occur under Federal, state or local public housing programs.
- 3. Highway construction, Federal, state or locally financed.
- 4. Enforcement of local housing codes, which may cause condemnation and direct removal of structures or indirectly cause family displacement by raising rent

levels (because of extensive repairs) beyond the means of current occupants.

- 5. Construction of public, private or parochial school (including college and university) facilities on sites requiring demolition of existing house inventory. Also, construction of other types of buildings by Federal, state and local governments, such as medical or hospital facilities, civic buildings, stadiums, military installations, and power projects.
- 6. Private construction such as commercial, industrial and residential buildings which may involve demolition of the existing inventory of housing. Units may also be lost through the conversion of existing units to nonresidential use or the merger of two-or-more residential units into fewer units. (Units can also be created in existing structures by the conversion of one-or-more units into a larger number of units.) Any changes such as these usually require a building improvement permit.
- 7. Units lost due to fires, floods and other causes.

The above list illustrates the wide range of activities which may cause inventory losses and impose relocation programs upon individual localities.

The market analyst will find it necessary to secure reliable and accurate information regarding the nature and extent of these demolition and displacement activities. If the community has a central relocation agency, he may be able to obtain this information from a single source. In most cases, however, it will be necessary for him to contact the several different agencies involved in the various displacement actions and obtain from them 24-36 month projections which would indicate (1) nature and location of displacement activities, (2) their timing, i.e., start and estimated completion dates, (3) numbers and characteristics of families to be displaced, including to the extent possible and as may be necessary, such factors as tenure of housing-owner or renter, condition of housing-standard or substandard, family size, income, race, and age. It will often be necessary to secure information on race in order to assess the impact of displacement on such minority groups and to be apprised of the relocation problems involved such as the usually lower incomes of these groups. which will make it more difficult to secure

adequate relocation housing. Special attention should also be directed to securing data on the number and characteristics of single elderly and non-elderly persons, who often constitute a significant proportion of the displacees.

Previous experience has demonstrated that a high degree of error frequently occurs with respect to the scope and timing of these displacement activities; also that information with respect to the characteristics of the displacees is frequently absent, or lacking in detail and accuracy. With respect to timing and scope, highway programs, for example, may be postponed due to unavailability of funds, or public hearings may dictate selection of alternative rights-of-way: in urban renewal undertakings, the scheduled plan of execution may take longer than was anticipated. Local code enforcement programs may be severely cut back without notice by municipal decisions to reduce budget and staff for such activities or to relieve the pressure on the housing supply caused by other types of displacement activities.

Regarding site-occupant information, such data are ordinarily obtained only in connection with urban renewal and public housing clearance activities. Similar information is usually lacking in instances of highway clearance and code enforcement. If the community has a Workable Program or a Community Renewal Program, information on past, current, and prospective displacement activity may be available in these documents. The planning commission or the local redevelopment agency will usually be apprised of the availability and content of the documents.

For effective community relocation programs, there is no reliable substitute for a thorough survey of site occupants. In this manner, the current tenure, incomes, racial identification, rent paying abilities, preferences and unit size requirements of displacees can be individually and collectively ascertained. In the absence of these survey data, the relocation agency must fall back upon either Census data or informed local sources.

Block statistics are available in the 1960 Census of Housing for all cities with a population of 50,000 or more, as well as for those smaller cities which paid the extra costs required to tabulate and print these data. Larger area coverage in the form of census tract reports are available for each of 180 tracted areas, most of which are metropolitan areas. Data tabulated under contract with selected local housing authorities on the characteristics of the occupants of substandard housing are available for 139 localities. (For information on the costs and references on city blocks, census tracts. and special tabulations on substandard housing, see the Appendix.)<sup>o</sup> Unpublished data for "enumeration districts," (which, in large urban centers may frequently involve fractional block coverage) can be obtained from the Census Bureau, but the costs will be significantly higher than for block and tract data, for which all mechanical computing and tabulating actions have already been accomplished.

These Census data, unfortunately, tend to lose their currency fairly rapidly, and their collective usefulness is accordingly limited. particularly in those sections of the city where neighborhood changes may be occurring at a rapid rate. (They, obviously, have no value in identifying individual family relocation problems.) Recognizing these limitations, the relocation official or the housing market analyst, nevertheless, can obtain some rough approximations with respect to the general socio-economic characteristics of the families to be displaced and the financial and structural character of the housing which they are occupying. He will be able to ascertain, for example, whether renters or owners will be displaced, whether they are white or nonwhite, their 1959 incomes and 1960 rents (which can be compared with locality medians and averages), labor force characteristics, and educational levels. Previous relocation experiences in many localities have demonstrated that most displacees tend to seek relocation resources within close proximity of their present residences, and here, the Census data can also provide approximations and clues to the nature of the surrounding housing supply.

The current general applicability of these data should be determined by discussion with informed local realtors and municipal officials. In this manner, account can be taken of changes in rents and housing values, changes in tenure, and racial occupancy which may have occurred since the last decennial Census. The foregoing implies that the analyst or relocation official should frequently undertake extensive "digging" before he can emerge with a fairly reliable estimate of family displacement within the next two-tothree year period. Even then, as indicated previously, his results will be subject to certain margins of error.

Due to local changes in execution timetables and revision of plans, displacement estimates should be restudied and revised annually, if feasible. In making estimates, it is necessary for the analyst or the relocation official to exercise critical judgment. For example, local officials often tend to overstate the number of families to be displaced as a result of code enforcement. Expanded programs of code enforcement have frequently failed to meet predetermined goals due to lack of budget and staff, or an overloaded court calendar which slows down the rate of condemnations. Wi'hin the field of urban renewal, the extended period between project planning and project execution frequently results in extensive voluntary moveouts from the affected sites, with the result that the relocation workload is smaller than the number of families who previously occupied the site. In applying these critical judgments, the market analyst may, for exemple, wish to compare condemnation records with announced goals, recognizing that without substantial budget and staff additions, future attainments will probably not significantly exceed previous accomplishments.

A critical element in developing effective relocation programs, as well as in determining effective relocation housing market demand, is the incomes of displaced families. Unfortunately, current income data are ordinarily obtained only from actual surveys of urban renewal and public housing site occupants. Therefore, the relocation official or market analyst will frequently have to make rough approximations of the income structure among other displaced families, using available income data as benchmarks, and utilizing census tract income data as comparability guidelines for extrapolation. The usefulness of such techniques will be circumscribed, and will be limited, essentially, to those areas where fairly uniform racial, tenure, and income characteristics would prevail. The usefulness of this technique might be extremely limited, for example, in a highway clearance program

<sup>&</sup>lt;sup>•</sup> For additional information on the use and availability of block statistics and Census tract data, see Technical Guide No. 11. Using Census Data for Urban Renewal Purposes. Urban Renewal Administration. Write to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. Price 10 cents.

which will displace suburban middle class homeowners, whose housing market positions and capabilities have little, if any resemblance to families in urban renewal areas.

## **Estimating Housing Unit Losses**

From the supply point of view, market analysts are interested in the number of housing units which are lost to the inventory as a result of governmental and private actions. From the demand point of view, the analyst and the relocation official are interested in the numbers of families who will be seeking alternative housing accommodations and will thus be absorbing housing units in the existing as well as new housing supply.

In most localities there will be fairly rough identity between these two estimates. Postwar doubling up generally has been reduced to minimum levels, and a unit removed from the supply will be tantamount to addition of a family to the relocation workload, although there may be some doubling up, particularly if the units are in slum clearance areas. Adjustment, however, would have to be made in those instances where there is a significant proportion of previous vacancies among the demolished units-and this may frequently occur in slum clearance projects. With the general easing of the postwar housing shortages, lower priced vacant units have tended to concentrate in the oldest and most deteriorated portions of the area housing inventory, while moderate to higher priced vacant units are likely to be in standard condition and in better neighborhoods.

Many localities require demolition permits for the removal of buildings by both public and private action and this can be an important source for estimating losses to the housing inventory. In many instances, however, the permits are issued on a structure basis. No record may be available to show whether the use of the structure was residential or nonresidential, and if the former, how many dwelling units were contained therein. Moreover, it is often not known whether the demolitions actually have occurred. In such cases, special care is required in estimating housing unit losses. When the importance of such records is known to local officials, frequently steps can be initiated to improve the system.

There is the additional problem of "time lag." Under the urban renewal program, for example, there may be a significant period between relocation of families and the actual removal of the structures which they previously occupied. Conversely, in numerous localities, there may be a significant interval between condemnation and removal of occupants. However, for two-to-three year estimates of displacement, these factors would tend to balance each other out. For shortterm relocation planning, the difference between units demolished and families displaced becomes more critical.

It had been previously mentioned that municipal departments frequently tend to overstate the magnitudes of displacement which will actually occur, and that the market analyst would have to apply a critical judgment factor to the estimates which have been provided to him. To develop this factor, the analyst should work closely with city officials in creation of a time series which would identify, in one column, (1) the number of units which had been estimated for condemnation or demolition during a specific time period and in another column, (2) the number of units which had actually been taken out of the housing inventory during that same period. The establishment and maintenance of such a time series will prove invaluable in estimating the size of the housing inventory as well as developing meaningful relocation workload estimates.

Losses to the housing supply also occur as a result of a merger of two or more housing units into a smaller number of units. These, however, are largely offset by conversions which proceed in the opposite direction, e.g., large-size units which are changed into two or more smaller-size units. Even in those cases where one type of activity tends to be significantly larger than the other, the overall impact upon the total housing market inventory would be very small, usually less than one percent of the total inventory over almost a 10-year period, according to evidence provided in Census of Housing reports.<sup>10</sup>

#### Estimating Housing Losses, 1950-1960

In making estimates of housing losses since 1960 and prospective housing losses, the analyst also may wish to obtain historical data for the 1950-60 period. For the metropolitan areas listed in footnote<sup>10</sup> in this section information is available on the number of housing units lost during the decade of the 1950's. In addition some metropolitan areas have maintained yearly data on estimated losses prior to 1960.

For most housing market areas, however, the foregoing data are not available, but

<sup>30</sup> For the United States and (4 major Census) Regions (\$1.00) and 17 metropolitan areas (\$0.30 each), the number of conversions and mergers can be determined from the 1960 Census of Housing. Volume IV, Series HC(4), Components of Inventory Change, Part IA: 1950-1959 Components. SMSA's included are: Atlanta, Boston, Dallas, Detroit, Los Angeles, Philadelphia, Seattle, Baltimore, Buffalo, Cleveland, Minneapolis-St, Paul, Pittsburgh, St. Louis, San Francisco-Oakland, and Washington, D.C. Separate reports are also published for the two Standard Consolidated Areas: New York-Northeastern New Jersey and Chicago-Northwestern Indiana. These are available from the U.S. Bureau of the Census, Washington, D.C. 2023. (Cost of Part 1B is also \$1.00 for the U.S. summary and \$.30 for each SMSA's and standard consolidated areas. The U.S. summary on Components of Inventory Changes, Part 2: 1957-59 Components is \$1.50.) In 14 of the 17 areas the net change resulting from conversions and mergers was published report, the net change resulting from conversions and mergers from 1950 to 1959 can be determined as follows:

	Units Chan		
Source	Conversion (1)	Merger (2)	Col, 1 plus Col. 2
Part 1A Table 2, Dwelling Units in 1959 Table 3, Dwelling Units in 1950	11,587 5,571	6,07 <b>2</b> 12,901	
Change from 1950 to 1959	•+6,016	▶-6,829	<del>~8</del> 13

▶ 5,571 units existing in 1950 have been converted into 11,587 units as of December 1959, or a net addition of 6,016 units.
▶ 12,901 units in 1950 have been merged into 6,072 units, or a net loss of 6,829 units.

• In this particular SMSA, there were only 813 more, units lost by merger than were created by conversion, which is only 0.26 percent of the total housing inventory of 311,720 units (Table 1) as of December 1959.

they may be derived from the Census as follows, using the Binghamton SMSA as an example:

#### January 1950-March 1960

The total number of housing units in 1950 and 1960 and data on the year built are available in the Censuses of Housing for 1950 and 1960 for all counties, metropolitan areas and urban places with a population of 2.500 or more. The source of data on housing units for year built are contained in footnote', page 18. Despite the use of Census data, the 153 units lost per year during the 1950's in the Binghamton SMSA as shown in line 6 do not necessarily indicate demolitions and units destroyed by fires and floods. Units may also be lost by conversion of units from residential to nonresidential units, and more units may be lost by merger than are created by conversions.

## SECTION V: VACANCY DATA

AN important measure of the strength of local housing markets is the extent to which the existing housing inventory is being utilized. In market analysis and general housing market considerations, this concept is expressed inversely—the extent to which the inventory is not being used. This measure of non-utilization is expressed as a vacancy rate. Generally a high vacancy rate would imply a condition of oversupply, and a low vacancy rate would reflect a condition of undersupply.

These generalizations, however, frequently obscure both internal and external differentials. For example, a high vacancy rate may disguise the fact that the great bulk of the vacancies is represented by small-size units. and that there is a substantial shortage of larger-size units. From an external consideration, comparable vacancy rates in two localities may reflect a situation of oversupply in one, but a condition of balance in another. For example, a 5 percent vacancy rate in a locality with a home ownership ratio of 80 percent would imply a serious problem of unsold new and existing inventory. On the other hand, this same 5 percent rate in a locality dominated by rental housing would probably be considered not only normal, but desirable, inasmuch as it would permit a reasonable choice of units for renters. Since the turnover ratio is rental units is apt to be two to three times higher than for owneroccupied units, a higher vacancy rate in the former is usually normal.

As encountered in many other sections of this guide, census data are highly useful for benchmarks, and against these data appropriate statistical techniques and judgment factors may be applied to arrive at current vacancy estimates. A subsequent section of this guide will be concerned with the development of population estimates for purposes of analyzing housing demand. These population estimates will be based, in large part, upon changes in the occupied housing inventory—and for this reason it is essential to develop reliable vacancy estimates as well as total inventory estimates.

There are various techniques for obtaining fairly accurate estimates of the gross and net effective vacancy ratios. Most of these, unfortunately, require substantial investment of time and manpower, and the housing market analyst may frequently have to settle for less accurate and less refined techniques.

In view of the scarcity of such data, the trend of vacancies is of particular importance to the market analyst. Frequently he will find it more useful and expedient to utilize less-than-precise vacancy measurement techniques if these can provide insight into movements and dynamics. An essential part of local market analysis, therefore, would be to maintain a continuity of vacancy reporting on a consistent basis since the last decennial census to permit estimates of the change in the vacancy rate, if any, since the last census.

#### 1. Use of Census Vacancy Data

Utilizing the same Census tables referred to in footnote<sup>11</sup> of subsequent Section VI the vacancy data shown in Table 11 can be obtained or derived.

As observed in Table 11, several types of vacancy rates are identified and defined. It will be seen that the gross vacancy count has little value, in itself, for determining the condition of the housing market—unless it is utilized as part of a time series to identify trend movements. For example, the Binghamton SMSA in 1960 had a total number of vacancies amounting to 3,344 units, and this constituted 5.0 percent of the area inventory. However, after deductions are made for units which were dilapidated or which were not available for rent or sale for occupancy on a year-round basis, the resultant net effective vacancy rate amounted to only 2.2 percent.

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NOTES

TABLE 11.—1960 Census Vacuncy Date V	Vacant Units		
	SMSA	Binghamton	Remainder SMSA
	3,344	876	2,468
Total vacant	5.0	3.5	5.9
Gross vacancy rate (percent)	2,340	785	1,555
Vacant year round	2,142	749	1,393
Sound or deteriorating	1,443	599	844
Available	2.2	2.4	2.1
Effective vacancy rate (percent)	375	73	302
For sale	0.9	0.6	1.0
Homeowner vacancy rate (percent)	1.068	526	542
For rent	4.6	4.1	5.1
Rental vacancy rate (percent)	301	51	250
Rented or sold	81	9	72
Held for occasional use	317	90	227
Held for other reasons	198	36	162
Dilapidated	1 004	91	913
Seasonal	.,		010

#### Definition of terms

Gross vacancy rate.—Total number of vacant units as a percentage of the total housing supply. This includes sound or deteriorating units available year round, dilapidated units, seasonal units and units held off the market.

Effective vacancy rate.—Total number of vacant sound or deteriorating units available for rent or for sale year round as a percentage of the sum of this figure plus all occupied units.

Effective homeowner vacancy rate.—Total number of vacant sound or deteriorating units available for sale year round as a percentage of the sum of this figure plus all occupied owner units.

Effective rental vacancy rate.—Total number of vacant sound or deteriorating units available for rent year round as a percentage of the sum of this figure plus all occupied rental units.

Approximately one-third of the gross vacancies were located in the county, outside of the central city, and this reflects the comparatively high number of seasonally occupied vacation cottages in the area.

In determining what is a "normal" vacancy rate, the analyst should recognize that "normal" may vary from one community to another. Generally, areas of slow growth and with limited in-migration require proportionately less available vacancies than communities with high growth and with greater inmigration. Areas where rental tenure dominates would require higher vacancy rates than areas where ownership tenure prevails to accommodate the higher residential mobility of renters. As a general rule, it can be stated that for most localities with an "average" (1.5 to 3.0 percent a year) rate of population growth, a homeowner effective vacancy rate of about 1.0 percent and a rental vacancy rate of approximately 5.0 to 6.0 percent would be considered normal. For areas with a slower growth rate, an effective vacancy rate of 0.5 to 1.0 percent for owners and about 4.0 to 5.0 percent for renters may be adequate. In housing market areas experiencing a growth rate of more than 3.0 percent per year, effective vacancy rates of 2.0 percent and 6.0 to 8.0 percent for owners and renters, respectively, may not be excessive. These guideline rates would generally be considered sufficient to provide adequate rental and sales choice to area residents and facilitate necessary residential mobility.

National rental vacancy rates of 7.0 percent or more reported during the early 1960's suggest that somewhat higher rental vacancy rates could be sustained than those indicated as normal in this guide. While such vacancy ratios may not result in serious deterioration of the housing market, a somewhat lower rental vacancy ratio would result in a more balanced condition in most housing markets.

Variances in quality of available vacant housing must also be considered. If a large proportion of the vacant available housing supply is in deteriorating condition and lacks plumbing facilities, the supply is going to be much less desirable than in other localities where the general condition of the supply is better. These qualitative considerations in vacant units have become increasingly important from a competitive standpoint and perhaps the analyst may wish to use a more restrictive definition of "effective (sales or rental) vacancy rate" than that indicated in Table 11. A more restrictive definition would be one which would eliminate vacant units in deteriorating condition or which are lacking some or all plumbing facilities.

The Census data, except for the immediate period following the decennial enumerations, have their principal usefulness as benchmark data. Their validity and accuracy diminishes sharply with passage of time. To duplicate a sample census count on an annual or bi-annual basis in order to obtain reliable current estimates would constitute a very expensive undertaking. Alternative lessexpensive techniques must be sought.

## 2. Postal Vacancy Surveys

The Post Office Department has made special arrangements to cooperate with the Federal Housing Administration on a reimbursable basis in conducting surveys of vacant housing units in areas requested by FHA. Under this agreement, postal carriers record the vacant dwelling units on forms supplied by FHA. Such surveys are made primarily in conjunction with FHA market studies.

The results of the postal vacancy surveys are expressed in quantitative terms because it is not feasible to collect qualitative data in this type of survey. The resultant vacancy data are not entirely comparable to those published by the Bureau of the Census because of differences in definition, area delineations, and methods of enumeration. Nor do they reflect as high a degree of accuracy as the 1960 data. Nevertheless, the surveys serve a valuable function when used in conjunction with other locality data in reaching a better-informed judgment regarding local market conditions.

The residential vacancy rate reflects the vacancy rate for single family homes which may be available for rent or for sale; the single family homes surveyed may be either renter occupied or owner occupied. The apartment vacancy rate reflects vacancies in structures containing two or more units.

Postal vacancy survey results are available to the public and requests to be placed on the mailing list for these survey results should be made to Public Information Officer, Federal Housing Administration, Department of Housing and Urban Development, Washington, D.C. 20410.

## 3. FHA Market Analyses

Since the beginning of 1965, the Federal Housing Administration in U.S. Department of Housing and Urban Development has been publishing housing market analyses which it has made in the various housing market areas in the nation. These market analyses usually contain a current estimate of the net rental and sales vacancy rate as compared with 1960 and a separate break by tenure as well as other pertinent information on vacancies. In larger or rapidly growing housing market areas, these market analyses are usually conducted every two to four years and generally less often in the smaller areas. Although the vacancy data may not be current for direct use by the analyst, it does provide vacancy estimates made since the last decennial census.

## 4. Idle Electric, Gas and Water Meters

Because this type of information is generally easy to obtain, housing market analysts have occasionally utilized it in estimating gross vacancy rates. In most areas, a utility meter will be disconnected when a housing unit is vacated. Where the number of installed disconnected (or idle) meters can be compared to the total number of installed meters, a rough approximation of gross residential vacancies may be obtained. When maintained on a continuing historical basis the value of such data increases.

Many utility companies maintain these data, and they can ordinarily be obtained with little difficulty. During recent years many utility companies have automated their data collection and data processing, and if the desired information is not a matter of record, often a fairly simple "machine run" can obtain these data for the use of the analyst. In his contacts with the utility company, the analyst should find out what is meant by an "idle meter" by that particular company. For example, some companies will remove a meter promptly if they believe that the meter is not likely to be used in the near future, if at all, whereas other companies may have a more flexible policy regarding removal of meters.

Frequently, however, the idle meter data have distinct limitations. Their coverage may include both residential and non-residential hookups, and there will be no separate breakdown for each type of user. The utility service areas will frequently not correspond to the boundaries of the housing market areas—in many cases, extending substantially beyond the boundaries. Even where residential and non-residential users are separately classified and the service and housing market areas closely correspond to each other, there might be the additional biases represented by: (1) large apartment house complexes served by a single meter, and (2) a substantial duplex or "conversion" rental inventory where a single meter for the landlord-occupant serves both units.

These limitations, however, should not discourage the use of this valuable data source, particularly as a technique for obtaining gross vacancy ratio trends. If the service area remains the same, and if new construction is increasing the customer load but does not significantly modify the total inventory in regard to the proportionate mix, i.e., single family, multiple family, commercial, etc., internal biases will usually offset each other and the idle meter index, expressed in a time series, can provide a valuable clue to the vacancy trend.

Under these conditions, the idle meter findings can also be correlated with Census benchmark data to arrive at annual gross vacancy approximations. For example, if the April 1960 Census gross vacancy count in the Binghamton SMSA was 5.0 percent, and if the electric idle meter index for a service area approximating the SMSA was 4.6 percent, it could be concluded that the idle meter index tended to understate the gross housing vacancy situation by approximately 8 percent. Phrased inversely, the gross vacancy rate was 1.09 times greater than the idle meter rate (5.0 divided by 4.6 equals 1.09). Therefore, if on January 1, 1964, 5 percent of the installed meters were idle, the gross vacancy rate could be estimated by multiplying 5 percent times 1.09. This would yield an estimated gross vacancy rate of 5.5 percent.

If the market analyst were to use gas meter data, instead, and the service area of this utility was almost entirely within city limits, the calculations would have to be based upon the 1960 gross vacancy rate for the city, which amounted to 3.5 percent.

Some additional notes of caution are advisable. The rural areas of the SMSA, out-

side the City of Binghamton, as previously noted, contained a large number of vacation cottages. During the winter months a much greater idle meter count could be expected in the SMSA than during the summer months. To ascertain vacancy trends and movements, winter months should not be compared with summer months without appropriate adjustments. Also, large scale governmental actions such as highway clearance and urban renewal may result in large numbers of vacated units in which the utility company has not yet removed its meters and they may be classified as "idle." This will distort the idle meter index, and the analyst should be careful to take this into consideration and make appropriate adjustments to the numbers of installations, idle meters, and to the inventory of housing.

## 5. Surveys of Apartment House Developments

In many of the larger communities, apartment house owner and manager associations conduct periodic surveys of resources owned and managed by their members. These can be very useful to the local market analyst, particularly if maintained on a regular and consistent basis.

In the small and medium-size localities the number of apartment house developments are usually few. Under these circumstances, the analyst can arrange firsthand coverage on an annual or semi-annual basis. Given the small number of housing resources to be surveyed, the analyst should attempt to secure more refined data, e.g., by unit size, duration of vacancy, rent level, and the utility costs paid by the tenant. The last item of information will enable the analyst to determine vacancy gross rent levels. In obtaining these data it is essential that the analyst preserve the anonymity of his information sources, and this he can do by dealing only with gross cumulative totals.

## 6. Newspaper Advertisements

The numbers and lineage of rental advertisements in local newspapers can provide an additional clue to the vacancy situation in a community. Here, as well, the value of this source of information resides with evidences of trend, rather than with numbers of units covered by the classified ads. Obviously, only a fraction of vacant units are advertised in daily papers; the rest are marketed on the basis of word of mouth, reputation,

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signs, and neighborhood shopping newssheets. Depending on local customs, the use of newspaper advertisements will vary among localities.

Inasmuch as one of the principal benefits to be obtained from such coverage reside in the trends which they reveal, the data should be obtained on a regular and periodic basis, at least semi-annually, and in smaller localities, on a quarterly basis. If maintained on a semi-annual basis, the second Sunday in April and the second Sunday in October are suggested for compilation. Quarterly data would include coverage for the second Sundays in January and July.

## 7. Local Realtors

An additional method for obtaining vacancy information is the interview of local rental agents. Personal contact by the analyst can obtain information regarding the number of units under management, number of vacancies, and possibly their identification by unit sizes and required gross rentals. It will be difficult for the analyst to adjust for dilapidated or substandard units; few rental agents will willingly admit to managing slum properties. Data of this nature should be obtained at least annually, and perhaps semiannually, with care taken to eliminate seasonal factors. The cooperation of these rental agents can be more readily obtained if they are assured of anonymity by virtue of handling and releasing only cumulative figures.

The total amount of rental properties under third-party management is likely to represent only a small part of the total rental inventory in these smaller localities, and application of these rental vacancy rates to the entire rental universe would be subject to great error. The rates, which are obtained, however, are useful in determining trends. Additionally, these rental agents can frequently provide an "educated guess" regarding the vacancy situation of the entire rental inventory, and this "feel for the market," obtained on the basis of day-to-day working contacts, can be extremely valuable.

## 8. Unsold Inventory of New Sales Housing

This source of information provides insight into the overall vacancy situations, although its principal usefulness would be in its relevance to the sales housing market. Section X of this guide treats this subject in detail.

## 9. Local Housing Authority Studies

Local Housing authorities may also be a source of information on vacancies inasmuch as they are required to prepare studies on the availability of housing in connection with obtaining approval of income limits.

## 10. Bureau of the Census Technical Assistance Program

Some localities may desire more refined data than can be obtained from the foregoing sources, but do not have the financial resources to contract with the Bureau of the Census or private survey organizations to conduct housing studies. These localities, however, may have competent personnel who, if provided with technical guidance, would be able to carry out their own surveys.

In recognition of such needs, the Bureau of the Census has instituted a Technical Assistance program under which a survey could be designed to provide vacancy rates, characteristics of the vacant units, as well as housing and household data for the occupied inventory. Upon request by communities, the Bureau will provide necessary technical guidance, from the time of initial planning to the completion of the survey. The assistance will cover such phases of survey activity as the selection of concepts and definitions, question wording and questionnaire design, sample design and selection, preparation of instructional manuals for interviewers, and for the supervisory staff, and procedures for the processing, tabulation and publication of the data.

By taking advantage of this program, localities will be able to conduct census-type studies at minimum cost. These studies will not only provide current information about a local housing market but comparisons with other localities will be possible by use of standardized concepts, definitions and procedures. The Technical Assistance Program is designed to be as flexible as possible so that each locality can "tailor" its own survey to meet its individual needs.

To help implement the program, the Bureau has available a staff of technicians experienced in the field of housing surveys. Communities asking for technical assistance will be required to pay the travel and per diem (living allowance) costs of the Bureau technician(s) for each day his services are required. The amount of the per diem and travel expenses is determined in accordance with Federal regulations regarding travel allowances for government employees. The salaries of the technicians, however, will be paid by the Bureau. Although Bureau personnel will be available to the community in an advisory capacity, the actual conduct and supervision of the survey (securing office space and facilities, obtaining staff, conducting the field enumeration, and processing, tabulating, and publishing the results) is the responsibility of the community.

For further information community officials should write to Housing Division, Bureau of the Census, Washington, D.C. 20233.

A locality which desires to maintain pertinent information regarding the nature and condition of the housing market should, of course, obtain and develop vacancy data. Since most of the above-described techniques have deficiencies, a more accurate judgment and assessment of both the current situation and of developing trends can be made if at least two or three of the previously described techniques are utilized for developing the vacancy series.

No single technique, other than a current scientific survey, is absolutely reliable. The analyst will probably have to develop an informed judgment derived from consideration of the several sources of information. To the extent that the vacancy series utilizing the different techniques are maintained from one census count to another, the value and drawbacks of each technique can be subsequently ascertained, and refined statistical adjustments can be developed. The approach for estimating the magnitude of the vacancies in the housing inventory based on data obtained in accordance with the guidelines in this section is described in the next section which deals with the subject of estimating the current housing inventory.

## SECTION VI: HOUSING INVENTORY

A FAIRLY accurate estimate of the total current housing inventory can be obtained by (1) adding new housing starts to and (2) subtracting housing losses and demolitions from the inventory figure provided in the last decennial census.<sup>11</sup> The data on additions and subtractions from the housing supply can be obtained from the materials gathered in accordance with Sections III and IV of this guide.

In addition to determining changes in the total housing supply, the market analyst will also be concerned with internal changes which have occurred within the housing inventory and in ascertaining the trend of these changes. For this reason he will wish to utilize both 1950 and 1960 Housing Census data, as well as the information he has collected with respect to changes since 1960. These will help establish both longterm and short-term trends regarding change in tenure, occupancy by minority groups, rent levels, and housing quality. In addition, he will wish to secure insight regarding internal geographic changes, and he would, accordingly, obtain data with respect to the central city and rest of the SMSA, individual counties in the metropolitan area and smaller political jurisdictions within the counties.

<sup>11</sup> Sources of Housing Inventory Data for 1960 and 1950:

Area	1960 Census of Housing Volume I-HC(1) Series States and Small Areas	1950 Census of Housing Volume I General Characteristics
<ol> <li>SMSA's, Constituent Counties, Places of 50,000 or more and Urbanized Areas.</li> <li>Places of 25,000 to 50,000</li></ol>	Table 12           Table 18           Table 22           Table 25           Table 25           Table 27           Table 28	• Table 17. Table 17. Table 17. Table 22. Table 25. • Table 26.

Does not include separate breakdown of Constituent Counties in SMSA's.
 Less detailed data available than for places with a larger population.

Includes all countles.

TABLE 12.-Housing Inventory in Binghamton, New York, SMSA, 1960 and 1950

			Inc	crease	
	1960	1950	Number	Percent	
All housing units	66,727	55,264	11,463	20.7	
Occupied housing units	63,383	53,040	10,343	19.5	
Owner occupied units	41,046	31,000	10,046	32.4	
White	40,959	30,951	10,008	32.3	
Nonwhite	87	49	38	77.5	
Renter occupied units	22,337	22,040	297	1.3	
White	22,087	21,883	204	0.9	
Nonwhite	250	157	93	59.2	
Percentage owner occupied	64.8	58.4			
Vacant	3,344	2,224	1,120	50.4	
Gross vacancy ratio (percent)	5.0	4.0			

Source: 1960 Census of Housing, Vol. I, States and Small Areas, Table 12; 1950 Census of Housing, Vol. I, General Characteristics, Table 17

TABLE 13.-Housing Inventory in City of Binghamton, New York, 1960 and 1950

	Erit-La		Inc	rease
	1960	1950	Number	Percent
All housing units Occupied housing units Owner occupied White Renter occupied White Nonwhite Percentage owner occupied Vacant Tops Vacancy ratio (percent)	24,763 23,887 11,547 11,492 55 12,340 12,110 230 48.3 876 3,5	$\begin{array}{r} 23,834\\ 23,381\\ 10,628\\ 10,588\\ 40\\ 12,753\\ 12,604\\ 149\\ 44.6\\ 453\\ 1.9\end{array}$	929 506 219 904 15 -413 -494 81 423	3.9 2.2 8.6 8.5 37.5 -3.2 -3.9 54.4 93.4

Source: 1960 Census of Housing, Vol. I, States and Small Areas, Table 12; 1950 Census of Housing, Vol. I, General Character-istics, Table 17.

Tables 12 and 13 for the Binghamton, New York SMSA and the City of Binghamton set forth some of the housing data which are available in Census publications. For the housing market analyst, obtaining and tabulating these data represents a "one-time" research effort in each locality, inasmuch as similar coverage will not be available again until the 1970 Census of Housing.

From Table 12 we note that the housing supply in the Binghamton SMSA increased 20.7 percent from 1950-1960. This was at a higher rate than the corresponding population increase, which amounted to 15.1 percent. This differential would be largely explained by decreasing household sizes and the improved economic ability of such "marginal" households as the lower income newlyweds, elderly, and single persons to maintain independent housekeeping arrangements.

The 20.7 percent increase in the housing inventory in the SMSA was achieved preponderantly through construction of single family housing for owner-occupancy; this sector increased 32.4 percent, as compared with only a 1.3 percent increase in the rental inventory. The SMSA nonwhite housing inventory grew from 206 units to 337 units, a 64 percent increase. It is of further interest to note that the bulk of nonwhite inventory additions, 96 out of 131, occurred within the central city of Binghamton.

Comparison of Tables 12 and 13 indicate that most of the additions to the SMSA housing inventory occurred outside of the central city, reflecting nationwide suburbanization trends as well as probable scarcity of vacant sites within the city.

As previously pointed out, the Census data have great value as benchmark data in making current estimates of housing market inventories. In the following example, Table 14, the 1960 Census data provide the basis for estimating the current housing supply. (Except for these Census data and the building permit data, the remainder of the figures are hypothetical and intended for illustrative purposes only.) Using the permit data in Section III, estimates were made regarding new rental and sales housing production. From the demolition information, described in Section IV, the analyst can, in addition, estimate the numbers of owner and renter occupied units which were removed from the housing supply. (Demolition data in Table 14 are assumed and were not reported in Section IV.)

From the information developed in accordance with the guidelines set forth in Section V, the analyst estimates that the gross vacancy ratio is about 5.5 percent in the SMSA, and that total vacancies have increased by about 14 percent, since the time of the 1960 Census.12 As indicated in Section V, such an estimate will probably have been based not on any single source or technique, but rather the analyst will have developed an informed judgment derived from consideration of several sources of information. The increase of about 450

"While local vacancy trends do not necessarily follow antional or regional trends, it would be advisable for the analyst to be apprised of such trends. Quarterly rental and owner vacancy data for the nation, major Census regions and inside and outside SMSA's are available in Current Housing Reports Housing Vacancia Content to Provide the Reports, Housing Vacancies, Series H-111, U.S. Bureau of the Census, Washington, D. C. Annual subscription rate as of 1965 was \$1.00, which also includes series H-121, Housing Charac-

TABLE 14.—Illustrative Example of Current Housing Inventory in Binghamton, New York, SMSA as of January 1, 1964 1

	Total	Owner	Renter	Other Vacant
Housing Supply as of April 1, 1960				
1. Occupied housing units         2. Vacant available units         3. Other vacant units         4. Total vacant units	63,383 1,443 (1,901) (3,344)	41,046 375	22,337 1,068	1,901
5. Total housing supply Changes in Housing Supply to January 1, 1964	<sup>2</sup> 66,727	41,421	23,405	1,901
<ol> <li>Additions<sup>*</sup></li> <li>Less demolitions<sup>4</sup></li> <li>Estimated housing supply</li> <li>Estimated vacancies as of January 1, 1964<sup>*</sup></li> </ol>	3,731 967 269,491 3 822	2,406 297 43,530	1,325 670 <b>2</b> 4,060	1,901
<ol> <li>10. Estimated available vacancies</li></ol>	1,643 2,179 65,669	428 43,102	1,215 22,845 97	2,179 -278 -278
<ol> <li>14. Estimated occupied housing supply (adjusted)</li> <li>15. Effective available vacancy ratio (percent)<sup>9</sup></li> </ol>	*65,669 2.4	* 42,921 1.0	*22,748 5.1	210

<sup>1</sup> Except for Census data and building permit data, all the data are assumptions for purposes of illustration only.

<sup>2</sup> Since the total includes category of "other vacant units," it is more than the sum of the owner and renter housing supply. In line 8, the 1,901 "other vacant" units is carried to January 1, 1964, but will subsequently be adjusted.

<sup>3</sup> Obtained from Section III: Housing Starts, and based on units authorized by permits from January 1, 1960 to December 31, 1963. \* This would be obtained from Section IV: Displacement and Demolitions.

<sup>8</sup> This would be based on data available in Section V: Vacancy Data. The number of units vacant, however, could not usually be determined until the size of the housing inventory was determined in this section.

• The increase of 278 in the number of "other vacant" units from 1,901 as of April 1, 1960 to 2,179 as of January, 1, 1964 is included in the owner and rent housing supply, i.e. new units and/or additional existing units have been held off the market since April 1960 or are otherwise not available. Therefore, the owner and rent supply is overstated by a total of 278 units. <sup>7</sup> The owner and renter housing supply is reduced proportionately by a total of 278 units.

Estimates should be rounded by analyst.

"This is determined by dividing the sum of line 10 and 14 by line 14.

vacancies would have been obtained by comparing the current estimate of the gross vacancy rates with the corresponding 1960 rates. Also, increases in the number of vacancies based on newspaper ads, apartment surveys, unsold inventory of housing and other sources of information would have been considered.

Unless there is evidence to the contrary, a simple method to break down the gross number of vacancies into net available vacancies by tenure is to assume that current vacancies are distributed in the same proportion as the 1960 Census. Therefore, in Table 14, the estimated available vacancies are estimated to be 43 percent of the gross number of vacancies (3,822), the same ratio as in the 1960 Census. Based on the distribution of available vacancies by tenure in the 1960 Census, 74 percent of the current available vacancies are estimated to be available for rent.

As rental vacancies increase numerically and proportionately, sales housing vacancies

also tend to grow, but the increase is likely to be less than for rental housing. Since sales housing usually consists of single family units, the volume of new construction and prices at which they are produced can be controlled by natural market reactions to a greater degree than rental housing. The number of new sales units being constructed will be reduced by builders if the market deteriorates, but once construction of an apartment development has begun, there is little that can be done to revise architectural and development plans. Therefore, any increase in sales housing vacancies is likely to be less than the rate of increase for rental housing vacancies.

As standard housing vacancies increase in a community, it is also likely that there will be an increase in vacancies in dilapidated units, since these are among the least desirable housing resources. The extent of precision and refinement to strive for in estimating vacancy changes would depend upon the time and manpower which can be applied to obtaining pertinent data and information, utilization of several vacancy indices, a familiarity with the local housing market, and application of sound and objective judgment factors.

In the foregoing it was indicated that an increase in rental vacancies is usually accompanied by an increase in sales housing vacancies; however, there are conditions when this would not occur. Under conditions of increasing family income, production of lower-priced sales housing, and liberalization of financing terms which would stimulate home purchases and also increased production of rental housing, rental vacancies could possibly increase, but sales vacancies might remain unchanged, or even decrease moderately.

## SECTION VII: POPULATION AND HOUSEHOLD ESTIMATES

C URRENT and reliable estimates of prospective population and household growth are essential to housing market analysis. These, in turn, must have a logical relationship to area employment potentials. It has already been noted that population in areas with rapidly expanding employment will tend to grow more rapidly than population in areas with stable or shrinking job opportunities.

The relationships between job opportunities and population growth were discussed in Section II. It was noted that with increasing productivity and decreasing employment in agriculture and in such extractive industries as lumbering and mining, coupled with increasing employment opportunities in service occupations such as finance and education, population increases can be expected to occur principally in larger urban areas where the latter kind of job opportunities are most readily available. Illustrative of this is the fact that from 1950-1960, 84 percent of the population growth in the United States occurred within the nation's 212 Standard Metropolitan Statistical Areas. While the population for the nation as a whole increased 18.5 percent from 1950-1960, population in the 212 SMSA's increased by 26.4 percent, and a population increase was encountered in all but 8 of the SMSA's. Demographers are in general agreement that this urbanization trend and the flow to SMSA concentrations will continue.

The urbanization trend is also encountered in many non-SMSA's as moderate-sized communities gain from in-migration of previous

TABLE 15.—Selected Housing and Population Data for Binghamton, New York, SMSA as of 1960 Census

1. Total population	212,661
2. Population in housing units	207,020
3. Population in group quarters (1 minus 2)	5,641
4. Occupied housing units	63,383
5. Average population in housing units (2	
divided by 4)	3.27

rural residents. There is also a trend among smaller communities, geared to an agricultural or extractive industry economic base, to decline in size. While this urbanization trend is a basic movement which will continue to characterize American population, caution should be exercised in its indiscriminate application to specific localities.

## Making a Current Population Estimate

In many instances current population estimates of a housing market area have been made by planning organizations, health departments and other sources. In some cases the future population has been projected or estimated. Such estimates might be used by the analyst, if he is satisfied with respect to the quality of the population estimate. He may, however, wish to make an independent population estimate and compare it with estimates which have been made by others.

Among the numerous techniques which can be used to make a population estimate in connection with housing market analysis, the housing unit method is one of the best and most useful, inasmuch as most of the requisite data already will have been obtained and developed as indicated in previous sections of this guide. Essentially and in oversimplified terms, this technique consists of multiplying the current estimated number of occupied housing units by the estimated "average" number of persons per housing unit, and then adding to the result, the estimated population living in group or institutional quarters. The Binghamton SMSA data are again used for purposes of illustration, and all data subsequent to 1960, except for building permit information, are hypothetical and intended for illustrative purposes only.

The population data in item 1 in Table 15 are available in the 1960 Census of Population, Volume I, Chapter A (see Appendix). Items 2, 4 and 5 can be obtained

from the 1960 Census of Housing.<sup>13</sup> It is suggested, however, that the figure should be recomputed and carried to two decimal places instead of the single decimal place shown in the Census. For example, in item 5 of Table 15 the Census indicated an average population per household of 3.3 persons. When multiplied by the number of occupied housing units, 63,383, this yields a population count of 209,164, which is greater than the actual figure of 207,020. Therefore the population in households was divided by the number of occupied housing units to obtain a more precise average of 3.27 persons per household.

For places having a population of 2,500 or more, the Census also reports the median household size, which is an average that represents the mid-point at which one-half of the families in housing units are larger and one-half are smaller. The median figure tends to be lower than the arithmetic mean, more commonly referred to as "the average." For estimating population based on the average household size, the figure reflecting "the average" population per household is used rather than the median.

In the 1960 Census the mean is shown in the previously-cited tables under the caption of "Population in Housing Units, 1960" and "Population in Dwelling Units, 1950." The concept of "housing unit" utilized in the 1960 Census introduces an area of noncomparability in comparing the decennial data. Basically, the housing unit count as compared to the 1950 Census dwelling unit count, introduces those non-housekeeping accommodations which are utilized on a nontransient basis, e.g., permanent residents of hotels and rooming houses. The effect of these resources, however, does not usually significantly influence the comparability of the 1950 and 1960 figures, although there may be a significant difference within central cities of SMSA's where there was a large "rooming" house inventory in 1950.

Between 1950-1960, the mean population

in each household in the United States declined slightly from 3.37 persons in 1950 to 3.31 persons in 1960. As of March 1964 the estimated mean household size was 3.33 persons. Although the average number of children per household increased from 1950 to 1960, this was more than offset by increased number of single person families and reduced numbers of adults per household Fewer families were doubled up in 1960 and more single adults were maintaining independent households in 1960. This is reflected in Census reports which indicated that the supply of housing between 1950 and 1960 increased at a faster rate than the population.

One method of estimating the current mean household size is to assume that the trend in the mean household size that took place from 1950 to 1960 will continue during the 1960's. In the Binghamton SMSA the mean household size declined from 3.35 persons in 1950 to 3.27 persons in 1960 a decline of .08 persons per household during the decade. Projecting this trend into the 1960's this would mean that for the fourvear period 1960-63 the average household size declined .03 persons. Thus, the mean household size estimate as of January 1. 1964 would be 3.24 persons per household. In the short term, past trends in mean household size may be reasonably valid. If an area is experiencing limited economic growth or if the rate of economic expansion has slowed down, then there is apt to be an increase in out-migration of younger persons and families of child-bearing age, which will tend to reduce the mean household size. An increase in the rate of economic expansion is likely to mean more younger families and stability, and perhaps an increase, in the mean household size. Economic prosperity, however, also means that more families and persons can maintain independent households.

Analysis of the trends in the age distribution of the population will enable the analyst

		-u-j 00
1960 Census of Housing, Volume I. States and Small Anna	•	
size in 1960 and 1950 as well as the number of anount Areas	, Sources of data on the nonulation to the	
in the manufact of occupied units in	1960. If the population in housing units, he	Jusehold

	Area	1960 Census of Housing
	1. Standard Metropolitan Statistical Areas, Constituent Counties, Places of 50,000 on Me	States and Small Areas
	<ol> <li>Places of 10,000 to 25,000 population.</li> <li>Places of 10,000 to 25,000 population.</li> <li>Places of 2,500 to 10,000 population.</li> </ol>	Table 15. Table 20.
	5. Places of 1,000 to 2,500 = 6. Counties outside SMSA's	Table 24. Table 26.
-	Population per household and household	Table 27. Table 29.

• Population per household can be computed by dividing the population in housing units by the number of occupied units.

to make judgments about the trends in household size and the effect of the age distribution on demand. For example, although the population of the Binghamton

metropolitan area increased by 15 percent from 1950 to 1960, there were significant variations by age groups, which are shown as follows:

Binghamton SMSA

		Population		1950–60	U.S. Percent
Age Distribution	1960	1950	Number	Percent	Change 1950-60
Under 10 10-19 20-29 30-39 40-49 50-59 60-or-more	45,226 32,910 24,223 29,642 27,423 22,677 30,560	33,921 23,907 28,153 28,282 24,686 21,307 24,442	+11,305 +9,003 -3,930 +1,360 +2,737 +1,370 +6,118	+33 +38 -14 +5 +11 +6 +25	+32 +37 -9 +7 +16 +16 +29
Total	212,661	184,698	+27,963	+15	+18

The 14 percent decline from 1950 to 1960 in the 20-29 age group as shown in the foregoing was due primarily to the low birth rates of the 1930's. As this group moves into the 30-39 age group during the 1960's, this is likely to place constraints on the volume of new homes sales. since households in the 30-39 age group are usually the primary buyers of new homes. As the 10-19 age group enters the 20-29 age group there is likely to be an increased demand for rental housing, especially at modest rent levels. In an area where there is extensive out-migration of the 20-29 age group, increases in the under 20 age group are likely to be more limited and the average household size is likely to decline.

In making local estimates of household size, an analyst should be aware of national trends. Annual estimates of the national "average" household size are made by the Bureau of the Census. Based on a sample, these estimates are reported in the P-20 Series of the *Current Population Reports* cited in the Appendix. If a national change has occurred, the local "average" figure can be adjusted on the basis of simple arithmetical treatment, as shown as follows:

	Average popula	ation per household
Date	National	Binghamton SMSA
1960= 1963	3.31 3.33	3.27 Unknown
Change 1960-6	3: Amount: +	.02

Percent: +.6 of 1 percent 1963 local estimate of population per housing units =

3.27 multiplied by 1.006 = 3.29 persons per household.

Adjusting the average household size in the Binghamton SMSA based on the national trend since 1960 rather than the local trend from 1950 to 1960 would mean a slight increase in the average household size rather than a decrease. Rising incomes and production of housing in the United States in sufficient quantity to alleviate the postwar housing shortage was no doubt a major factor in the decline of the national average household size from 3.37 persons in 1950 to 3.31 persons in 1960. Any decline in household size during the 1960's therefore is not likely to be as large as during the 1950's. It is therefore recommended that the current estimate of average household size generally be based on a rate which is about one-half the rate of change from 1950 to 1960.

## Estimated Population in Group Quarters

Item 3 in Table 15 refers to the population in group quarters. In practically every community there are people who reside in institutions, hospitals, nurses' homes, college dormitories, fraternity and sorority houses, military and other types of barracks, convents and monasteries. They would also include persons who occupy hotel and rooming house accommodations on a transient basis. If their accommodations are of a permanent nature, i.e., where rent is paid on a monthly basis, for example, and there is additional evidence of long-term occupancy, these quarters are considered by the Census to be housing units. The Census does not include these persons in non-housing units in their calculations of average population

per household. They are generally classified as occupying "group quarters."

The population living in group quarters as of the last decennial Census can be computed by subtracting the population in housing units from the total population. The population in housing units is shown on the same Census table as the average population per household. As indicated in Table 15, the population in group quarters, the Binghamton SMSA in 1960 was 5,641. This number constituted 2.7 percent of the population. Although comparatively small, this segment of the population should be taken into consideration when making population estimates.

In order to estimate the changes that have taken place in this sector of the population, the analyst should check with the principal group living quarters in the SMSA. This, for example, would include rest homes, college dormitories, and orphanages. Separate counts should be taken for both April 1, 1960 and for the current date. The analyst will probably encounter some inconsistencies in accuracy of reporting; some group quarter officials may provide precise counts; others will be able to provide only rough estimates.

A discussion of population in group quarters is found in the Introduction of the U.S. Census of Population. Series PC(1)-B. General Population Characteristics and the Introduction of the U.S. Census of Housing: 1960, Series HC(1), States and Small Areas (See Appendix). Most of this information is self-explanatory, but several points should be noted. Patients in general hospitals are counted in their usual places of abode; however, persons in mental wards or some other part of the hospital set aside for more or less permanent occupancy would be classified as living in group quarters. The same group quarters designation would apply to persons residing in mental hospitals, nursing homes, and other medical facilities which tend to house persons on a more or less permanent basis. In 1940, college students were enumerated as living in their home communities; however, in 1950 and 1960 they were classified with respect to where they were actually living at the time of enumeration. The analyst who is observing population trends in college communities would have to take this into consideration; otherwise, he might ascribe a large increase in population to the 1940-1950 period, whereas much of the increase might have been caused by this difference in enumeration procedures. Students living in dormitories, boarding houses, sororities and fraternities were classified as living in group quarters. Students who may have rented a single room in an ordinary household, however, would be classified as living in housing units.

From the foregoing, it can be seen, for example, that although college enrollments may have remained fairly constant since the last Census, there might have occurred significant changes in the residential classifications of the student body. A large dormitory construction program, for example. could have significantly increased the number of students in group quarters and correspondingly reduced the numbers living in private households. If a population estimate is made during the summer, this will usually show a smaller college enrollment; dormitories may be under-utilized, or some of the group quarter resources may be closed. Adjustments would have to be made for normal academic year enrollments and housing resources.

•3.

Regarding military bases, only personnel living in barracks, bachelor quarters, or other such accommodations are classified as living in group quarters. Married military personnel living with their families, either on base or off-base, would be automatically allocated to the estimate of population living in housing units.

As indicated previously, it is necessary for the analyst to check with major group living quarter resources in a housing market area to make reliable current estimates of population. In the case of the Binghamton SMSA, it is recalled that the 1960 Census count of persons in group quarters amounted to 5,641. If a check with the *principal* group quarter accommodations in the Binghamton area revealed an increase since 1960 from about 2,200 to about 2,450, the resultant increase of 250 persons would be added to 1960 Count of 5,641 for a total of about 5,800.

Based on previous discussion in this section as well as previous sections, the current population estimate shown in Table 16 is somewhat self-explanatory. The estimate of the total number of housing units, vacancies and occupied units is derived from Section VI. The current estimate of the average number of persons per household and the population in group quarters was discussed in the text.

## TABLE 16.—Current Population Estimate in Binghamton, New York, SMSA as of January 1, 1964

<sup>1</sup> See text for discussion of determination of these figures.

Estimates of current population should be utilized with care, for they are subject to error. For example, the method illustrated in Table 16 was based, in turn, upon several previous estimates, which were: an estimate of the current housing inventory; an approximation of average household s'ze; and an estimate of the number of vacancies; and an estimate of persons in group living quarters. If reasonable care and precision are utilized in developing all these estimates, however, comparatively reliable population estimates can be derived for use in housing market analysis.

## How to Make Population and Household Projections

In housing market analysis, a population projection is made in order to make an estimate of the number of new household formations that will occur during the projection period. Since such household projections are seldom made for more than a period of about 3 years in short-term housing market analysis, population projections are usually made for only a relatively short term.

While this short range projection simplifies the task of the analyst, it does not diminish the need for careful evaluation of data. A projection of course is only an assumption of what may occur under certain circumstances. Intervening forces of exogenous nature may cause his projections to lose their validity rapidly, e.g., introduction of a new plant, completion of defense contracts. Nevertheless, the analyst may proceed on the assumption that although there may be modifications in the growth rates previous growth trends in the local economy are not quickly reversed under ordinary circumstances. This is also true of population growth trends which tend to correlate strongly with employment trends.

This correlation between employment and population will be used as the basic technique in making a population estimate in this manual. The amount of employment as a percent of the total population of an area is known as the "employment participation rate." This rate, while relatively stable, may be subject to small, but significant changes over a period of a few years.

The projected population estimate for January 1967 is based on a projection of the non-agricultural employment and the projected employment participation rate. Agricultural employment data have been excluded since housing market analysis is related primarily to nonfarm housing. Data in Table 17 were derived as follows:

Lines 1 and 2. Total non-agricultural employment was obtained from Section II by subtracting agricultural employment from total employment. The labor force participation rate was obtained by dividing total

 TABLE 17.—Population Projection in Binghamton SMSA Based on Non-Agricultural Employment

 Projection and Employment Participation Rate

Period	Non-Agricultural Employment	Population	Employment Participation Rate-Percent
1. 1950 Census.         2. 1960 Census.         3. 1960-12 Mo. BES Average.         4. January 1964-BES.         5. Projected January 1967.	72,168           82,158           85,400           87,800           89,650	184,698 212,661 212,661 219,900 225,800	39.1 38.6 40.2 39.9 39.7

 
 TABLE 18.—Projection of Household Formations in Binghamton SMSA from January 1, 1964 to January 1, 1967

1. Projected total population       22         2. Projected population in group quarters       23         3. Projected population in housing units (*1 minus *2)       23         4. Estimated average population per household       24         5. Projected number of household units       26         6. Estimated number of occupied housing units January 1964       27         7. Estimated number of new household formations from January 1, 1964 to January 1, 1967       27	225,8006,000219,800 $3.2567,63165,6691,962$
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non-agricultural employment by the total population.

Line 3. The non-agricultural employment figure in this line is based on the 12-month average non-agricultural employment figure of the Bureau of Employment Security obtained from Section II. This is divided by the 1960 population to obtain the employment participation rate.

Line 4. The non-agricultural employment data for January 1964 are based on the 12-month average for 1963 obtained from Section II. (If a market analysis is done during the year, it would be advisable to use the average for the last 12 months if available; if not, the average for the last calendar year would be acceptable taking into consideration increases that have occurred since that time.) This figure is divided by the current population estimate obtained from Table 16 to derive the employment participation rate.

Line 5. As indicated in Section II, it was judged that employment would increase for the next three years at the same rate that has occurred since 1960. Therefore, nonagricultural employment for January 1967 has been projected at the rate of total employment change since 1960. It is further assumed that the labor force participation rate will follow the trend that occurred from 1950 to 1960. During that period the employment participation rate declined by 0.5 percentage points or 0.05 percentage points per year. Projecting this to 1967, this would mean a decline in the employment participation rate of 0.15 percentage points. Therefore the employment participation rate would have declined from 39.9 percent as of January 1964 to 39.7 percent as of January 1967. To obtain the projected population estimate, the projected employment figure is divided by the employment participation rate.

Derivation of most of the data in Table 18 is self-explanatory. The projected population in group quarters is assumed to be about the same as in January 1964. Unless there is evidence to the contrary, it should generally be assumed that the population in group quarters will not exceed the proportion of the population that was in group quarters as of the last decennial Census. In line 4 it is assumed that there will be a further slight decline in the average number of persons per household.

During the three year period, January 1964 to January 1967, line 7 of Table 18 shows an estimated increase of 1,962 households or an average of about 650 units per year. This, however, should not be interpreted as constituting effective demand for that many new housing units during that same period. Only a portion of these families will wish to purchase or rent newly constructed units, and many will be limited by their incomes from participating in this higher priced market. The marketing of new construction will depend, essentially, upon existing households who wish to upgrade their accommodations or adjust to revised family housing needs. There will, however, remain a need to provide shelter of some type for these new and additional households, much of which will be provided by the existing units which are vacated by existing households who buy or rent new units.

The estimate of additional housing requirements or potential demand is the total household formations shown in Line 7 of Table 18 before adjustment for vacancies in the housing area. If vacancies in the housing market are excessive, part of the new household formations will absorb the excess vacancies and thus reduce the overall requirements or potential demand for new construction. This will be discussed further in Section XII. TABLE 19.—Population Migration in Washington, D.C. SMSA, 1950-1960

<ol> <li>Population, April 1, 1960</li> <li>Population, April 1, 1950</li> <li>Net Change</li> <li>Births, 1950-60</li> <li>Deaths, 1950-60</li> <li>Net natural increase (excess of births over deaths)</li> <li>Net migration: net population change (*3) minus net natural increase (*6)</li> <li>Net migration rate: net migration as a percent of population at the beginning of period (1950)</li> </ol>	2,001,897 1,464,089 +537,808 471,000 139,000 332,000 +205,000 +14.0
8. Net migration rate: net migration as a percent of population at the beginning of period (1950)	· +14.0

Population and Household Estimation for Sub-markets

5

1

For purposes of sub-market analysis it is often necessary for the housing market analyst to make population and household estimates for white and nonwhite persons and households. Unfortunately, the housing unit method of population estimation does not lend itself to making estimates of population by these characteristics. When used in conjunction with the housing unit method of population estimation, however, the use of birth and death statistics, population trends and migration trends for the white and nonwhite population can be developed separately without an undue amount of work.

Information shown in Table 19 indicates that for the Washington, D.C. SMSA, for example, from 1950 to 1960 there was a net in-migration of 205,000 persons into the area in addition to the net natural increase of 332,000.14 As a percent of the 1950 population, net migration into the area occurred at a rate of 14 percent. From 1940 to 1950 the net in-migration into the area was 302,000 and the migration rate was 31 percent. From 1940 to 1950 the population of the SMSA increased by 51 percent, by 37 percent from 1950 to 1960, and current information indicates that the rate of increase will be lower from 1960 to 1970. Thus, while there has been and will continue to be a substantial absolute increase in the population, the rate of population increase has declined and the rate of in-migration has also declined. If the analyst makes his current population estimate based on the housing unit method, through a review of birth and death statistics since the last decennial Census, a current estimate of net migration can be made using the method shown in Table 19.

The analyst can also usually obtain separate birth and death statistics for white and nonwhite persons for each year since 1940 as well as decennial population data. Using the same method shown in Table 19, the amount of in-migration or out-migration and the rate of such migration can be obtained to the last decennial Census. Likewise birth and death statistics since the last decennial Census can be obtained. Based on the historical ratio of the white or nonwhite population to the total population as well as graphic analysis of annual data on birth and death statistics by these characteristics, a reasonable estimate can usually be made of the breakdown of the current population estimate by white and nonwhite persons as well as a breakdown of the projected estimate. The foregoing method as presented here should not be interpreted as a refined method of population estimation for white and nonwhite persons, but rather as a general tool of analysis by a housing market analyst, whose primary objective is to estimate the demand for housing.

The average household size of housing units occupied by nonwhites can be computed by dividing the nonwhite population (provided in the decennial Census) by the number of nonwhite occupied units (also provided in the decennial Census). For the white population the identical procedure is followed. In the absence of information on changes of household size by white and nonwhite occupancy, it will be necessary to use the rate of change determined for all households, which reflects both white and nonwhite occupancy.

Another possible source of migration statistics on a local or metropolitan basis is the school systems. A number of school districts have a time series on school enrollment and also prepare projections for the fall sessions based on surveys and inquiries made earlier in the year.

<sup>&</sup>lt;sup>14</sup> "Components of Population Change, 1950 to 1960, For Counties, Standard Metropolitan Statistical Areas, State Economic Areas, and Economic Subregions," Current Population Reports, Series P-23, No. 7 is available from the U.S. Bureau of the Census, Washington, D.C. 20233, for \$1.00, For SMSA's the report also shows net total migration, 1940 to 1950. (For subscription information to Current Population Reports, see Appendix of this guide.) Separate data for the white and nonwhite population are not available in this report.

## SECTION VIII: FAMILY INCOME ESTIMATES

M EASUREMENT of housing needs, as reflected by increased population and households, is not a measurement of effective demand. A measurement of demand would consider not only need and desires for housing accommodations, but also the ability of these prospective consumers to pay for such housing. Therefore, an essential part of housing market analysis is the identification of the capabilities of potential purchasers and renters in terms of their family incomes.

Experience has shown a high correlation between incomes and housing costs. Even though the proportion of income spent for housing costs (along with food and clothing) tend to decline with increasing incomes, the dollar amounts spent show a steady, upward trend. Accordingly, if the analyst can develop a distribution of family incomes in a community, he can also proceed with the construction of a demand schedule for various-priced rental and sales housing accommodations.

Where nonwhite families constitute a significant proportion of the population, it is usually desirable to delineate the relevant importance of demand estimates for this segment of families. This, of course, means delineating an accurate assessment of family incomes among these nonwhite households. It is recognized that numerous local considerations and factors may disguise the full extent of housing market potential among nonwhite households, and a sub-market analysis for this group of families may demonstrate that, contrary to prevailing expressions, a significant market for new construction may exist among this group at various price ranges.

Benchmark data for current family income estimates are furnished in the 1960 Census. Herein, the data reflect 1959 incomes, inasmuch as respondent families were asked to report their incomes for the previous year.

		Раят А						Рлкт В		
			Percentage	Distribution				-		Retimeted
Binghamton (Nev York) SMSA All Families 1959 Family Incomo	Number	1959 ]	ncome	Cur	rrent	Decile	1959 Income By Deciles	Col. (8) × 1.05	Income Increase Adiustment	Current Income Col. (9)
		By Class	Cumulative	By Class	Cumulative					X (10)
(1)	(2)	(3)	(4)	(2)	(8)	(2)	(8)	(6)	(10)	(11)
Total	54,167									
Under \$1,000	1,167	2.2	2.2	_	_	D-10	\$2.850	\$2,992	1.16	\$3,471
\$1,000-\$1,999	2,092	ດ ຕໍ່ເ	1.9	80	œ	D-2-	4,100	4,305	1.16	4,994
\$2,000-52,999	2,833	2.0	10.2	5	13		5,000	5,250 6,037	1.16	6,090
\$4,000-\$4,999	6,077	11.2	30.4	-	50	P-2-D	6,450	6.772	1.16	7,855
\$5,000-\$5,999	7,634	14.1	44.5	6	29	D-6.	7,200	7,560	1.16	8.770
86,000-86,999	7,366	13.6	58.1	11	40	D-7	8,200	8,610	1.16	9,988
\$7,000-\$7,999	6,001	11.1	69 2		15	8-04 8-04	9,425	9,896	1.16	11,479
80,000-88,999	3 395	9.1 9	61.3 83 4	20	10		11,600	12,180	1.16	14,129
810,000–814,999	6.719	12.4	95.8	22	32		11,200	14, 210	01.1	11,290
315,000-\$24,999	1,776	3.5	99.1	4						
\$25,000 and over	513	0.9	100.0	×	001					

A procedure for making a current income estimate is shown in Table 20 and in the Instructions for Table 20.

## Instructions for Completing Columns in Table 20

Columns (1) and (2). Census income data for 1959 are available in 1960 Census of Population, Volume I, Chapter C. General Social and Economic Characteristics. (See Appendix.) Sources of income data found in this volume will be found as follows:

- Area 1. Standard Metropolitan Statistical Areas, Table urbanized areas, and urban places of 10,000
- or more ..... \*76 2. Urban places of 2,500 to 10,000 population.... 81
- 3. Counties
- 4. Nonwhite population for selected Standard Metropolitan Statistical Areas, urbanized areas and urban places of 10,000 or more \*\*78
- 5. Nonwhite population for selected counties \*\*88
- 6. Rural population (includes all non-urban minor civil divisions and places of less than 2,500 population as well as the farm pop-
- ulation ..... 7. Rural-farm population ......

\*More detailed data for SMSA's available in Volume II, Metropolitan Housing, HC(2) Series. \*\*The selected areas include all those areas that had a non-white population of 1,000 or more in 1960.

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There may be some counties in metropolitan areas under consideration where there is a substantial proportion of rural farm inhabitants. The reported money incomes of these families is usually significantly less than those of urban families, although "in kind" types of income such as garden crops may compensate in part for the lower incomes. In order to remove the downward bias introduced by the presence of these rural farm incomes, the influence of these families should be removed from the income distributions arrayed in Column (2) of Table 20. This, it is suggested, should occur when these rural farm families constitute more than 10 to 15 percent of all families in the county or metropolitan area. Table 93 of the Census of Population will contain the income distributions of these rural farm families by county, and the number of families identified in this table should be subtracted from the total number of families in the county or metropolitan area before any income adjustment is undertaken. This adjustment can only be made to the total income distribution and cannot be made to the income distribution of renter households. Since a relatively small proportion of farm households are renters, generally their presence in the income distribution of renter families for the housing market area will

not significantly distort the income distribution of renter households.

Column (3). This is a simple percentage distribution computed from Column (2). In the example used in Table 20, to determine the percentage of families that had an income of \$1,000 to \$1,999, the analyst can divide the number of families in this income range, 2,092 by the total number of families, 54,167 and this will yield a percentage of 3.9.

Column (4). The cumulative percentage distribution is the summation of the percentages in Column (3) below each income range. For example, the determination that 19.2 percent of the families earned less than \$4,000 in 1959 constitutes a summation of the percentages in Column (3) below \$4,000.

Columns (5) and (6). These columns are to be completed after the remaining columns are completed. These instructions follow the instructions for Column (11).

Column (7). This column is a listing of deciles, which will be used to divide the frequency distribution of families in Column (2) into 10 equal parts. Deciles are another way of expressing percentiles. For example, the second decile would constitute the 11th to 20th percentile, with the 11th percentile being the bottom of the second decile and the 20th percentile being the top of the second decile. References to income or rent levels in this guide by decile always means the value at the top of the decile.

Column (8). In Column (3) the number of families with reported incomes was distributed by percentages, and in Column (4) these percentages were presented in cumulative fashion. Under this column heading (8) an additional distribution is carried out in order to show the breakdown of family incomes by deciles. This additional step is to simplify the procedures for bringing 1959 incomes up to date. In some instances, particularly at the top of the income ranges, it is desirable to break the deciles down even further. For example, in Column (7) a 9.5 decile is indicated; this would be equivalent to determining the income below which 95 percent of the families fall.

To illustrate the foregoing, the analyst might wish to determine the income below which 20 percent of the families fall; this would be the same as determining the income at the top of the second decile. From

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## Exhibit 1: Cumulative Income Distribution in Binghamton, N.Y., SMSA, 1959



Column (4) it is noted that the top limit of the second decile would fall within the income interval of 4,000-4,999 shown in Column (1). Similarly, the top limit of the sixth decile, or 60 percent, would occur within the income interval of 7,000-7,999.

Two techniques can be followed to obtain this decile breakdown, the graphic and interpolation. The graphic is much easier to carry out, and it has the additional advantage of being able to provide fairly reasonable estimates at the very top and bottom of the scale. This is accomplished by extending the curve obtained from the graphic operation. The techniques for graphic plotting are described in the example provided in Exhibit 1.

The technique for interpolation is arithmetically simple. It would utilize the following equation:

Upper limit of 2nd = decile (20%)	Bottom of the income range in which the decile occurs (from Column 1)	+	20% <sup>1</sup> minus the cumulative percent of the preceding interval (from Column 4) proportion of families within the interval in which the decile occurs (from Column 3)	×	Size of Income Interval (from
Substituting values,	this would be:				Col. 1)
2nd decile $(20\%) - \$4$	000 + 90 007 10 007				

2nd decile  $(20\%) = \$4,000 + \frac{20.0\% - 19.2\%}{11.2\%} \times \$1,000$ 

2nd decile (20%) =  $$4,000 + (7.1\% \times $1,000)$ 

2nd decile (20%) = \$4,000 + \$71

2nd decile (20%) = \$4,071

<sup>3</sup> This percent will always be the same as the one at the beginning of the equation.

Through the process of arithmetic interpolation it is calculated that the upper limit of the second decile occurs at \$4,071. This compares very closely with the results obtained through the graphic method, \$4,100, which, in turn, suggests the use of the graphic method for greater ease and simplicity. (Note: All figures provided in Column (8) were derived from the graphic techniques.)

Column (9). Based upon experience over the years, the Census Bureau has discerned a tendency for families to underreport their incomes. Respondent families resort to memory in reporting their incomes and frequently they do not recall minor or irregular sources of income such as gifts and part-time earnings. The Census Bureau estimates in the 1960 Census that, in effect, only 95 percent of actual income received was reported to

Census enumerators. Accordingly, a factor of 1.05 is applied against the 1959 incomes in order to compensate for this underreporting.

Columns (10) and (11). Several different techniques can be used to adjust 1959 incomes to current levels. One of the easiest and most reliable techniques is to relate changes in incomes to increases in average hourly earnings of workers in manufacturing industries since 1959. These changes in hourly earnings can be obtained from Department of Labor, Bureau of Employment Security Offices in practically all metropolitan areas. These offices maintain current records. and they also periodically publish Labor Market Letters (discussed in Section II), which summarize these data. These letters can be obtained without charge. In addition, metropolitan area and state data can be found in the monthly publication of the U.S. Department of Labor entitled Employment and Earnings and Monthly Report on the Labor Force (subscription, 1966: \$7.00).

It is recognized that manufacturing activity constitutes only a part of total employment in local housing market areas. However, wage changes in this sector of the economy are highly sensitive, and earnings in other sectors will tend to lead or follow closely manufacturing earnings.

In the example shown in Table 20, 1959 average hourly earnings in manufacturing industries in the Binghamton labor market area, which is coterminous with the SMSA, amounted to \$2.06. By January 1964 average hourly earnings had advanced to \$2.39, or a gain of 16 percent. In order to bring 1959 incomes (after adjustment for underreporting) up to January 1964 levels, the adjusted 1959 incomes are multiplied by the factor of 1.16.

It is recognized that average hourly earn-

ings are not the only factors which influence size of annual income. Number of hours and number of weeks worked can be even more important than hourly earnings during periods of "boom" or during economic decline. However, in most major housing market areas, there will normally be only minor variations in hours worked from one year to the next among manufacturing firms. Within white collar occupations, wages are almost always paid on a weekly basis and on the basis of 52 weeks a year. These nonmanufacturing jobs presently dominate most urban economies. The use of adjustment factors derived from changes in manufacturing wages would, of course, have its most pertinent application in those localities where manufacturing activity is an important part of the economy. An alternative method of measuring income changes is related at the end of this section.

Column (6). The cumulative distribution in this column can be obtained by either graphic or interpolation techniques. In using interpolation, the same basic procedure is followed as described in connection with Column (8) data.

To illustrate, the analyst would wish to determine the percentage of families with current incomes under \$7,999. In Column (11) this income would fall within the intervals of \$7,855 and \$8,770. Reading backwards along the same lines, the analyst notes, from the decile numbers in Column (7) that \$7,855 represents the top of the D-5 decile and \$8,770 is the top of the D-6 decile. Therefore, the analyst can assume that \$7,999 will fall at a point higher than the top of the fifth decile, or 50 percent, but below the top of the sixth decile, or 60 percent.

Arithmetically, the procedure would be as follows:

Percentile at which \$7,999 occurs	=	percentage value at top of the decile oc- curring below \$7,999: 50%	÷	\$7,999 less top of fifth decile value: \$7,855 \$8,770 (top of sixth decile value) less \$7,855 (top of fifth decile value)	×	percentage size of interval	
		substi	ituti	ng values			
		= 50.0 perce	ent	$+$ 144 $\times$ 10 percent			

915= 50.0 percent + 16 percent × 10 percent = 50.0 percent + 1.6 percent

This calculation indicates that 51.6 percent of the families, as of January 1964, had incomes below \$7,999. The same procedure could be applied to all other income intervals. Graphic determination, which is an easier method, is illustrated in Exhibit 2, and it is noted therein that projection of the curve can provide estimates for the very

	Income After Taxes Col. (4) Col. (4) - (8)	(6)	\$3,494 4,872 5,855 5,855 6,659 7,406 8,207 9,274 10,546 12,779 15,356
A, January 1966	Amount of Tax	(8)	<ul> <li>\$ 216</li> <li>466</li> <li>655</li> <li>655</li> <li>655</li> <li>827</li> <li>901</li> <li>1,167</li> <li>1,167</li> <li>1,105</li> <li>1,725</li> <li>2,324</li> <li>3,132</li> </ul>
Vew York, SMS	Taxable Income Col. (2) – (4)	(2)	81,339 2,804 3,859 4,737 5,557 6,437 7,608 9,044 11,593 11,593
in Binghamton, N	Deductions + Exemptions Col. (3) + \$2000	(9)	\$2.371 2,534 2,534 2,551 2,551 2,554 2,510 3,510 3,510 3,510 3,510 3,510
ome After Taxes	Deductions Col. (4) X .10	(5)	\$ 371 534 651 651 749 840 840 1,227 1,510 1,849 1,849
r Projecting Inco	Projected Income, Col. (2) × (3)	(4)	83,710 5,338 6,510 7,486 8,397 9,374 10,676 10,676 112,271 112,271 112,271 112,271 112,271 112,271 112,271
יייין איניטר איניטריין איניטריין איניטריין איניטריין איניטריין איניטריין איניטריין איניטריין איניטריין איניטריי	Income Increase Adjustment	(3)	1.24 1.24 1.24 1.24 1.24 1.24 1.24 1.24
1100011	1959 Income Adjusted	(3)	\$2,992 4,305 5,250 6,037 6,772 6,772 6,772 8,610 8,610 8,610 8,610 8,610 8,610 12,180 14,910 14,910 to complete the col
	Decile	(1)	55 Instructions on how

Exhibit 2: Cumulative Income Distribution in Binghamton, N.Y., SMSA, January 1964



high and for the very low income intervals, which cannot be obtained through the arithmetical interpolation technique.

Column (5). The figures in this column are derived by simple subtraction of the cumulative figures in Column (6). In Table 20, for example, the percentage of families with January 1964 incomes of \$5,000-\$5,999 would be obtained by subtracting 20 percent from 29 percent.

## **Income Projections**

Since the housing market analysis is being made for a period of generally two to three years, it is advisable that incomes be projected also, since the ability to pay for housing is related to income. Since Federal income taxes take a significant proportion of incomes in most cases; consequently, it is likewise advisable to estimate projected incomes after taxes. Both of these computations have been carried out in Table 21 and the derivation of the data are explained in the following instructions:

Instructions for Completing Columns in Table 21

Column (1). This is a listing of deciles which was explained in the instructions for Table 20.

Column (2). The 1959 adjusted income was obtained from Column (9) of Table 20.

Column (3). The 24 percent income increase adjustment factor is the estimated income change for the 6-year period from 1959 to January 1966. Although the housing market analysis in this manual is being made for three years, it is recommended that income projections be made for two years. If the income were projected for the three-year period, this would result in a significant overstatement of demand in the higher price levels during the early part of the forecast period.

Income projections should be based on the average annual increase in the area for the last 3 to 5 years in the local housing market area. Generally, however, such increases should usually not exceed the national average. For the four-year period, 1959-1963, median family income in the United States increased an average of 3.8 percent per year. As noted in Column (10) of Table 20, incomes in the Binghamton SMSA increased 16 percent during the 1959-63 period or 4 percent per year. Projecting these increases for a two year period results in an 8 percent increase using the average for Binghamton or 7.6 percent using the national average. Using the nearest whole percent the national average would also be 8 percent. The 8 percent projected increase for the 1964-66 period is added to the 16 percent during the 1959-63 period for a total increase of 24 percent. The income projection is thus an assumption that

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the income trends in the past will continue in the short term future.

Column (4). By multiplying Column (2) by Column (3) the projected income for January 1966 can be obtained.

Column (5). This is the first step in the determination of after tax income. Assuming the standard Federal income deduction of 10 percent, this percentage is applied to the incomes in Column (4).

Column (6). Since the average household size in the United States is about 3.3 persons, this is multiplied by the Federal exemptions of \$600 per person to obtain an estimated \$2,000 in exemptions per family. (Any changes in Federal tax structure regarding deductions or exemptions would require appropriate changes in these columns.) This column is the sum of the average exemption, \$2,000, and the amount of the deductions shown in Column (5).

Column (7). To obtain the taxable income, the exemptions and deductions in Column (6) are subtracted from the income figures in Column (4).

Column (8). The amount of the tax is computed by using a current Federal income tax schedule.

Column (9). The income after Federal taxes is computed by subtracting the tax in Column (8) from the income figures in Column (4). (In computing current income—as shown in Table 20—after Federal taxes, the same procedure as used in Columns (5) through (9) of Table 21 would be used.)

As will be discussed in Section XII, the techniques shown in this section can be utilized to develop a variety of income distributions including distributions for all families, renter families, families by different sizes and by racial characteristics. The income distributions, in turn, will be used to determine rent and sales price distributions that families in a locality can afford.

# Income Data Available in the Metropolitan Housing Series

Detailed income information by various classifications is available for families in standard metropolitan statistical areas which have a population of 100,000 or more, and this is contained in the HC(2) Series of

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the 1960 Census of Housing entitled Metropolitan Housing (see Appendix). This Census volume contains 1959 incomes of families and individuals in owner-occupied and renter occupied housing units by household size. Similar income breakdowns are provided for nonwhite families in these SMSA's, but only if the SMSA contains 25,000 or more nonwhite occupied housing units. In bringing nonwhite family income data up to date, the methods suggested above for all families would apply to nonwhite families.

In developing the income distribution for renter families, one-person families should be subtracted. The inclusion of these families in the distribution introduces a strong downward bias, inasmuch as their incomes are usually far below the income levels of all other renter households. Many of these oneperson households are represented by transients, students, elderly and other persons who, if they do not require or seek complete housekeeping units in terms of private cooking and bathing facilities, frequently can obtain standard housing only through various forms of private or governmental subsidy. The exclusion of one-person families also compensates to some extent for income not reported in this distribution. It is important for the analyst to note that in those units in which there reside two or more unrelated individuals, only the income of one primary individual is reported by the Bureau of the Census. For example, if three unrelated nurses shared an apartment and had a combined income of \$12,000, only the income of one of the nurses would be reported in this distribution, but the household would still be reported as a three-person household. The method previously discussed in this section is used to bring the income data up to date.

## An Alternative Method of Measuring Income Changes in Columns (10) and (11), Table 20

In those housing market areas where manufacturing is of little or no importance, or where manufacturing wage data are not available, a different approach to adjustment of 1959 incomes is suggested. The Bureau of the Census publication, County Business Patterns, contains income data on each county in the United States. This report previously published every two or three years, including 1959, 1962 and 1964, will now be published annually. The publication is now being released in the form of state bulletins, which are available for a modest cost.

Although the data are usually not as current as data in *Employment and Earnings*, they can still be used to update and project income data. Thus, a market analysis of the Binghamton housing market areas as of January 1, 1964 made using the *County Business Patterns* data would have to rely on data available only through 1962, since 1964 data would not be available as of that date. In this case, the annual rate of change in income from 1959 to 1962 would be used to make an updated income estimate to January 1, 1964 as well as to project income to January 1, 1966.

The County Business Patterns show, with certain exceptions, first quarter data for workers covered by Old Age and Survivors Insurance. The total number of employees as well as aggregate income are shown. The average income is computed by dividing the aggregate income by the number of employees. This would be computed for the latest published County Business Patterns as well as the 1959 report in order to determine the percentage change in income from 1959 to the present.

The use of the data in the County Business Patterns should not be used without consideration of other income data which are available. Each year the Census Bureau makes a sample survey of current family income in the United States, and this is published in Current Population Reports: Consumer Income, Series P-60, which is identified in the Appendix of this guide. Since the income data reported in the County Business Patterns is an incomplete survey of incomes, the increase in incomes determined from the County Business Patterns for the United States should be adjusted so that it will not exceed the increase reported in the P-60 Series. For example, the median family income in the United States in 1959 was \$5,417 and \$6,569 in 1964, reflecting a 21 percent increase. If the data in the County Business Patterns indicated a 24 percent increase for the United States from 1959 to 1964, then this shows that the U.S. average increase of 21 percent was equal to 88 percent of the increase reported in the County Business Patterns (21 divided by 24 equals 88 percent).

Since the foregoing data would indicate that based on a national average, the income increase from 1959 to 1964 is overstated in the County Business Patterns, the increases for local areas based on the County Business Patterns data should be multiplied by 88 percent in order to adjust for this overstatement. Thus, if in a given county, incomes were projected to increase by 33 percent by January 1, 1966, based on the County Business Patterns, this would be multiplied by 88 percent to obtain an adjusted increase of 26 percent.

## SECTION IX: NUMBER AND SALES PRICES OF EXISTING HOMES

In the typical housing market area, resale of existing homes will ordinarily greatly exceed the volume of sales activity derived from new construction. This is to be expected, for the existing housing inventory offers, at any single time, a much wider range of choice with respect to prices, quality and location. Furthermore, turnover of the existing supply will ordinarily furnish many more sales offerings than yielded by new production activity. (An approximate estimate of the number of existing sales that occurs each year can be derived through the use of turnover data discussed in Section XIII.)

Disregarding, for the moment, considerations of quality and housing condition, the existing housing inventory will offer a spread of sales prices which will meet capabilities of the great bulk of the market. New sales housing, on the other hand, is usually funneled into the middle and top income segments of the market, inasmuch as costs for new construction, codes and building regulations establish "floors" under which it is extremely difficult to build new sales housing.

Furthermore, the financing terms for purchase of used housing show wider variations than encountered in sale of new housing. A distinct relationship is ordinarily encountered between quality of housing and availability of liberal financing, i.e., newer more modern, higher quality housing in sound neighborhoods, even though higher priced, can obtain proportionately lower down payments, longer periods of amortization, and lower interest rates than can more obsolescent, older structures in deteriorating or marginal neighborhoods.

The numbers and characteristics of existing home sales, as well as the characteristics of existing home offerings, are data which are extremely useful to the analyst in evaluating the condition of the local housing market. Residential Research Committees will ordinarily collect and publish data on the sales volume and price levels of existing homes. In those localities without such Research Committees, the analyst can work with local real estate interests to establish a reporting system on existing sales. Additional information can be obtained directly by the analyst from local real estate dealers and appraisers, newspaper ads and FHA and VA officials with respect to price levels and financing characteristics of existing houses.

The usefulness of maintaining existing sales housing information is illustrated, for example, in assessing the impact upon the housing market caused by the loss of a principal area employer. Likewise it is important to determine the price trends of older homes in order to evaluate, for example, if the prices of existing homes are increasing, declining or remaining stable. If the prices of existing homes are declining or remaining stable, this may have tendency to weaken the new sales housing market, since there is reduced financial advantages for families in existing homes to purchase a new home. Where price levels of existing homes are depressed, their selling time is also likely to have increased.

Maintaining these records can prove extremely useful, as well, in the formulation and execution of relocation programs, to accommodate displacees from urban renewal, highway construction, and other types of governmental activities.

There are several ways in which data on existing sales can be obtained and tabulated. Although the following method may not be the best for all localities, its basic approach and coverage should ordinarily apply. The forms suggested are comparatively simple and straightforward. Inasmuch as they involve clerical efforts and, perhaps, development of new record-keeping procedures for the realtors, they might require a "sales" or promotional effort unless a central or multiple listing service is already in existence.

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If there is a multiple listing service, much of the information would no doubt be available and efforts should be made to enlist the cooperation of this group. If there is no such organization, the first step in initiating this reporting procedure would be to enlist the cooperation of the local real estate board. Assuming that the board agrees to the proposal, a form or forms as suggested in Exhibits 3 and 4 would have to be prepared and distributed to the realtors before the beginning of each reporting period. It is, of course, most desirable that the real estate board carry out the necessary mailing, tabulation and statistical operations. From the reports of the individual firms, a table or tables comparable to that shown in Exhibit 5 could be prepared. Needless to say, the anonymity of individual reporting firms should be guaranteed, not only to the public, but also among themselves. This would be stressed to the board, indicating that only total figures would be used and that data from individual firms would remain confidential.

The survey data would probably not be tabulated and published more than twice a year, and the coverage would probably conform to the area encompassed by real estate board membership activity. Although the data are published only periodically, participant realtors would be required to maintain continuing data collection. In the tabulation of the data, it would be advantageous, in the larger housing market areas, to break the data down by geographical subareas, since quality and price of housing will tend to differ among various sectors of the city and the suburbs. Communities which have undertaken such reporting activities have used various approaches for defining the geographical areas. In some cases, natural topographic boundaries, such as rivers, lakefronts, and expressways are used; in others, quadrant divisions are used as might be represented by northwest, northeast, southeast, and southwest sectors. Frequently, it will be necessary to use a combination of the two techniques, one applicable to the central city, and the other for the outlying suburbs.

The information that would be presented in Exhibits 3, 4 and 5 would be most useful in evaluating price trends, volume of sales and the amount of housing on the market at a given time. The easiest table to prepare in terms of time and effort would be the one shown in Exhibit 4, since it would not require continuing data tabulation. Realtors would only be requested to provide a distribution of listings available as of a given date.

4 Bedroom

or more

EXHIBIT 3.—Recording Sheet of Existing Sales '

Real Estate Firm		_				
Geographic Area to Which Sale	s Apply					
For Period Beginning	and E	Ending	0***			
	Single 3	Detached Hou	ses Sold	Ro	w or Duplex U	nits
Price Range:	2 Bedroom	3 Bedroom	4 Bedroom or more	2 Bedroom	3 Bedroom	41
						_

<sup>3</sup> A possible variation of this form would be to eliminate the column of price ranges and have each real estate firm list the sales price of each unit in the appropriate column. Thus, if a 3 bedroom detached house sold for \$11,500, that figure would be placed in the column under 3 bedroom detached units. Then the above form could still be used to summarize these data.

EXHIBIT 4.--Existing Houses Available for Sale at End of Period

Date\_\_\_\_

Price Banget	Single	Detached Uni	ts Sold	Roy	w or Duplex U	nits
rrice Range:	2 Bedroom	3 Bedroom	4 Bedroom or more	2 Bedroom	3 Bedroom	4 Bedroon or more
Under \$10,000						
\$10,000 to \$14,999						
\$15,000 to \$19,999						
\$20,000 or more						

This exhibit can be used for collection of data from individual firms as well as for presenting summary information.

## EXHIBIT 5.—Sales Price Distribution of Existing Homes Sold in Community "A" Housing Market Area, 1960-1963 as Reported by Real Estate Firms'

	Percent Distribution				
Price Range	1960	1961	1962	1963	
Under \$10,000 \$10,000 to \$14,999 \$15,000 to \$19,999 \$20,000 or more Total: Percent Number	$\begin{array}{r} 23.2 \\ 45.7 \\ 25.8 \\ 5.3 \\ 100.0 \\ 542 \end{array}$	22.9 44.6 26.7 5.8 100.0 580	22.6 44.1 27.1 6.2 100.0 602	21.9 43.2 28.5 6.6 100.0 593	

<sup>1</sup> Further refinement of this table can be made by making a presentation by geographic area and by unit size.

## SECTION X: UNSOLD INVENTORY OF NEW HOUSES FOR SALE

SECTION V of this guide considered the vacancy ratio as a criterion of housing market strength. A high vacancy ratio generally would indicate a weakness of the market, while a low vacancy rate would imply that there is a current unsatisfied demand for additional housing.

Within the above-mentioned vacancy count there would be included a number of completed and unoccupied homes-and we can also assume, unsold homes. The numbers and characteristics of these houses provide a sharper insight into the local sales housing market situation. Furthermore, they provide factors which will condition the quantities and types of additional sales housing which will be produced and marketed. The builder will regulate his output in accordance with most recent marketing experiences---if he does not elect to do this voluntarily, he finds that his sources for construction loans will limit his production to his previous sales accomplishments.

If there is an excessive unsold inventory of completed houses, this does not automatically call for a broad cutback in the entire new construction program. This may mean only that certain portions of the market have been overbuilt, or that a more selective homebuying public is rejecting new housing which has locational, environmental, or qualitative drawbacks. Furthermore, this does not always indicate that the moderate income families are not being served; there may be occasions when local builders fail to build adequately for the "second round" buyers who desire improved and more expensive accommodations.

In order to assess properly the dynamics of the market for new sales housing, it is necessary to develop continuing data with respect to the characteristics of the unsold sales housing inventory.<sup>15</sup> It will probably take several surveys to determine what is a "normal" unsold inventory, and the concept of "normalcy" may change over time. As a local housing market progresses from a condition of balance to mild surplus, the previous unsold inventory which could be sold within 60-90 days may require 120-180 days, which, in turn, would suggest that the magnitudes of the unsold inventory should be reduced.

These surveys of unsold inventories should be conducted annually or semiannually. An initial step in securing this survey would be to contact the local Homebuilders Association (or the individual builders, if the locality does not have such an organization) to discuss the possibility of carrying out such surveys. As in surveys of similar nature, the analyst should stress that only cumulative totals are of interest to him, and the anonymity of individual data sources will be protected.

Depending upon the degree of interest of the builders, it might be desirable to start such surveys on a limited scale.<sup>18</sup> Rather than try to obtain all of the data suggested in Exhibit 6, the first survey might obtain information only with respect to the number of unsold structures, by price ranges, which have progressed beyond the plastering or wallboard construction stage. If successful response is obtained in this initial inquiry, the next survey might include a breakdown of completed homes by unit sizes, location; also the number of houses

<sup>10</sup> Since 1961, homebuilders in Portland, Oregon have been doing comprehensive surveys on the unsold inventory of not only new sales housing, but also of existing homes, rental property and vacant lots. The tabulation of the 1963 data resulted in 13 pages of tables. In addition, lenders in the Portland area make a semi-annual survey of new unsold single-family dwellings completed past the plastering or wallboard stage. Results of the annual survey are included in the spring issue of Real Estate Trends in Portland, Oregon, Metropolitan Portland Real Estate Research Committee, Inc., 321 S.W. 4th Ave., Portland, Ore, In 1965 copies of this semi-annual publication were available for \$5.00 each from the Metropolitan Portland Real Estate Research Committee, Inc.

NOTES

<sup>&</sup>lt;sup>13</sup> National and regional data on sales of new single-family units by price, type of financing and the unsold inventory are published in Construction Reports: Housing Sales, Series C25, Bureau of the Census and the Department of Housing and Urban Development. Annual subscription in 1965 payable to the Bureau of the Census was \$2.50. Subscription includes monthly and quarterly reports as well as an annual summary.

which are under construction, both sold and unsold. Information could also be obtained on multifamily structures consisting of 2-ormore units where all or a portion of the units will be offered for rent.

The above-mentioned geographical breakdowns would be determined locally, best fitting local building patterns. In almost any area there would be a logical breakdown by central city and suburbs. If there is extensive construction in the central city, there might be further breakdown by geographic quadrants. Suburban construction is most frequently identified by its location in counties or minor political jurisdictions.

For surveys conducted on a semi-annual basis, the months recommended for coverage are March and September or April and October, corresponding largely to the span of the building season. Where surveys are conducted on an annual basis, the spring is suggested for survey coverage, inasmuch as the major portion of new construction activity will start during this season.

In addition to the above, the prices at which new sales housing are sold can be tabulated in a manner similar to the method discussed in Section IX and shown in Exhibits 3 and 5 of that section. If resources are limited, however, it is more significant for the analyst to obtain data on the volume and characteristics of the unsold inventory, since the price levels (and to some extent the volume) of new sales housing can be obtained through interviews and the study of newspaper advertisements.

EXHIBIT 6.—Form for Reporting Unsold Inventory by Builder

# Builder\_\_\_\_\_

Unsold Inventory of Single Family Homes (completed past plastering or drywall installation stage)

			Price Range		
	Below \$12,500	\$12,500- \$14,999	\$15,000- \$19,999	\$20,000- \$24,999	\$25,000 or more
Unil Size:					
2 Bedrooms					
3 Bedrooms					
4 or more Bedrooms					
Geographic Location:					
Central City					
Outside Central City					
Under Constru	 ction — (Footing	must have be	en poured)		
All size single family units					
Number sold					
Number of Single Family Houses Under Con	struction on Indi	vidual Contra	t Basis for Ov	vner	
Renta	l Properties Und	er Construction	n		
Туре	Number Structures Total Housing Units			nits	
Duplex					
Multiple					
I			<u> </u>		

SECTION XI: REAL ESTATE TRANSFERS, MORTGAGE RECORDINGS AND DELINQUENCIES

AS observed in foregoing sections of this guide, there is no single measure of the strength of the housing market. This guide has already considered such criteria as vacancies, sales of existing houses, and unsold inventory of new sales housing. This section will consider two additional highly sensitive market indicators: (1) the pace and velocity of real estate market activity as represented by deeds and mortgage recordings, and (2) the comparative strength of the home financing market, as represented by delinquent mortgages and mortgage foreclosures.

Although building permit data will show the prospective volume of new construction activity for the next 3-6 month period (and longer in the case of apartment projects), these data do not provide insight into the current nature of the sales housing market for both new and existing houses. If there is a brisk demand for sales housing, as reflected in the current and recently preceding volume of sales, the new production will probably be absorbed without difficulty. On the other hand, if the rate of sales has been declining, the analyst can anticipate that the newly produced housing will encounter marketing difficulties. Information with respect to the rate of sales of new and existing homes can be obtained from records of real estate transfers and from mortgage recordings.

Regarding real estate transfers, it is important to recognize that not every conveyance of property represents the transaction between a willing buyer and a willing seller. For example, probate court actions, executor deeds, and sheriff's deeds would not be considered voluntary transfers. Accordingly, the analyst would wish to eliminate these "involuntary" transfers from consideration. He can accomplish this by obtaining only records of warrant deeds, inasmuch as these reflect, essentially, voluntary transfers from a willing seller to a willing buyer. These warranty deed records can be obtained from the office of the county clerk or from title companies.

Even these warranty deeds contain certain elements of distortion. For example, they will cover transfers represented by condemnations resulting from highway clearance, urban renewal, and other types of public actions. They will also cover nonresidential properties. Furthermore, a single deed might cover an apartment house sale representing transfer of hundreds of housing units. Despite these deficiencies, warranty deeds indicate "trend" of residential sales, both new and existing with a high degree of reliability. Where the trend reflects an increase in activity, this would imply an improving market; where the trend is one of decrease, the market might be considered as weakening.

Since most real state transfers involve a mortgage of some type, mortgage recordings will tend roughly to parallel real estate transfers. They will, however, ordinarily be numerically less than the volume of transfers, inasmuch as many properties are purchased on the basis of the buyer's assuming the existing mortgage. The sources for obtaining data on mortgage recordings will ordinarily be the same as those utilized for securing real estate transfer data.

The foregoing transfer and mortgage data should be maintained regularly on a historical basis in order to ascertain trend movements. Current data, if possible, would be developed on a quarterly and/or monthly basis, dating back for at least a year in order to assess current dynamics. These data will ordinarily be available only on countywide basis, and the analyst will not be able to determine, for example, differentials between central city and suburban activities. They will, however, provide a broad overview of sales activity for the entire housing market area, or for major geographic segments of the market. In order to obtain most effective presentation of the above data—in terms of trend identification and measurement—it is suggested that the mortgage recordings and real estate transfers be plotted graphically. In this manner, the analyst can compare movements within a single year, as well as yearto-year changes.

## **Delinquencies and Foreclosures**

During periods of economic downturn, not only will the volume of sales for new and existing housing decline, but many homeowners will encounter difficulty in meeting their monthly mortgage payments due to layoffs, reduced work weeks, etc. It should be pointed out that certain minimum levels of delinquencies can be expected even during strongest market conditions; e.g., illness, deaths, and family dissolutions, create conditions where the mortgagor is either unable or unwilling to continue his mortgage payments.

A foreclosure, of course, results from continued delinquencies, and this step constitutes a "last resort" by the mortgage lender, a step which most are usually anxious to avoid. The legal costs and commissions for resale of a property can frequently consume the equity forfeited by the previous owner. The circumstances which affect the incidence of foreclosure constitute a vicious cycle. For example, during a period of economic downturn, property values are likely to drop. A homeowner with limited equity investment, despite continuity of income, may find that he cannot obtain sufficient funds from intended resale of his property to cover both outstanding indebtedness and costs incidental to selling. (Numerous real estate brokers have indicated that, in addition to real estate commission fees, such additional costs as local and state transfer taxes, mortgage initiation fees, and "point payments" for obtaining liberal financing can amount to 10 percent of the sales price.) Under these circumstances, the present owner may allow the mortgagee to take back the property under foreclosure procedures, or he may simply "walk away" from his commitments.

For purposes of market analysis, foreclosure proceedings initiated are usually a more current and sensitive indication of the condition of the market than completed foreclosures. This is especially true in states which have a long redemption period.

Data on delinquencies are available from mortgage companies, savings and loan associations, and banks. In some instances, a centralized source of delinquency data may be provided by local Mortgage Bankers Association groups, many of which send in monthly reports to their central organization. In order to obtain the cooperation of these sources of information, it is essential that the analyst preserve the anonymity of his respondents. This he can do by assuring the sources that he will utilize only "total" figures, and that he will not release figures of individual lenders.

The delinquency data which are obtained will cover mortgages serviced by local mortgage lending institutions. Many mortgage lenders, particularly mortgage service companies, will initiate mortgages and service them (collect mortgage and principal payments and make necessary outlays from accumulated escrow accounts) even though the mortgages may have been sold to such prime lending sources as out-of-state savings banks and insurance companies.

Exhibit 7 illustrates one type of presentation that can be used for compilation and tabulation of delinquency data. This table can be expanded, or additional tables can be used, to provide historical coverage for purposes of comparison. EXHIBIT 7.---Mortgage Loan Delinquencies by Type of Loan Serviced in\_

## Housing Market Area As of\_\_\_\_

	m of L	All Loans	Percent Delinquent by Degree					
	Type of Loan	Serviced (percent)	Total Delinquent	30–60 Days	Over 60 Days	Foreclosure Proceedings Initiated	Foreclosed	
To	stal	100						
FI	łA	<b>10</b> 0						
V	A	100		<u> </u>				
Co	onventional	100						

(date)

## SECTION XII: ESTIMATING EFFECTIVE DEMAND AND NEED FOR HOUSING

HOUSING market analysis is intended to provide two separate findings: (1) an estimate of housing requirements, and (2) an estimate of effective demand, and the need for publicly-assisted housing. The first estimate will indicate the total number of additional housing units which are required during the forecast period to accommodate the increased number of households, replace inventory losses, and allow for an adequate level of vacancies necessary for a balanced market condition, which permits the internal movement of population, the orderly marketing of new dwellings and the maintenance of a healthy competitive condition in various segments of the housing market. Frequently this estimate is additionally refined with respect to separate sales and rental housing requirements, and where applicable, includes a subclassification of housing requirements among the nonwhite and the elderly population. The second, the estimate of effective demand, identifies the foregoing requirements with respect to the price ranges at which sales housing demand will materialize and rent levels and unit sizes at which the rental demand will be expressed. The analyst, at the same time, should review Section XIII. Estimating Relocation Resources, and take the contents in that section into consideration when making the foregoing estimates.

All final estimates made by the analyst should, of course, take into consideration the past and current marketing experience of various types of housing such as sales housing, garden apartments, high rise apartments, housing requiring direct governmental assistance as well as housing not requiring direct assistance.

In view of the complexity of the techniques for estimating housing requirements and effective demand, this section is presented in the following major categories:

- A. Estimating Housing Requirements
- B. Estimating Effective Demand for Private Housing and Need for Publicly Assisted Housing
  - (1) Effective Demand for Sales Housing
  - (2) Effective Demand for Rental Housing and Need Considerations for Publicly Assisted Housing

## SUBSECTION A: ESTIMATING HOUSING REQUIREMENTS

ABLE 22 provides an illustrative example of how housing requirements can be estimated for the forecast period, January 1, 1964 through January 1, 1967. The Binghamton, New York housing market area is, again, used for illustrative purposes: the data utilized are largely hypothetical and are intended for illustrative purposes only.

## Instructions for Completion of Table 22

Line (1): The anticipated household growth in the housing market area is derived from the illustrative example Table 18 in the household formation part of Section VII, "Population and Household Estimates." The distribution of families by tenure (owner and renter occupancy) is derived from the estimated current tenure distribution shown in line 14 of Table 14 of Section VI, "Housing Inventory." In the case of this latter distribution, it is noted that 35 percent of the existing housing inventory was renter occupied. It should be emphasized that this inventory breakdown represents an historical development in the Binghamton area; most recent expressions of effective demand for new housing in most cases will vary from the historical trend. This consideration will he discussed in greater detail in the following subsections dealing with estimates of effective demand.

It is noted in Table 22 that there is no adjustment for "in and out" changes in the

TABLE	22.—Illustrative	Example fo	T Estimating	Housing 1964 thro	Requirements ugh January 1,	ın t 1967	ne 1	Bingnamion,	New	York
		SMSA J	or January 1,	1901 0010						

	Total	Owner	Renter
<ol> <li>Anticipated household growth in the housing market area.</li> <li>Shift in tenure.</li> <li>Estimated demolitions.</li> <li>Growth and replacement requirement; line 1 plus line 2 and line 3.</li> <li>Vacancies available at beginning of period <sup>1</sup>.</li> <li>Estimated number of required vacancies.</li> <li>Excess or deficiency of vacancies; line 6 minus line 5.</li> <li>Estimated growth, replacement and vacancy housing requirement; line 4 plus or minus line 7.</li> </ol>	1,962 450 2,412 1,643 1,452 -191 2,221 <sup>3</sup> 740	1,275 + 348 + 150 + 1,773 + 428 + 428 + 428 + 1,773 + 3591 + 1,773 + 3591 + 1,773 + 591 + 591 +	687 -348 300 639 1,215 1,024 -191 448 <sup>3</sup> 149
Effective demand by area <sup>4</sup> 10. Central City 11. Remainder of housing market area	(*) (*)	(*) (*)	(*) (*)

Data are illustrative only and no attempt was made to relate these data to the actual situation.
 Sound or deteriorating units with or without private plumbing facilities available for rent or for sale.
 Estimates should be rounded by analyst.

Estimated after total effective demand has been estimated by rent ranges and sales price ranges.

housing inventory represented by conversions or mergers. As indicated in a previous section of this guide, these activities cover only a small proportion of the total housing supply, and they have tended to balance each other out during the current and recent "non-shortage" housing conditions.

Line (2): The figures in this line are used to indicate the estimated shift in tenure that has occurred in the existing housing supply. A technique has been developed to make

Occupied		(x) April 1960	
Dwellings	Number		Percent
Total	63,383		100.0
Owner	41,046		64.8
Renter	<b>2</b> 2,3 <b>3</b> 7		35.2

(d) The foregoing indicates that there has been an increase in the ratio of home-ownership due to new construction and a probable shift from renter to owner occupancy. The annual average loss of renter units to owner occupancy since 1960 is determined as follows:
 22,337 — 21,931 = 108

3.75 yrs. (Apr. 1960-Jan. 1964)

(e) The average annual household increase is computed in the following manner: 65,669-63,383=610

3.75 years

(f) The annual net shift of 108 units is relative to an annual average household increase of 610 units, and it is assumed that this relationship will continue in the future. Computation of the estimated annual net shift in the future for allowances for this shift, which is shown as follows:

- (a) Show the tenure breakdown in 1960 of the occupied housing supply in absolute and percentage form. See Column (x) below.
- (b) Repeat step (a) for the current housing stock. See Column (y) below.
- (c) Apply the current estimated percentages to the 1960 occupied housing stock. See Column (z) below.

Est. Jan	/) 1. 1964	(z) Current Percentage—
Number	Percent	Applied to 1960 Total
65,669 42,921 22,748	100.0 65.4 34.6	63,383 41,452 21,931

owner and renter occupancy is computed as follows:

108 x 650 (annual projected

610 household growth) =116(g) The estimated annual shift of 116 units from renter to owner occupancy is multiplied by the forecast period, 3 years, to obtain the estimated shift for the period. This amounts to 348 units and is entered as a minus figure under the renter column in Table 22 and a plus figure under the owner column. (A shift from owner to renter occupancy would be reflected in a minus figure in the owner column and a plus figure in the renter column.) While the foregoing technique is not presented as an accurate method of indicating shifts in tenure, it does provide a reasonable method

of making allowances for shifts in tenure.

Line (2): The estimates of demolitions by tenure would be obtained from the foregoing Section IV, "Displacement and Demolitions." From Section IV, it had been assumed that inventory losses derived from demolitions will amount to 150 units a year, or 450 units for the three-year forecast period. This estimate considered the fact that actual demolitions generally lag behind schedules established by local agencies, in terms of both starts and periods required for execution. The breakdown of these demolition losses by tenure can frequently be obtained from the agencies carrying out the demolition. Local urban renewal agencies, for example, are required to carry out surveys of site occupants. Where such data are not available, the analyst can frequently develop fairly reliable estimates by checking demolition areas against most recent Census tract and block which will identify tenure of the occupants.

Line 4: This represents a total of lines (1), (2), and (3).

Line 5: The vacancies available at the beginning of the forecast period (January 1, 1964) are obtained from line 10 of Table 14 in Section VI, "Housing Inventory." This figure should reflect the "effective" vacancy concept utilized by the Census of Housing, i.e., these units should be available for rent or sale, and in sound or deteriorating condition, and should contain all or some plumbing facilities. This estimate would exclude dilapidated units, or units which are not considered as being available for rent or sale.

Line 6: In the foregoing Section V, "Vacancy Situation," the concept of the "normal" vacancy rate was discussed. This rate was considered to be sufficiently high to .provide required residential mobility and to provide a reasonable choice in housing accommodations by rent, price, location and quality. In the case of Binghamton, the 1.0 percent homeowners effective vacancy rate is considered to be normal. On the other hand, the effective rental vacancy rate of 5.1 percent can be considered, at the present time, to be above a normal range of 4 to 5 percent (mid-point 4.5) for the Binghamton market. An effective vacancy rate of 4.5 percent, applied against the current rental inventory, would yield 1,024 vacancies, which are 191 less than the currently estimated rental housing vacancy estimate of 1,215. It should be emphasized that the 4-5 percent range of effective rental vacancies considered "normal" for Binghamton at the present time would have relevance for this market area only. The analyst should expect ratios to vary from one market area to another, reflecting individual area characteristics.

Line 7: As indicated in Table 22, Line 6 is subtracted from line 5 to determine the excess or deficiency in vacancies. This procedure would yield a modest surplus of 191 vacant rental units for the Binghamton area.

Line 8: A more refined estimate of housing requirements is set forth in this line. The previous line 4 estimate of requirements reflected increased household formations, housing inventory losses, and shifts in tenure. In this line, further adjustment is made for deficiency or excess of vacancies. In the case of Binghamton, the excess of 191 vacancies necessitates subtraction of this amount from line 4. (If there had been an estimated deficiency of vacancies, this amount would have to be added to the figure in line 4.) The figures in this line represent the estimated housing requirements by tenure for the three year forecast period.

*Line 9:* The line represents the estimated housing requirements on an annual basis, and the figures should be rounded inasmuch as they are only estimates.

Lines 10 and 11: The determination of these figures will be discussed in subsequent portions of this section which considers estimating the effective demand.

## SUBSECTION B(1): EFFECTIVE DEMAND FOR SALES HOUSING

HE method of computing the effective demand for sales housing is shown in Tables 23 and 24.

## Explanation of Table 23

Column (1) — Listing of deciles.

Column (2) — This is the estimated current income after Federal taxes of all families in the Binghamton SMSA as of January 1966. Techniques for estimating current income are covered in Section VIII. In estimating the demand for sales housing, current estimated incomes of all families are used rather than TABLE 23.—Illustrative Example for Estimating the Price of New Sales Housing by Desile in Binghamton, New York SMSA

Decile (1) D-1 D-2 D-3 D-4	Estimated           Family           Income '           January 1966           (2)           \$ 3,494           4,872           5,855           6,659           7.405	Ratio of Purchasers' Income to Income of All Families (3)* 1.48 1.30 1.24 1.20 1.18	Estimated Purchasers' Income <sup>1</sup> (4) \$ 5,171 6,334 7,260 7,991 8,739	Ratio of Sales Price to Purchasers' Income (5)* 2.70 2.61 2.55 2.50 2.46	Estimated Sales Price (6) \$13,962 16,532 18,513 19,978 21,498
D-5 D-6 D-7 D-8 D-8 D-9 D-9.5	7,406 8,207 9,274 10,546 12,779 15,356	1.15 1.12 1.08 1.03 1.00	9,438 10,387 11,390 13,162 15,356	2.42 2.38 2.35 2.32 2.29	22,840 24,721 26,767 30,536 35,165

<sup>1</sup> After Federal taxes.

National ratio, which may be used in all housing market areas.

income of owners since demand for sales housing is predicated on the assumption that prospective buyers will be either previous renters or previous owners. In estimating the demand for rental housing, however, only renter income is utilized on the assumption that relatively few owners would be in the market for rental housing.

Column (3) — The lowest price at which private enterprise can provide new standard housing in the United States is above the income level of lower income families. It follows that the income distribution of families who purchase new homes will be higher than the income distribution of all families. The 1960 Census provides the incomes of households of owner-occupied units who bought homes which were built in 1959 through March 1960. Since two-thirds of the owner-occupied units built in 1959 to March 1960 were within metropolitan areas, and since most housing market analyses are likely to be conducted within metropolitan areas, metropolitan data are used in providing an income distribution of home buyers in 1959 to March 1960. After making technical adjustments, Column (3) of Table 23 shows the ratio by decile of the incomes after Federal taxes of purchasers of new homes in 1959 to March 1960 inside metropolitan areas to the decile distribution of 1959 incomes (after Federal taxes) of all families inside metropolitan areas. These ratios provide a technique whereby the projected income distribution of all families in a housing market area can be adjusted upward to reflect the projected income distribution of homebuyers.

Column (4) — The projected income of home purchasers is estimated by multiplying Column (2) by Column (3).

Column (5) — The ratio of sales price to purchasers' income shown in this column is computed by dividing the decile levels of a national sales price distribution by the decile levels of the income distribution of home purchasers. After making technical adjustments, the ratio was primarily derived from 1960 Census data and sales price data of one-family homes sold in the United States inside metropolitan areas in 1963.

Column (6) — The estimated sales price distribution by decile is determined by multiplying Column (4) by Column (5).

The technique in Table 23 in effect assumes that the entire estimated demand for private sales housing can be allocated only to those families who can afford to purchase new private housing. To a degree, families with insufficient incomes to purchase new housing will purchase existing housing. Many families occupying existing housing will in turn purchase new housing.<sup>17</sup>

"For further information on this process, see William G. Grigsby, Housing Markets and Public Policy (Philadelphia, Pa.: University of Pennsylvania Press, 1963). Chart on page 63 shows that the bulk of the new households moving into new units in the Philadelphia SMSA in 1955-56 were former renters or former owners. Also, see Chapter III: The Filtering Process. Exhibit 8: Cumulative Price Distribution of Sales Housing Demand in Binghamton, N.Y., SMSA, January 1964-January 1967



#### **Explanation of Table 24**

Using the data derived in Table 23, a preliminary estimate of the demand for new sales housing is made by price ranges in Table 24. The explanation of Table 24 is as follows:

Column (1) — These are arbitrary local sales price ranges that will vary among localities. They would generally reflect the range of sales prices achieved by homebuilders. The lowest sales price should be the same as the estimated lowest price at which private enterprise can provide new housing in the housing market area. In the Binghamton housing market area, it is estimated (for illustrative purposes only) that the lowest price at which private enterprise can provide new housing is \$11,000. This price therefore becomes the lower level for a sales price class, preceded by a class of "Under \$11,000."

 TABLE 24.—Illustrative Example for Estimating Annual Effective Demand for New Sales Housing by

 Price Ranges in Binghamton, New York, SMSA, for Forecast Period January 1, 1964 to January 1, 1967

	Estimated Pa	ercentage Distrib	oution of Potent	ial Purchasers
Conventional Sales Price Classes	Cumulative	By Class	Above Minimum Price	Preliminary Absolute Distribution
(1)	(2)	(3)	(4)	(5)
Under \$11,000_ \$11,000-\$12,499_ \$12,500-\$14,999_ \$15,000-\$17,499_ \$17,500-\$19,999_ \$20,000-\$22,499_ \$22,500-\$24,999_ \$25,000-\$29,999_ \$30,000 or more_	4 6 13 24 40 58 72 89 100	4 2 7 11 16 18 14 17 11	2 7 11 17 19 15 18 11	12 41 65 100 113 89 106 65
Total Percent above minimum price	96	100 96	100 100	591

Column (2) - To determine these figures, the sales prices in Column (6) of Table 23 should be plotted graphically against the deciles in Column (1) of Table 23. This is shown in Exhibit 8 and is the same as the technique used in estimating incomes in Section VIII. A french curve should be used in making a demand distribution curve. In order to obtain a fairly smooth distribution curve similar to a normal income distribution curve, it will not always be possible to connect all the plotted points. On the lower and left end of the curve, the tail should be similar in shape to the incomes curve shown in Section VIII. From the resultant graph the percentage of households in various price ranges can be obtained by selecting the upper limit for each conventional sales price class on one axis and then reading up or across to where this limit intersects the french curve.

It has been determined that the lowest price at which private enterprise can provide new standard housing in substantial numbers is \$11,000. The data in Column (2) shows that 4 percent of the demand schedule is below \$11,000. The last figure in Column (2) is 96 percent, since this is the proportion of the demand schedule that is above the minimum price of \$11,000.

Column (3) — This is the class distribution of Column (2). Thus, to determine the proportion of the demand that is in the \$15,000-\$17,499 range, 13 percent in Column (2) is subtracted from 24 percent indicating that 11 percent of the demand is in this price range.

Column (4) — The 96 percent of the demand schedule above \$11,000 in Column (3) is redistributed on the basis of 100 percent. Thus, 18 percent of the demand in Column (3) in the \$20,000 to \$22,499 price range is divided by 96 percent to obtain a figure of 19 percent in Column (4).

Column (5) — Table 22 shows that the estimated annual demand for sales housing in the Binghamton housing market area is 591 units. To determine the demand by sales price ranges, this figure is multiplied by the percentages in Column (4), Table 24.

Based on unsold inventory surveys and other knowledge about the sales market, the demand schedule shown in Table 24 might be modified to reflect these market factors. It is important to note this demand schedule reflects the demand for sales housing regardless of whether it is built for sale or built for the exclusive use of the owner. Of the new one-family homes sold in the United States in 1963, only 62 percent were built for sale and 35 percent were built for the exclusive use of the owner on his own land." The remaining 3 percent was either built for rent or not reported. While 35 percent of all the new one-family homes sold in the United States in 1963 were built exclusively for the owner, data available suggest that of the one-family homes in the highest 10 to 15 percent of the sales price levels, approximately 45 to 50 percent were built exclusively for the owner.

The demand schedule in Table 24 is presented without regard to number of bedrooms in the unit. In 1963, 70 percent of the one-family homes sold in the United States contained three bedrooms and 24 percent contained 4 bedrooms or more. More than three-fourths of the homes containing 4 or more bedrooms sold for \$20,000 or more. Thus, it can usually be assumed that the bulk of any sales demand schedule will be for 3-bedroom units with 4-bedroom units being a more important demand factor in the higher price brackets.

## SUBSECTION B(2): EFFECTIVE DEMAND FOR RENTAL HOUSING AND NEED CONSIDERATIONS FOR PUBLICLY ASSISTED HOUSING

ESTIMATING the demand for rental housing is somewhat more difficult than estimating the demand for sales housing. In most instances, demand for sales housing is for units containing three or more bedrooms. Families purchasing housing usually want to assure that the house will be large enough to meet their needs for several years, at least, and consequently will often buy a house which is larger than their present family needs.

On the other hand, persons or families renting apartments or homes usually do not wish to pay for more space than they will need, since they can move to larger quarters if their space requirements increase. Demand therefore has to be estimated carefully in terms of units ranging in size from efficiency units to units containing 3 or 4 bedrooms or more.

Moreover, apartment demand is further subclassified by types of structures and location whereas the bulk of new sales housing is likely to be built on the periphery of

<sup>15</sup> Construction Reports: Housing Sales, op. cit. (Footnote 15. Section X)

the built-up areas within a housing market area. Rental housing may consist of single family units, duplexes, row houses, gardentype developments and high-rise structures. and these may be built in the central city of the housing market area or in the suburban area. The location, type of structure and rent will be important factors in determining the type of tenant that the rental housing will serve. For example, married couples with children are more apt to be found in a garden-type development than in a high-rise structure. A high-rise structure in a central city near good public transportation may attract primarily middle-age tenants while another high-rise structure with a large parking area, swimming pool and other recreational facilities may attract a mixture of young single persons, recently married couples as well as middle-aged and older persons with no children at home. Proximity to a hospital or a university may also have a major impact on the occupancy of a nearby apartment structure.

In most housing market areas the demand for higher rent units in elevator buildings is usually quite small, particularly outside of the larger metropolitan areas. According to the Bureau of the Census, only 20 percent of the private multifamily units in 5-ormore unit structures started in 1963 contained 4-or-more stories. Non-family households consisting of two or more unrelated individuals are often a significant factor in the demand for rental housing especially in high-rise elevator units. Any surveys of the tenants of such structures would certainly be helpful in estimating the proportion of non-family households in the market as well as other significant characteristics of occupants of such units.

The analyst should also review population changes by age distribution. The primary rental market usually includes the 20-29 age group and the over 45 age group, while the primary sales market is the 30 to 45 age group. Although there is a certain amount of overlap of demand among these groups, review of the population age structure can provide useful background information in evaluating the rental housing market.

The remainder of this subsection will be primarily devoted to the technique for making a preliminary estimate of the demand for rental housing by unit size and by rent ranges.

## Methodology for Making Preliminary Estimates of Effective Demand

The development of effective demand estimates for rental housing rests upon the assumption that families at various income levels are willing to allocate certain proportions of their income for rent (gross rent including all utilities). This proportion is usually designated as the rent-to-income ratio or abbreviated as "RIR." Table 25 provides a guide of rent-to-income ratios after taxes for all families and for nonwhite families,

 

 TABLE 25.—National Gross Rent-to-Income Ratios (After Federal Taxes) for All Households and Nonwhite Households by Family Size

		All Households		N	onwhite Househo	olds
Income Decile	1-Person	2-Persons	3-or-more Persons	1-Person	2-Persons	3-or-more Persons
(1)	(2)	(3)	(4)	(5)	(6)	(7)
D-1 D-2 D-3 D-4 D-5 D-6 D-7 D-8 D-9 D-9 D-9.5	25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 24 (.02000) 23 (.01917) 22 (.01833) 21 (.01750) 20 (.01667) 20 (.01667)	25 (.02083) 24 (.02000) 23 (.01917) 22 (.01833) 21 (.01750) 20 (.01667) 19 (.01583) 18 (.01500) 17 (.01417) 17 (.01417)	22 (.01833) 21 (.01750) 20 (.01667) 20 (.01667) 20 (.01667) 20 (.01667) 19 (.01583) 18 (.01583) 18 (.01500) 17 (.01417)	25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 24 (.02000) 24 (.02000)	25 (.02083) 25 (.02083) 25 (.02083) 25 (.02083) 24 (.02000) 23 (.01917) 22 (.01833) 21 (.01750) 20 (.01667) 20 (.01667)	25 (.02083) 25 (.02083) 25 (.02083) 24 (.02000) 23 (.01917) 22 (.01833) 21 (.01750) 20 (.01667) 19 (.01583) 19 (.01583)

() The figures in parenthesis following the gross rent-to-income ratios are reciprocals that may be applied to the annual income to obtain the estimated monthly gross rent. For example, the reciprocal for a 23 percent rent-to-income ratio is determined by multiplying .23 times .0833 (which is equal to 1/12th). This saves the double computation of multiplying the annual income by .23 to obtain the annual gross rent and then dividing by 12 to obtain the monthly gross rent.

which may be used for all localities in developing demand estimates.

Table 25 indicates that lower income households spend proportionately more of their income for rent than higher income households. Although these ratios are based on data in the 1960 Census for renter households inside metropolitan areas, some of the ratios particularly in the lower income ranges were higher in the Census than as indicated in Table 25. The rent-to-income ratios in the Census reflect not only what households are willing to pay for housing, but also what they are forced to pay for housing, which is more apt to be reflected in the rent-to-income ratios for the lower income ranges. Therefore, in the lower deciles, the rent-to-income ratios have been lowered to reflect more what households would be willing to pay for housing. Since the income distribution for nonwhite households as compared with all households is substantially lower, the rent-to-income ratios for nonwhite households are higher than for all households. (The rent-to-income ratios related to gross incomes before Federal taxes would be lower than as shown in Table 25, especially in the middle and higher income groups.)

#### Explanation of Table 26

As indicated in the foregoing, the ratios developed in Table 25 may be used for all localities. If, however, the housing market area had a population of 100,000 or more as of the 1960 Census, it may be advisable to compute the metropolitan rent-to-income ratio for the study locality based on the method shown in Table 26. The rent-toincome ratios developed in Table 26 are for households containing 2-or-more persons. Development of local rent-to-income ratios in Table 26 by the household sizes shown in Table 25 requires the substitution of local rent and income data for 1-person households, 2-person households and 3-or-more person households.

Use of local data would reflect the rentto-income ratios families were paying as of the 1960 Census. In some cases, where there has been relatively little new rental housing construction, the rent-to-income ratios reflected what households were paying for a rental housing inventory which was relatively old. If new rental housing were placed on the market with modern amenities and good location, households may be willing to allocate a larger proportion of their income for rent than the Census data for the locality would indicate. In such instances it may be advisable to use the national rent-to-income ratios shown in Table 25.

## Instructions for Completing Table 26

Column (1) (2) (3). Taken from Table A-3 in the Metropolitan Housing Series HC(2) of the 1960 Census of Housing for the Binghamton metropolitan area.

Column (4). Column (3) subtracted from Column (2).

Column (5). Percentage distribution of Column (4).

Column (6). Cumulative distribution of Column (5).

Column (7). Listing of deciles. Explained in Section VIII.

Column (8). To determine these figures, plot the percentages in Column (6) against the gross rent distribution shown in Column (1). See Section VIII for procedures and graphic Exhibit in this section.

Column (9). The monthly rent in Column (8) times 12 equals the gross annual rent. Using the 1959 income distribution for families of two or more persons, this is computed by the procedure shown in Section VIII.

The development of 1959 income data after Federal taxes will require the use of the Federal income tax schedule which was operative in 1959. The income tax schedule for a selected income group at that time was as follows:



3.5	T	-	_

	MARR	IED	
Not over \$4,000 Over: \$4,000 \$8,000 \$12,000 \$16,000	But not more than: - \$8,000	$\begin{array}{r} 20\% \\ \$800 + 22\% \\ \$1,680 + 26\% \\ \$2,720 + 30\% \\ \$3,920 + 34\% \end{array}$	of Excess Over \$4,000 \$8,000 \$12,000 \$16,000
	SING	LE	
Not over \$2,000 Ver: \$2,000 \$4,000 \$6,000	But not more than: \$4,000 \$6,000	20% \$400 + 22% \$840 + 26%	of Excess Over \$2,000 \$4,000

\$8,000\_\_\_\_\_

\$10,000\_\_\_\_

\$12,000\_\_\_\_\_

\$840 + 26%

\$1,360 + 30%

\$1,960 + 34%

\$2,640 + 38%

In estimating household income after Federal taxes for all households, an exemption of \$2,000 per household was assumed. This is based on a national average household size of 3.3 persons times an exemption of \$600 per person. By household size, the exemption schedule would be as follows: 1 person, \$600; 2 persons, \$1,200; 3-4 persons, \$2,100; 5 persons, \$3,000; and 6 or more persons, \$3,600.

\$6,000\_\_\_\_\_

\$8,000\_\_\_\_\_

\$10,000\_\_\_\_\_

Column (11). Column (10) divided by Column (9). In cases where the computed rent-

to-income ratio exceeds 25 percent, the analyst may wish to arbitrarily lower the ratio to 25 percent based on a market assumption that families cannot afford to pay more than about 25 percent of their income for rent.

\$4,000

\$6,000

\$8,000

\$10,000

Tax

## Explanation for Use of Rent-to-Income Ratios as of the 1960 Census

The use of rent-to-income ratios as of the 1960 Census for making current market estimates is predicated upon the assumption

TABLE 26.—Computation of Decile Distribution of 1959 Gross	Rents of Renter Families
of Two or More Persons in the Binghamton, Neu	York, SMSA

		PART A						PART E		
1959 Gross	Re	enter-Occu Househol	ipied ds	Perc Distr	entage ibution		Gross	Gross	Adjusted	
Rent Distribution	Total	One Person	Two or more Persons	By Class	Cumu- lative	Decile	Monthly Rent	Annual Rent	Renter Income	Income Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Under \$30 \$30-\$39 \$40-\$49 \$50-\$59 \$60-\$69 \$70-\$79 \$80-\$99 \$100-\$119 \$120 or more	342 793 1,619 2,614 3,976 3,852 4,852 1,943 1,015	258 500 661 811 848 558 481 143 58	84 293 958 1,803 3,128 3,294 4,371 1,800 957	0.5 1.8 5.7 10.8 18.8 19.7 26.2 10.8 5.7	0.5 2.3 8.0 18.8 37.6 57.3 83.5 94.3 100.0	D-1 D-2 D-3 D-4 D-6 D-6 D-7 D-8 D-9	\$53 61 67 71 76 82 88 97 110	\$636 732 804 852 912 984 1,056 1,164 1,320	\$2,251 3,241 3,887 4,489 5,049 5,566 6,246 7,046 8,288	28 23 21 19 18 18 18 17 17 16
Total	21,006	4,318	16,688	100.0	100.0	D-9.5.	123	1,476	10,331	14

74

that while incomes may rise, the rent-toincome ratios will not change significantly within each income decile. This comparative stability of the rent-to-income ratios can be attributed to two factors: (1) one is the assumption that management and maintenance costs will rise, and (2) during periods of rising income, families are more willing to spend an increased amount for housing (but not necessarily a higher proportion of income). Both factors will tend to keep the rent-to-income ratios comparatively stable at the various decile levels. While rent-toincome ratios by various deciles may change over the period of a decade, such changes are usually slow in developing and are not likely to reflect radical changes before new data from the next decennial census are available.

## Relationship of Household Size to Unit Size

In order to make estimates of demand for rental housing by rent ranges and by unit size, it is necessary to assume that there will be some correlation between household size and unit size. The matching of household size and unit size in Table 27 is a rough approximation of the unit size requirement for a given size household for purposes of determining rent ranges. For example, to determine the demand by rent ranges for 0-bedroom or efficiency units, the income distribution for 1-person renter households would be used. To determine the demand distribution by unit size, however, the method shown in Tables 30 and 31 will be used.

TABLE 27.-Unit Size Requirements for Renter Households for Purposes of Determining **Rent** Ranges TT '' O' D . .

Renter Household Size	Unit Size Required
1 person 2 persons 3-4 persons 5 persons 6 persons	0-bedroom. 1-bedroom. 2-bedroom. 3-bedroom. 4-bedroom.

## Estimating Projected Rent Paying Ability by Unit Size

As indicated previously in this subsection. estimating the demand for rental housing requires estimating the demand by both unit size and by rent ranges. Since incomes and rent paying ability tend to vary by size of family, estimates of demand for rental housing will have to take these factors into consideration. For metropolitan areas having a population of 100,000 or more, the technique shown in Table 28 and Exhibit 9 and accompanying instructions can be used.

## Instructions for Completing Table 28

Column (1) - This is a list of deciles. which was explained in Section VIII: Family Income Estimates.

Column (2) — As indicated in Table 27, the income distribution of three and four person households is considered to be the most appropriate for determining the effective demand for two bedroom units. (To determine the demand for efficiency or 0-bedroom units, the analysis would utilize the income distribution of one person families; for one

TABLE 28.—Illustrative Example for Estimating the Projected Rent Paying Ability by Decile for 2-Bedroom Unit for the Binghamton, New York, SMSA\*

Decile (1)	Renter Family Income <sup>1</sup> January 1966 3-4 Persons (2)	Gross Rent-to- Income Ratio (3)	Monthly Rent-to- Income Ratio Reciprocal (4)	Estimated Monthly Gross Rent (5)
D-1 D-2 D-3 D-4 D-5 D-6 D-7 D-6 D-7 D-8 D-9 D-9 D-9 D-9 5	\$3,233 4,396 5,192 5,818 6,412 7,052 7,827 8,654 10,135 11,673	22 21 20 20 20 20 20 19 18 17 17	.01833 .01750 .01667 .01667 .01667 .01667 .01583 .01500 .01417 .01417	$\begin{array}{c} \$59.3\\ 76.9\\ 86.6\\ 97.0\\ 106.9\\ 117.6\\ 123.9\\ 129.8\\ 143.6\\ 165.4 \end{array}$

\*See text for instruction on how to complete the columns in this table. <sup>1</sup> Estimated income after Federal taxes.

Example and Explanation of the Derivation of a 100-Percentage Distribution from a Decile Distribution 90-50-The decile gross rent levels in Column (5) of Table 28 are plotted and a curve is drawn with a french curve to connect as many points as possible. After the curve has been drawn, the cumulative percentages as various gross rent levels can 20~ be read from the graph. For example, a gross rent level of \$120 intersects the curve at about the 66th percentile, which means that 66 percent of the demand for 2-bedroom units 10would be at gross rents of less than \$120 per month. 50 60 70 80 100 110 120 130 140 150 160 170 180 190 200 90 MONTHLY RENT (DOLLARS)

Exhibit 9: Cumulative Distribution Curve of Rent Paying Ability for 2-Bedroom Units in Binghamton, N.Y., SMSA,

January 1964-January 1967

bedroom units, the distribution for two person families; for three bedroom units, the distribution for five person families; for four bedroom units, the distribution of six person families.) The 1959 income data for 3-4 person renter families in the Binghamton SMSA was taken from Table A-3 of the Metropolitan Housing series, HC-2 and is projected to January 1966. Although the housing market analysis in this manual is being made for three years, as indicated in Section VIII, it is recommended that income projections be made for two years. If the income were projected for the threeyear period, this would result in a significant over-statement of demand in the higher price levels during the early part of the forecast period.

Column (3) - These figures are obtained from Column (4) of Table 25, which provides data on the national rent-to-income ratios. The analyst, however, may compute the rent-to-income ratios for the study locality based on the technique shown in Table 26.

Column (4) — This is the monthly rent-toincome ratio reciprocal, which is also taken from Column (4) of Table 25. The annual income may be multiplied by the reciprocal to obtain the estimated monthly gross rent. The alternative is to multiply the annual

income by the gross rent-to-income ratio shown in Column (3) to obtain the gross annual rent and then divide by 12 to obtain the monthly gross rent.

Column (5) — The figures in Column (2) are multiplied by the reciprocals in Column (4) to obtain the estimated monthly gross rents.

This same technique is then used to develop estimated rent paying ability for efficiency, one-bedroom, three-bedroom and four-bedroom units, except that for efficiency units, Column (2) of Table 25 would be used for the rent-to-income ratios and Column (3) for one-bedroom units.

## Explanation of Exhibits 9 and 9A.

The gross monthly rent and paying ability by deciles for a 3 or 4 person family shown in Column (5) of Table 28 has been plotted as a cumulative rent paying ability distribution curve in Exhibit 9. As indicated in the explanation of Table 28, gross monthly rent paying ability by deciles would also be computed for other size families. In addition to the cumulative rent paving ability distribution curve for 3-4 person households, Exhibits 9 and 9A show distributions for other size families. As can easily be determined from these graphs, the further to the right the curve is, the greater



is the rent paying ability in terms of absolute dollar amounts. The curves were drawn to connect as many of the plotted points as possible and yet achieve reasonably smooth curves. The use of this exhibit is discussed in the next part of this subsection.

#### **Explanation of Table 29**

Table 29 provides a means whereby the current distribution of renter households by size of household can be estimated. Since there is a large concentration of lower income 1-person households reflecting a high proportion of elderly as well as a relatively

high incidence of low incomes among large families, the renter household distribution of families able to afford new private rental housing is different from those who cannot afford new private housing. Instructions for completing Table 29 are as follows:

Columns (1), (2) and (3) — The distribution of renter households by number of persons in the household is shown in the HC (2) metropolitan housing series cited in the appendix. The figures in Column (3) are a percentage distribution of the figures in Column (2).

TABLE 29.—Current Estimated Distribution	of Renter Households by Family Size
in Private Market and Directly Assist	ed Market in Binghamton SMSA

Number of Persons in	Distril as of 1960 (	ution the Census	Current	Private Market Without Direct Assistance			As	Directly sisted Mark	et
Units (1)	Number (2)	Percent (3)	Estimate (4)	Percent (5)	Number (6)	Percent Dist. (7)	Percent	Number	Percent Dist.
1 2 3 4 5 6 or more Total.	4,588 6,415 4,561 3,333 1,864 1,576 22,337	20.5 28.7 20.4 15.0 8.3 7.1	4,663 6,529 4,641 3,412 1,888 1,615	21 55 59 59 61 43	979 3,591 2,738 2,013 1,152 694	9 32 25 18 10 6	79 45 41 41 39 57	3,684 2,938 1,903 1,399 736 921	32 26 16 12 6 8
	22,337	100.0	22,748	49	11,167	100	51	11,581	100

mate of the renter-occupied housing supply is 22,748 units. It is assumed that the current distribution of renter households by number of persons in the household will be the same as in the 1960 Census. Accordingly, the percentage distribution in Column (3) is applied to the current estimated total number of renter households, 22,748, to obtain a current absolute distribution. It is true that in-migration or out-migration or changes in the age distribution of the population since the last Census could change the percentage distribution that existed as of the last Census. Such change, however, is

Column (4) - Table 14 in Section VI: Hous-

ing Inventory shows that the current esti-

difficult to determine, and any percentage shift is likely to be gradual.

Column (5) — Computation of the figures in Column (5) requires estimate of gross rent level by unit size at which new rental housing can be provided in the study locality without direct subsidy. It is usually desirable to establish a rent level based on rental housing financed at a market interest rate and the rent level that can be achieved by use of some form of assistance such as below market interest rates under the FHA Section 221 (d) (3) program and/or State assistance and local tax abatement. In the case of the Binghamton market, these minimum achievable monthly gross rents are illustratively estimated as follows:

	1–Person 0–Bedroom	2–Persons 1–Bedroom	3–4 Persons 2–Bedroom	5–Persons 3–Bedroom	6–or-more Persons 4–Bedroom
Below-market rate	\$90	\$95	\$100	\$105	\$115
Market rate	105	110	120	130	140

Taking a 2-bedroom unit, the lowest gross achievable rent which private enterprise could provide based on a below-market interest rate would be \$100. In Exhibit 9, a \$100 gross rent intersects the vertical axis at the 41st percentile, which means that 41 percent of the 3-4 person renter households could not afford a rent of \$100, and conversely 59 percent could afford a rent of \$100 or more. Thus, for a household of 3 or 4 persons, the percent in the private market in Column (5) would be 59 percent. The same technique is used to determine the proportion of other size families that would be in the private market.

Column (6) — To determine the number of renter households who could afford rents for new construction in the private market, the figures in Column (4) are multiplied by the percentages in Column (5).

Column (7) — This is a percentage distribution of Column (6).

Column (8) — The provision of new construction for households unable to afford new construction in the private market requires a more direct form of assistance such as rent supplements or low-rent housing constructed by local housing authorities. The percentages in Column (8) are the differences between 100 percent and the percent shown in Column (5), and show the percent of renter households that cannot afford new private housing without direct assistance.

Column (9) — This is the difference between Column (4) and Column (6).

Column (10) — This is percentage distribution of Column (9).

## Explanation of Table 30

In estimating the demand for rental housing it is necessary to not only estimate the demand by various rent ranges, but also by unit size. Table 30 illustrates a means whereby the unit size requirements for private rental housing without direct assistance can be determined. The allocation of various size households to different bedroom sizes is based on not only what is desirable, but also what is likely to occur in a free market situation. Where occupancy standards are not established or enforced, it is probable, for example, that there will be some efficiency units occupied by 2 persons and some 1-bedroom units occupied by 3 persons, even though these families should be in larger size units. Instructions for the completion of Table 30 are as follows:

(1) The distribution of the number of renter households by various unit sizes was obtained from Column (6) of Table 29. 

 TABLE 30.—Determination of Unit Size Requirements for Private Rental Housing

 Without Direct Assistance in Binghamton, New York, SMSA

		Number of Bedrooms Required							
Persons in Renter Units	Total	0-Bedroom	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom			
1 2 3 4 5 5 6 or-more	979 3,591 2,738 2,013 1,152 694	979 98 xx xx xx xx xx	xx 3,493 274 xx xx xx xx	xx xx 2,464 1,208 xx xx xx	xx xx 805 1,152 xx	xx xx xx xx xx 694			
Total Percent	11,167 100	1,077 10	3,767 34	3,672 33	1,957 17	694 6			

(2) All 1-person households should be allocated to 0-bedroom units.

## Explanation of Table 31

- (3) The allocation of the 2-person house-holds assumes that some of these house-holds will occupy 0-bedroom units. It is assumed that approximately 10 percent of the efficiency units would be occupied by 2 persons. Thus, the 979 1-person households are multiplied by 10 percent to determine the number of 2-person households that would occupy efficiency units. The remainder would be allocated to 1-bedroom units.
- (4) It is assumed that approximately 10 percent of the 3-person households would occupy 1-bedroom units, and 90 percent would be in 2-bedroom units.
- (5) It is assumed that 60 percent of the 4person households would be in 2bedroom units.
- (6) All 5-person households are allocated to 3-bedroom units.
- (7) All 6-or-more person households are allocated to 4-bedroom units.

market by unit size is very similar to the instructions for the completion of Table 30. Through conversion and rehabilitation activities existing housing, which is provided by the private housing sector for lower and modest income families, is likely to be in the smaller size units. In view of this and the lower level of mobility among the elderly, who generally require smaller size units, housing planned for lower and modest income families, perhaps, should be skewed to the larger size units to a greater degree than as shown in Table 31. This qualification could be incorporated in the conclusion of a market analysis or it could be achieved by discounting the number of households shown in Table 31 for the smaller size units. Instructions for the completion of Table 31 (without discounting the number of smaller size households) are as follows:

The method for estimating the assisted

TABLE 31.—Determi	nation of Unit Size Requirements for Directly-Assisted	
Doméni	Hawain Brit Brite Jon Directly Hastated	
nemal	nousing in Binghamton New York CMCA	
	TOTE SMSA	

		Number of Bedrooms Required							
Persons in Renter Units  1	Total 3,684 2,938 1,903 1,399 736 921 11,581 100	0-Bedroom 3,684 xx xx xx xx xx xx 3,684 32	1-Bedroom xx 2,938 190 xx xx xx 3,128 27	2-Bedroom xx xx 1,713 839 xx xx 2,552 22	3-Bedroom xx xx 560 736 xx 1,296	4-Bedroom xx xx xx xx y21 921 8			

TABLE 32.—E	Estimated	l Rent D	istributic	on by Ui	rit Size f	or Bingl	namton, i	New Yoı	rk, SMSA	1		
		Percent Distribution										
Rent Range	1-Person 0-Bedroom		2–Persons 1–Bedroom		3–4 Persons 2–Bcdroom		5-Persons 3-Bedroom		6-or-more Persons 4-Bedroom			
	Cumu- lative	By Class	Cumu- lative	By Class	Cumu- lative	By Class	Cumu- lative	By Class	Cumu- lative	By Class		
Under \$30 \$30-\$39	30 35	30 5	} 10	10	5	5	1	1	2	2		
\$40-\$49	42	7	13	3	7	2	2	1	5			
\$50-\$59	51	9	18	5	10	3	5	3	9	4		
\$60-\$69	61	10	24	6	16	6	9	4	14	5		
\$10-\$19	71	10	32	8	23	7	15	6	22	8		
800 800	79	8	40	8	32	9	23	8	31	9		
\$100-\$100	80	0	50	10	41	9	33	10	40	9		
\$110-\$119	09	4 2	60	10	53	12	45	12	51	11		
\$120-\$129	94	0 9	09	9	66	13	58	13	64	13		
\$130-\$139	95	1	19 97	10	80	14	70	12	76	12		
\$140-\$149	96	1	02	0	88	8	80	10	85	9		
\$150-\$159	97	1	95	3	92	4	86	6	89	4		
\$160-\$169	98	ī	96	1	96	2	90	4	92	3		
\$170-\$179	1		1 97	i	97	4	92	2	94	2		
\$180-\$199	100	2	\$ 99	ĩ	98	î	96	$\frac{2}{2}$	96	1		

1

100

100

- The distribution of the number of renter households by various unit sizes was obtained from Column (9) in Table 29.
- (2) All 1-person households should be allocated to 0-bedroom units.

\$200 or more.....

- (3) All 2-person households should be allocated to 1-bedroom units. In the private market, it was assumed that 10 percent of the efficiency units would be occupied by 2-person households. In the assisted market, new efficiency units are likely to be smaller in size than in the private market, and occupancy is likely to be more rigidly controlled by local housing authorities or nonprofit corporations. Therefore, no 2-person households were allocated to efficiency units. The high proportion of units in the assisted market in the efficiency and 1-bedroom unit sizes is due to a high incidence of elderly households with low incomes.
- (4) It is assumed that approximately 10 percent of the 3-person households would occupy 1-bedroom units, and 90 percent would be in 2-bedroom units.
- (5) It is assumed that 60 percent of the 4-person households would be in 2bedroom units.

(6) All 5-person households are allocated to 3-bedroom units.

100

100

(7) All 6-or-more person households are allocated to 4-bedroom units.

#### **Explanation of Table 32**

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Table 32 shows rent paying ability by unit sizes and by rent ranges. Rent paying ability for 2-bedroom units was derived from Table 28 and Exhibit 9. The cumulative percentages for various rent levels shown for 2bedroom units was read from Exhibit 9 For example at \$90, 32 percent of the households had a rent paying ability of less than \$90. At \$100, 41 percent of the households had a rent paying ability of less than \$100. To determine the proportion of households that could pay between \$90 and \$100 rent, the cumulative percentile, 32, is subtracted from cumulative percentile, 41, to determine that 9 percent of the 3-4 person households have a rent paying ability within this range.

Comparable type data for other unit sizes can be developed by using the technique in Table 28 for other size families and plotting the resulting estimated monthly gross rent by deciles in Exhibit 9A. The data in Exhibit 9A can, in turn, be used to structure the distributions shown in Table 32.

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## Allocation of Rental Housing Requirements Between Directly Assisted and Unassisted Market

In the development of Table 29, estimates were made of the lowest achievable gross rents for rental housing financed at market rates as well as for units receiving some indirect form of assistance such as below market interest rates. Table 29 indicates that 49 percent of the rental demand would fall within the category of the private market without direct assistance while 51 percent would be in the directly assisted market. As in the case of the sales market, however, a process of filtration occurs in the rental housing market." That is, demand for new rental construction will be derived, in part, from households residing in older rental units, which often have a lower rent than new rental construction. The older will, in turn, be occupied by other households, probably of lower income on the average than the income of the families which vacated such units, since these latter families will usually have had increases in income to enable them to afford new rental housing. Thus, to some degree, rental housing is made available to families of low and moderate income through a process of filtration.

The housing needs of lower and moderate income families, however, cannot be met entirely through the process of filtration. The units in many older, especially wellmaintained and well-located rental units, may still be able to command substantial rent levels and thus not become available to lower and moderate income households. Also, a significant amount of the rental housing supply which is within the means of low and moderate income families is lost through demolition and other means. During the three-year period, 1957-59, the national housing inventory shows that nearly 400,000 renter-occupied units and nearly 60,000 vacant rental units inside metropolitan areas were lost through demolition and other means. Of the occupied units, 57 percent were in substandard condition and 43 percent were in standard condition. Of the occupied rental units lost through demolition and other means, the gross rent for 31 percent of the units was under \$40 and under \$60 for 65 percent of the units. Evidence available indicates that demolition activity is continuing at relatively high levels during the 1960's.

19 Grigsby, op. cit. (Footnote 17, Section XII)

The incidence of demolition activity is greater among renter-occupied units than among owner-occupied units. Sixty-two percent of the occupied units lost through demolition and other means in the 1957-59 period inside metropolitan areas were renteroccupied units. It should also be noted that although 41 percent of the occupied units inside metropolitan areas in 1960 were renter occupied, for households with incomes of less than \$4,000, the ratio of renter occupancy was 58 percent and only 33 percent above this income level.

Thus, if an adequate supply of housing is to be provided for all income levels, it will be necessary to expand the supply of housing for families of low and moderate income. The proportion of the estimated additional rental housing requirements made in the market forecast which is allocated to the directly assisted market will depend in part on the amount of demolition activity relative to increases in the number of households. In a rapidly growing area, demolition activity is apt to be relatively small in relation to additional households. Thus most of the rental demand in these areas would be allocated to the private market. In slower growing areas, the demolition activity may be a more important factor relative to the net increase in households. In such cases as the latter, there should be more emphasis on providing housing for low- and moderate-income families. In most metropolitan housing market areas the bulk of the new rental housing construction will be provided through the private sector without direct governmental assistance.

In the Binghamton housing market area, it is assumed that 70 percent of the rental housing requirements should be allocated to the private sector without direct governmental assistance and the remaining 30 percent would require direct governmental assitance. As might be deduced from the foregoing text there is no formula for making an allocation of units between that part of the market requiring direct governmental assistance and that not requiring direct assistance. The proportional allocation is a matter of judgment on the part of the analyst. In making such a judgment the analyst should take into consideration such factors as (1) the volume of the past and prospective displacement and demolition activity, (2) the amount of substandard and other poor quality housing in the housing market

TABLE 33.—Bedroom Distribution in Private Market and Directly Assisted Market, Binghamton, New York, SMSA

Redman Sin	Private	Directly Assisted Market		
Betroom Size	Percent	Number	Percent	Number
	Distribution	of	Distribution	of
	Table 30	Units	Table 31	Units
0	10	31	32	43
1	34	107	27	36
2	33	104	22	29
3	17	53	11	15
4	6	19	8	11
Total	100	314	100	134

areas, (3) the amount of standard existing housing which becomes available through filtration to lower and modest income families, (4) the amount of housing which has been provided lower and modest income families through new construction and rehabilitation, and (5) the marketing experience of housing programs directed to meeting the market for families of low and modest incomes.

Thus, based on the aforementioned allocation for the Binghamton housing market area, the estimated additional rental housing requirements of 448 units over the next 3 years, as indicated in Table 22, is 70 percent or 314 units to the private sector and 30 percent or 134 units to the directly assisted sector. The additional housing requirement indicated in Table 22 is based on projected replacement demand and new household formations after adjustment for vacancies. It does not reflect backlog needs resulting from unmet housing needs in the past. It is therefore quite possible that the need for directly assisted housing over the next three years could exceed the 134 units indicated for this part of the market. An additional allocation of units to the directly assisted market would mean an acceleration of replacement of the existing housing stock and any such allocation would be in addition to the rental housing requirements of 448 units for the assisted and unassisted markets. A significant proportion of the programming for public housing and other similar type programs is based on replacing existing substandard housing (generally defined as sound or deteriorating units which lack some or all plumbing facilities and all dilapidated units).

## Explanation of Table 33

In Tables 30 and 31 in this section the percentage distribution by unit size was derived for the private market without direct assistance and the directly assisted market. Subsequently it was determined that the estimated rental housing requirements for the next three years would be 448 units with 314 units allocated to the private market and 134 to the directly assisted market. Using the percentage distribution derived in Tables 30 and 31, the absolute bedroom distribution was developed for each of these markets in Table 33.

TABLE 34.—Distribution of Demand for 2-Bedroom Rental Units by Rent Ranges in the Private Market Without Direct Assistance for the Binghamton, New York, SMSA

	Perce	Percent Distribution						
Rent Range	By Class	Cumu- lative	Based on 100%	of Units Cumu- lative				
(1)	(2)	(3)	(4)	(5)				
\$100-\$104 \$105-\$109 \$110-\$114 \$115-\$119 \$120-\$129 \$130-\$139 \$140-\$149 \$150-\$159 \$160-\$169 \$170-\$179 \$180-\$199 \$200 or more	6 6 7 14 8 4 2 2 1 1 2	59 53 47 41 34 20 12 8 6 4 3 2	100 90 80 70 58 34 20 14 10 7 5 3	104 94 83 73 60 35 21 15 10 7 5 3				

## **Explanation of Table 34**

Column (1) — In the explanation of Table 29, it was determined that the lowest achievable gross rent for 2-bedroom units in the

# TABLE 35.—Distribution of Total Demand for New Rental Units by Number of Bedrooms by Rent Ranges in the Private Market Without Direct Assistance for Binghamton, New York SMSA for Forecast Period January 1, 1964 - January 1, 1967

	Number of Units					
Rent Range	0–Bedroom	1–Bedroom	2-Bedroom	3-Bedroom	4-Bedroom-or-mor	
\$90 or more	31 27 22 19 16 15 12 9 7 6 4 3	107 97 88 76 66 59 39 24 14 7 6 4 2	104 94 83 73 60 35 21 15 10 7 5 3	53 48 42 37 26 17 12 8 7 5 4	18 15 10 6 5 3 3 2 2	A B

Binghamton area involving some assistance such as below market interest rates was \$100 and for \$120 based on a market rate without assistance. Accordingly the lowest rent shown in Column (1) of Table 34 for 2-bedroom units is \$100.

Column (2) — The percentage distribution shown by class for 2-bedroom units at \$100 and above in Table 32 is repeated in Column (2) of Table 34. Since the minimum achievable rent is estimated at \$105 for 3bedroom units and \$115 for 4-bedroom units, the rent ranges in the lower part of the demand schedule is in \$5 intervals. Thus the 13 percent figure shown in Table 32 for the \$110-119 rent range is shown in Table 34 as 6 percent in the \$110-114 rent range and 7 percent in the \$115-119 rent range. If there appeared to be overbuilding or significant unmet demand in any price range, the percentages should be adjusted upward or downward to reflect this.

Column (3) — The figures in Column (2) are shown cumulatively starting with the high rent range of \$200 or more and working downward.

Column (4) — Column (3) shows that only 59 percent of the preliminary demand distribution would be for rents of \$100 or more. To determine the demand distribution by rent ranges for 2-bedroom units in the private market, the percentages in Column (3) must be recomputed to a 100 percent base. Thus, 59 percent in Column (3) is equal to 100 percent. Fifty-three percent is divided by the base of 59 percent to obtain the 90 percent figure shown in Column (4). Thus, 90 percent of the 2-bedroom units in the private market can rent for \$105 or more, 80 percent for \$110 or more, etc.

Column (5) — Table 33 shows that there is an absolute demand for 104 2-bedroom units in the private market. Thus, there is a preliminary demand for 104 2-bedroom units renting for \$100 or more, 94 units renting at \$105 or more (104 units x 90 percent in Column 4), 83 units renting for \$110 or more (104 units x 80 in Column 4) etc.

The same procedure as the foregoing is repeated for 0-, 1-, 3-, and 4-bedroom units. The resulting demand schedule using this method is shown in Table 35.

The demand in the "A" part of the demand schedule above the line requires some form of indirect assistance such as tax abatement or a below market interest rate in order to achieve these rent levels. The demand in "B" part of the demand schedule below the line would be the demand for rental housing, which private enterprise could produce at market interest rates with no tax abatement.

The rent schedule shown in Table 36 is derived by the same method as shown in Table 34, using the data in Table 32. A minimum rent of \$30 per month was assumed since even minimum rents in public

## TABLE 36.—Distribution of Housing Requirements by Number of Bedrooms and Rent Ranges for Rental Units Requiring Direct Assistance for Binghamton, New York SMSA for Forecast Period January 1, 1964 - January 1, 1967

Rent Bange	Number of Units 1					
	0-Bedroom	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom- or-more	
\$30 or more	43 24 20 15 10 4 xx xx xx xx	36 28 26 22 17 10 4 xx xx	29 26 24 22 18 13 6 3 xx	15 14 14 13 12 9 6 4 2	11 10 10 9 8 7 5 4 3	
\$105 or more	xx xx	XX XX	xx xx	xx xx	2 1	

Area marked by "XX" falls within the private market not requiring direct governmental assistance.

housing are seldom below this level. That part of the market which would require a rent of less than \$30 was placed in the \$30-39 rent range.

Since the size of potential annual rental demand in the Binghamton housing market area was relatively small, the demand schedules show the total rental housing demand for the three-year forecast period. In housing market areas where the annual rental demand would be significantly larger, the demand schedule could be expressed annually.

## Housing Requirements and Demand. Estimates for Small Housing Market Areas

The technique for estimating the housing requirements by total and by tenure for small housing market areas, including metropolitan areas of less than 100,000 population and areas outside of metropolitan areas, is the same as shown in this section. This also applies to estimating the demand for sales housing by price ranges, since income data for all families are used in this technique.

In estimating the demand and need for rental housing, the technique discussed in this section requires an income distribution of renter households by family size. For metropolitan areas of less than 100,000 population and all other small housing market areas, however, there are no separately published income data for renters and owners, which would facilitate development of need and demand estimates by rent ranges. In view of the limitations imposed due to the lack of income data, it becomes more important for the analyst to collect as much data as possible about the rental market. The analyst, of course, will have developed an estimate of housing requirements for renters. Estimates of demand and need by rent ranges will be more difficult to develop, and specific techniques are not suggested here.

It should be pointed out, however, that the market for rental housing in these smaller housing market areas is likely to be less complex than in larger housing market areas, which will facilitate a more complete review and analysis of the rental housing market. In general demand for rental housing which does not require direct governmental assistance usually should be concentrated in the lowest level at which housing can be provided without direct governmental assistance, inasmuch as there is seldom any significant demand at higher rent levels. Even at the minimum rent level at which rental housing can be provided without direct governmental assistance, the demand is likely to be quite limited, mostly for smaller size units. If there is a specific proposal to develop housing requiring direct governmental assistance, help in estimating the market will usually be available from the government agency providing the financial assistance. Having completed all the other requirements involved in making a housing market analysis, the analyst will usually be in a position to arrive at some reasonable judgments not only about the number of rental units required, but also the unit size and rent distribution. His data and analysis will also be particularly useful to those planning rental housing programs.

## SECTION XIII: ESTIMATING RELOCATION RESOURCES

IN many housing markets governmental programs such as urban renewal, highway construction, and code enforcement impose upon affected localities the responsibility for effectively relocating displaced families into standard housing accommodations. The difficulties encountered under these relocation programs reside, principally, in matching the relocation units with displaced family size and income characteristics.

Section IV of this manual considered such governmental programs from the standpoint of reductions in or net losses to the housing inventory. These displacement activities, however, can also be viewed as constituting a submarket within the over-all demand estimate-a submarket, which frequently demands the priority considerations of local officials because of statutory and administrative requirements. Approval of urban renewal and public projects, for example, requires a finding by the Secretary of the Department of Housing and Urban Development that a satisfactory relocation plan for that project has been formulated. The Workable Program for Community Improvement, under Element VI, requires each locality to develop suitable programs and administrative organizations to accommodate displacement of families from the entire range of governmental programs. (See Program Guide No. 6, "Workable Program for Community Improvement," available from Regional Offices of the Department of Housing and Urban Development.)

Estimating the amount and characteristics of relocation resources is not easily or precisely accomplished. Nevertheless, the analyst can obtain and develop certain data which will enable him to develop reasonable conclusions regarding the adequacy of these resources to accommodate anticipated displacements. The analyst is concerned with a dynamic situation, in which displacees will compete with other families for available housing resources, both existing and new. The nature of the housing market may change sharply from year to year. For example, initially heavy displacement may be accommodated within an existing surplus of vacancies. If the rate and volume of displacement continues unabated, however, and if there is no corresponding acceleration in construction of additional housing resources to offset these inventory losses, relocation will become increasingly difficult to carry out during the subsequent years.

Generally, displaced families will maintain the same tenure identification which they had prior to displacement. Shifts in tenure, of course, will occur, but these renter-toowner and owner-to-renter shifts will tend to offset each other.

TABLE 37.—Relocation Housing of FamiliesDisplaced from Urban Renewal Projects in132 Cities During June, July, August 1964

	Percentage Distribution				
Relocation Housing	Total	White	Nonwhite		
Total	100	100	100		
Owner	37	-46	32		
Renter	63	54	68		
Total	100	100	100		
Standard	94	97	91		
Substandard	6	3	9		
Total	100	100	100		
Public housing	13	7	18		
Private housing	87	93	82		

Source: Housing and Home Finance Agency, The Housing of Relocated Families: Summary of a Bureau of the Census Survey of Families Recently Displaced from Urban Renewal Sites, March 1965, Washington, D. C.

Table 37 sets forth a breakdown of how families displaced by urban renewal projects during a selected period have been relocated. Sixty-three percent of the families were relocated into rental accommodations, both private and public, and this corresponds

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closely to their pre-displacement tenure, in turn, reflecting the higher rate of tenant occupancy in blighted areas. Relocation experience in urban renewal projects has revealed that owners tend to have higher family incomes than tenants, permitting their easier relocation, whether into alternative owneroccupied housing or into renter units. This urban renewal experience has also revealed that most displacees tend to seek units near the area from which they were displaced, and that these areas frequently have socioeconomic, racial and ethnic characteristics similar to those of their previous neighborhoods.

## **Relocation Housing Resources**

The previously described market analysis approach will have considered the housing inventory adequacy of the market area. This adequacy will be evidenced by comparing the total number of households with the number of housing units, amount of doubling up, and extent of overcrowding. This, in turn, will help shape the analyst's determination regarding the adequacy of locality housing resources to accommodate families displaced by governmental actions.

Relocation resources for displacees stem from several sources:

- (1) Existing available vacancies.
- (2) Turnover in the existing housing supply. Consideration of this resource, however, requires careful judgment. In an extremely tight housing market, not only will the rate of turnover be less, but accommodation of a displacee in a standard turnover unit may frequently result in subsequent necessity of a nondisplacee to accept substandard housing. This turnover resource is meaningful only to the extent that the total housing supply increases at a rate fast enough to meet area household growth and/or to the extent that net outmigration reduces local net demand for housing resources. These same general considerations would apply to both the private and public housing sectors of the market.
- (3) New and additional housing construction which would include resources built under private, public, or "special" programs which reduce housing costs via such measures as below market interest rates, grants, tax abatements, and site cost writedowns.

(4) Net migration out of the housing market area which reduces the number of households requiring housing accommodations.

## 1. Existing Available Vacancies

Existing vacancies may be able to absorb initial displacement. Many housing markets have currently reached a condition of supplydemand balance or even mild surplus. Under pressure of displacement, a "normal" five percent vacancy rate can be reduced to two or three percent. This will, of course, involve utilization of units which, under normal circumstances, might have remained vacant and eventually have been removed from the housing supply. This vacancy resource, of course, is a limited one. In the absence of offsetting new construction, this resource can be quickly consumed.

Section V of this guide discussed techniques for estimating rents of vacant units. and the importance of assembling current data for making these estimates warrants repeated stress, also with respect to sales housing vacancies.

In considering vacancies, the analyst should not ignore resources at price levels which are beyond the means of the displacee families. Although imperfect in its operation, the "filter down" process will allow many of these resources to be rented or sold to non-displacees, in turn, creating vacancies in the lower-priced inventory. The imperfections of the filter down process are known to students of housing, and the limitations of this mechanism should be recognized. These imperfections, to mention a few, include awareness that many of the filterdown units may have become substandard, are of the wrong size, or, in many cases, will not be accessible to nonwhite displacees or to displacees with large-size families.

## 2. Turnover in Existing Housing

While some displaced families will move into new rental and sales construction, most will move into existing housing, most of which, in turn, will be privately owned. These units will be obtained through the turnover process.

American urban culture is characterized by a high rate of residential mobility. The American milieu encourages residential mobility to accommodate changes in family size, changes in family income, and status aspirations. This turnover is enabled via the introduction of new construction generally

TABLE 38.—Computation of Annual Turnover for Binghamton Standard Metropolitan Area and Components for Year Ending April 1, 19601

Category	SMSA	Urbanized Area	Binghamton City
<ol> <li>Ounce of complete of http://www.complete.com/com/complete.com/complete.com/complete.com/complete.com/complete</li></ol>	41,046 3,571 2,857 7.0 22,337	28,872 2,081 1,665 5.8 19,969	11,547 739 591 5.1
<ol> <li>Annual Turnover 1.</li> <li>Turnover Ratio (*7 divided by *5).</li> </ol>	7,644 6,115 27.4	6,695 5,356 26.8	3,858 3,086 25.0

Sources of Turnover Data (Year Moved Into Unit) in the 1960 Census.

 Area 1. SMSA's, Constitutent Counties, Places of 50,000	1960 Census of Housing Volume I-HC(1) Series States and Small Areas
<ol> <li>Places of 25,000 to 50,000</li></ol>	<ul> <li>Table 15.</li> <li>Table 21.</li> <li>Table 24.</li> <li>Table 26.</li> <li>Table 29.</li> <li>Table 10.</li> </ul>

Data are available for a total of five quarters, 1959 through March, 1960. Annual turnover is determined by multiplying

b Data are available for a total of nine quarters, 1958 through March, 1960. Annual turnover is determined by multiplying the nine quarter figure by 44%.

• Data are available for a total of five quarters, 1959 through March, 1960. Annual turnover is determined by multiplying the most appropriate State five quarter figure by 80%. After the State turnover ratio is computed, this is applied to the number of nonwhite units in the locality to determine the current turnover ratio. For SMSA's having 25,000 or more nonwhite occupied units in 1960, turnover data are available for nonwhites. This is to be found in the 1960 Census of Housing. Volume II—HC(2) Series, Metropolitan Housing, Tables A-11 and A-12. Separate reports are available for each such metropolitan area. See Appendix. <sup>2</sup> For counties outside SMSA's and places of 2,500 to 10,000 population, the multiplication factor is .44 instead of .80.

serving households in the upper half of the income distribution. When these families move into new housing, they free the units which they previously occupied; these in turn, are occupied by other families, who, in turn, free other units, etc.

The rate of turnover is directly affected by the magnitudes and marketing of new construction and also by the rate and volume of vacancies. Where new construction additions do not match net additional housing requirements generated by new family formations and net in-migration, the resultant shortages of housing will inhibit residential mobility. Also, if the vacancy rate is too low to enable ready choice of alternative accommodations by neighborhoods, size and price ranges, turnover will be inhibited.

Table 38 illustrates how with use of decennial housing census data, to compute an annual turnover ratio (based on year moved into unit) for both owner occupied and for renter occupied units. The use of these rates during intercensal years is considered satisfactory, since turnover and mobility characteristics do not tend to change radically during short-run priods. (It should be noted,

however, that a number of units into which families move are newly constructed units. and in rapid growth areas this may constitute a substantial proportion of the turnover. For a more accurate estimate of turnover in existing units in such areas, the analyst may wish to deduct the amount of new construction).

The turnover rate would ordinarily be calculated for the area in which displacee families would be expected to relocate. Since displacee families have tended to relocate in neighborhoods which are near their previous places of residence, turnover would ordinarily be calculated for the political jurisdiction in which the displacement occurs. While this may contradict the metropolitan or urban area approach to the housing market. this procedure recognizes the realities of relocation experiences. It is generally known, for example, that ready access to suburban areas has often been denied to nonwhite population groups even where discrimination is prohibited by law, and consideration of these suburban resources for relocation of Negro families would yield distorted conclusions.

For the illustrative example under consideration, the analyst would restrict his turnover estimates to the City of Binghamton. The data obtained in Section VI indicated that there were only 11,000 renter occupied units in the central city, and application of the 25 percent turnover rate obtained from the foregoing table would yield an estimated rental turnover rate of approximately 2,750 units. Correspondingly, a current estimate of 12,500 owner occupied units in the central city would yield an annual turnover yield of 625 units, on the basis of a calculated 5 percent rate.

It should be noted that the Census data do not permit differentiation between private and public housing turnover. Ordinarily, public housing resources constitute a very small proportion of the total rental inventory, and the use of the unrefined figure would not jeopardize conclusions. If a substantial proportion of the rental housing inventory, however, is represented by public resources, the analyst should carry out separate calculations for both groups of rental housing, wherein he would obtain from the local housing authority data with respect to total resources and annual turnover in the low-rent housing inventory.

It will often be necessary to evaluate the impact of displacement as between white and nonwhite housing inventories. This recognizes that nonwhite families have usually been denied access to large portions of the locality's housing inventory, and that such access has been generally obtained only via a slow-paced transitional process. In the case of Binghamton the total number of nonwhite occupied units is very small, and even modestly-sized programs of governmental action displacement affecting nonwhites could raise very serious relocation feasibility problems and would require the local government's special attention in such areas as opening the locality's housing supply to all without racial restrictions, or increasing the rate of transitional processes and constructing new housing resources which would be available to nonwhite occupants.

From foregoing Table 38, it is noted that nonwhite turnover data are available only on a state-wide basis of reporting; breakdown is provided for inside and outside SMSA's, all urban places and all rural nonfarm places. In the case of Binghamton, the data in Volume 1, Table 10, 1960 Census of Housing would be utilized for "inside SMSA's." These data indicate that the annual turnover rate in New York State for nonwhite populations inside SMSA's is 10 percent in owner occupied units and 18 percent in renter occupied units. These rates, in turn, would be applied against the currently estimated nonwhite housing inventory.

Because of the paucity of new construction for nonwhite or integrated occupancy. the lagging pace of transitional acquisitions, as well as the fact that most urban centers have experienced net gains in nonwhite inmigration, the turnover rate in nonwhite resources is generally lower than that for the population as a whole. Therefore, in those cases where state-wide data reveal a higher nonwhite rate than experienced by the entire housing universe in the locality. the latter's lower rate should be used for nonwhites. Otherwise, the bias caused by turnover experience in large urban centers with substantial nonwhite housing inventories may distort the picture. For example, the large-scale transitional activities in the New York City SMSA may have contributed to a 10 percent nonwhite homeowners turnover rate for the entire state. It is doubtful, however, whether this rate would apply in the City of Binghamton where the overall homeowner turnover rate amounted to only 5 percent.

After determining the magnitudes of rental and sales housing to be yielded by turnover, the analyst would relate this to the estimated amount of governmental action displacement. From Section XII of this manual it is recalled that the estimated volume of governmental action displacement would amount to only 150 families per year. Aside from considerations such as income, race and family size, this volume of displacement amounts to only 4 percent, or one twenty-fifth of the annual turnover yield of 3,375 units. This would not be considered an excessive ratio.

On the other hand, if all or most of the 150 displacees were nonwhite, the displacement impact would be substantial, inasmuch as the 1960 Census enumerated less than 350 nonwhite households in the entire Binghamton SMSA.

The feasibility of relocation cannot be viewed entirely from a passive point of view. An aggressive and dynamic relocation agency, through liaison with private rental agencies and landlords, can positively channel turnover units to displacees and may frequently be successful in opening new transitional areas, as well as stimulating new housing production for these families. There are recognized limits, however, to the positive programs of these agents, and as a general rule, the analyst can assume that, in the case of nonwhite displacement, displacement up to 5 percent of nonwhite turnover can be accommodated. In the case of white displacees, for whom there would not be a color bar to over-all inventory accessibility, the rate might be higher.

Experience has shown that a significant proportion of governmental action displacees will have incomes low enough to qualify them for admission to low rent public housing. These displacees, in most localities, will enjoy preference for admission to low-rent public housing. Turnover data are kept accurately and in detailed fashion by local housing authorities, not only in terms of number of move-outs, but also in terms of unit size availability. The latter consideration is especially important, since many of the low-rent eligibles may require larger-size units.

## 3. New Construction

The volume, and to a lesser extent, the prices of new rental and sales construction in the market area were developed in Sections III, X and XII of this guide. Included in this inventory would be private housing built and directed to lower middle income groups under programs which involve below market rates of interest, grants and tax abatement. Ordinarily, the amounts of housing built under such programs is so limited that the analyst would not encounter any difficulty in canvassing the sponsors or insuring agency (FHA) with respect to such details as unit sizes and rents. Again, caution should be exercised by the analyst in evaluating the availability of new housing construction to nonwhite displacees. Although the President's Executive Order forbids discrimination in sale of FHA or VA aided housing on the basis of race, local inertia within the housing industry as well as within the nonwhite community itself, may still operate to limit sale or rental of these resources to nonwhite households.

Local housing authorities can provide detailed information regarding the size and characteristics of low-rent housing resources to be constructed. The analyst, however, must be careful to evaluate this resource in terms of governmental action displacement timing. If the completion of public housing construction coincides with displacement actions, all or most of the new housing construction may be considered available for relocation. On the other hand, if one precedes the other, the low-rent housing will become available only as turnover—on a greatly reduced annual basis. Coordination of this timing is extremely difficult to achieve, but it should be the aim of local officials.

# 4. Migration Out of the Housing Market Area

Relocation experience has shown that only a very small proportion of the displacees move from the locality. In such cases, displacement probably triggered an earlierreached decision for out-migration which in turn, may have been incurred by excessive commutation to work, loss of employment, etc. In many cases, the migration will constitute a shift from one portion of the SMSA to another.

From a locality resources point of view, extensive net out-migration among nondisplacees will add to the supply of vacancies and, in turn, stimulate turnover. It is important, however, that the analyst look beyond mere out-migration figures, since an offsetting reduction in household size (increased numbers of one and two person elderly families and single person households) may keep the number of households near previous levels despite significant absolute losses in population.

# Matching Displacement Needs with Relocation Resources

Utilizing the data developed in Section IV as well as in other parts of this section, the analyst will have already begun the process of matching displacee needs with relocation resources. Although this is not a precise technique, the market information obtained by the analyst will assist him in reaching more reliable conclusions than he could have obtained otherwise.

Table 39 can be used as a guide in determining the rent paying and home purchasing ability of displacees. It is recognized that there will be great variations by individual families. For example, a higher income family may have numerous debt obligations which will limit the extent of its rent paying capacities, while a lower income family may set a high premium upon housing accommodations and be prepared to pay

TABLE 39Incon	nes of Familie	es to be Displa Home Purcha	sing Ability		Estimated Sales
Annual	Estimated Number	Monthly Gross Rent Paying	Estimated Rental Resources	Purchasing Ability	Housing Resources Available
Income	of Families	Ability (3)	Available (4)	(5)	(6)
(1)	(2)	\$30		None None	
Less than \$600		\$30		None	
\$600 to \$1,199		\$30		\$4,500 to \$5,999	
\$1,200 to \$1,799		\$30-\$40		\$6,000 to \$7,499	
\$1,800 to \$2,399		\$40-\$50		\$7,500 to \$8,499	
\$2,400 to \$2,999		\$50-\$60		\$9,000 to \$10,455	
\$3,000 to \$3,599		\$60-\$10		\$10,500 to \$11,500	
\$3,600 to \$4,199		\$70-\$80		\$12,000 to \$13,490	
\$4,200 to \$4,199		\$80-590		\$13,500 to \$14,555	
\$4,800 to \$5,399		\$90-\$100		\$15,000 and over	
\$5,400 to \$5,555		STOD OF MOLE			he Urban Benewal

d Related Rent Paying Ability and

Column (1)—Annual income classes are based on the monthly family income classes as required Administration. Administration. Column (3)—Rent paying ability is based on a 20 percent rent to income ratio. However, as indicated in Section XII, there are variations in rent paying ability for different income levels. Hence, the 20 percent rent to income ratio is not inflexible. No rents below \$30 were entered in column (3) since rents below this level are rarely available, even in public housing.

In public nousing. Column (5)—It is assumed that a family can pay for a home, which sells for about 2 and one-half times its annual income. This is only a rough guideline, since equity in an existing home, age of household head, financial obligations, different income levels, and other factors will enter into the determination of home purchasing ability. Unless sufficient assets are available, it is also assumed that no family with an income of less than \$1,800 per year can afford to buy a home that was in standard condition.

a high proportion of income for good housing, Generally, these will tend to balance each other out.

The number of families and individuals to be displaced should be distributed in Column (2) according to the income distribution shown in Column (1). This income distribution will have been obtained from project records, and extrapolations of these data, and from use of Census block statistics. In Columns (4) and (6) the estimated rental and sales housing resources that would be available to displaced families would be distributed by rent ranges and by sales price intervals. To the extent feasible and, if necessary, Columns (2), (4) and (6) could be be further refined by family size and racial identification.

The specific information with respect to relocation resources, i.e., turnover in existing private housing, new public housing construction, etc. would have been developed in the first part of this section. Through a matching process such as this, judgment can be derived regarding the adequacy of relocation resources.

If the matching process shows that relocation resources are not adequate at certain price and unit size ranges, the locality would

have to either stimulate production of new housing to meet these needs or reduce and/or reschedule displacement to meet these resource capabilities. In some cases, the analyst may conclude that large additional increments of public housing will be needed. He should recognize, however, that not all eligible families will apply for public housing. Although urban renewal experience has shown that approximately half of all displacees have qualified, in terms of income, for public housing, less than one-quarter of the white families and less than one-half of the nonwhite families have actually moved into these resources. While this low percentage may have been due in part to a lack of desire to move into public housing, a significant proportion no doubt has been due to the lack of availability of public housing at the time of displacement. Until 1965 unless new public housing was constructed and available at the time of displacement, the only public housing resource was those units which became available through turnover. Under the Housing and Urban Development Act of 1965, local housing authorities may now purchase and rehabilitate, if necessary, existing housing and they may also lease housing. This latter authority to lease units could be particularly

useful for the shorter term housing needs generated by displacement of households.

The Housing and Urban Development Act of 1965 also provided for a rent supplement program for low-income families, which is administered by the Federal Housing Administration. Housing under this program may be developed by private nonprofit organizations, limited dividend mortgagors or cooperative housing corporations.

Within Federally assisted urban renewal and code enforcement areas, rehabilitation grants and low interest rate rehabilitation loans are available to assist lower and modest income families in upgrading their housing. These programs are designed primarily to preclude displacement.

Avenues are also open for satisfying the relocation needs of families whose incomes are too high for admission to public housing or the rent supplement program. These include FHA Section 221(d) (3) rental housing (market rate and below-market rate programs) and Section 221(d) (2) sales housing. Both of these programs can be used for

purchase of new and existing housing, and the used housing inventory may be available at price ranges within the reach of many displacees. The locality, or its relocation agents, would plan to stimulate the use of these vehicles through liaison with locality builders, mortgagees and realtors, and in the case of 221(d) (3), may actually act as sponsor. Another vehicle suitable to answer relocation needs is the Department of Housing and Urban Development program of direct loans for elderly housing (Section 202), where extended amortization and below-market rates of interest yield rents which can serve lower middle income elderly.

As a final note, the analyst should remember that the estimates of housing needs in Section XII had taken into consideration sources of displacement in arriving at net additional household requirements. After a review of available relocation resources in this section, it may become necessary for the analyst to modify his demand estimates in the preceding Section XII.

## APPENDIX

Selected Data Source Material Available from the Federal Government

1. 1960 Census of Population

U.S. Census of Population: 1960, (Indicate State) Volume I, Characteristics of the Population Series PC(1)—\*A, Number of Inhabitants Series PC(1)—\*B, General Population Characteristics Series PC(1)—\*C, General Social and Economic Characteristics Series PC(1)—\*D, Detailed Characteristics (Generally not needed for this guide)

\*Insert the State number from Table 1 of this appendix; e.g., New York State would be Series PC(1)-34A, Number of Inhabitants.

Each chapter A, B, C and D has been issued as separate paperbound publications, which cost from \$.35 to \$3.25 each, depending on the chapter and the size of the State. The four chapters for each State are being combined and reissued in a buckrambound edition, which will be more expensive than the separate paperbound editions. Either is available from the Bureau of the Census, Washington, D.C. 20233.

2. 1960 Census of Housing

(a) U.S. Census of Housing: 1960, (Indicate State)

Volume 1, States and Small Areas Series HC(1)-\*.

\*Insert the State number from Table 1 of this appendix.

These are available from the Bureau of the Census, Washington 25, D.C., in paper bound edition ranging from \$.50 to \$1.50. These will be reissued in a buckram bound edition, with each edition covering four or five states.

(b) U.S. Census of Housing: 1960,

and State) Volume II, Metropolitan Housing, HC (2) Series.

This series is available for any Standard Metropolitan Statistical Area having a population of 100.000 or more in 1960. Separate paper bound editions for each area cost from \$.30 to \$.75.

(c) U.S. Census of Housing: 1960,
 <u>(Indicate city and State) Volume III, City Blocks, Series HC (3).</u>

This series is available for cities and other urban places having a population of 50,000 or more as the 1960 Census and a number of smaller localities which arranged for block statistics. Cost of paper bound editions range from \$.20 to \$3.00, with practically all issues costing less than \$1.50.

(d) U.S. Census of Housing: 1960, Special Reports for Local Housing Authorities, Series HC (S1).

This is a series of special tabulations on the number and characteristics of substandard housing in 139 localities contracted for by local housing authorities. Reports for each locality are \$.15.

(e) Censuses of Housing and Population: 1960, \_\_\_\_\_\_\_ (Indicate city and State) Census Tracts, Series PHC(1).

This series is available for 180 tracted areas in the United States and Puerto Rico, practically all of which are SMSA's. Prices range from \$.30 to \$8.25 with most reports costing less than \$3.00.

## 3. 1950 Census of Population

U.S. Census of Population: 1950,

(Indicate State) Volume II, Characteristics of the Population Series P—\*A, General Characteristics (Includes essentially the same data as PC(1)—A, B, C in the 1960 Census. Series P—\*B, Detailed Characteristics (Not needed for this guide)

•Insert the State number from Table 1; e.g., New York State would be Series P-32A, General Characteristics.

These reports were issued separately in paper bound editions and combined in buckram bound editions.

4, 1950 Census of Housing

U.S. Census of Housing: 1950,

\_\_\_\_\_ (Indicate State)

\*Insert the State number from Table 1 in this appendix.

NOTES

These were issued separately in paper bound editions and also in buckram bound editions, with each of the latter covering four or five states.

TABLE 1.—Census Parts for the United States, the 50 States, the District of Columbia, and Puerto Rico for the 1960 and 1950 Censuses

	Part Number Assigned to Each State		
State	1960 Census	1950 Census	
U.S. Summary	1	1	
Alabama	2	2	
Alaska	3	51	
Arizona	4	3	
Arkansas	5 C	4 5	
California	5	5	
Colorado.	6	7	
Delauran	0	é	
Detaware	10	0	
Florido	10	10	
Coorgin	11	11	
Howeii	13	52	
Idaho	14	12	
Illinois	15	13	
Indiana	16	14	
Iowa	17	15	
Kansas	18	16	
Kentucky	19	17	
Louisiana	20	18	
Maine	21	19	
Maryland	22	20	
Massachusetts	23	21	
Michigan	24	22	
Minnesota	25	23	
Mississippi	26	24	
Missouri	27	25	
Montana	28	26	
Neurado	29	27	
Nevaua	21	20	
New Jorsey	30	29	
New Mexico	33	31	
New York	34	32	
North Carolina	35	33	
North Dakota	36	34	
Ohio	37	35	
Oaklahoma	38	36	
Oregon	39	37	
Pennsylvania	40	38	
Rhode Island	41	39	
South Carolina	42	40	
South Dakota	43	41	
Tennessee	44	42	
I exas	45	43	
Vermont	40	44	
Virginia	4/	45	
Washington	70 10	40	
West Virginia	50	47	
Wisconsin	51	40	
Wyoming	52	50	
Puerto Rico	53	53	

## 5. 1960 Census of Population, Subject and Area Reports

In addition to national, state, and small area data, the Bureau of the Census has published a number of special subject and area reports based on 1960 Census data. These are as follows:

U.S. Census of Population, Volume II, Subject Reports

Series Number and Title	Price
DC(R) 1A Notivity and Parentage	\$1.00
FC(2)—IA, Mativity and Franch Surname	1.50
PC(2)—IB, Persons of Spanish Burname	1 76
PC(2)-1C, Nonwhite Population by Race	1.75
PC(2) = 1D. Puerto Ricans in the United	
States	.70
States	35
PC(2)—IE, Mother Tongue	1 50
PC(2)—2A, State of Birth	1.50
PC(2) = 2B. Mobility for State and State	
Economic Areas	3.00
DC(2) 2C Mobility for Metropolitan Areas	2.25
PC(2)-2C, Wobility for Metropolitic	2 75
PC(2) = 2D, Lifetime and Recent Migration.	2.10
PC(2)—3A, Women by Number of Children	<u> </u>
Ever Born	2.25
PC(2)-4A Families	2.75
DC(2) AB Persons by Family	
FC(2)—iD, Feisons by Funning	1 50
Characteristics	1.00
PC(2)-4C, Sources and Structure by	
Family Income	2.00
PC(2)-4D Age at First Marriage	1.25
DC(2) AF Marital Status	1.50
PC(2) 54 Coloral Equally and	1.00
PC(2)-SA, School Enrollment	1.20
PC(2)—5B, Educational Attainment	1.25
PC(2)—6A, Employment Status and Work	
Experience	1.75
PC(2) 6B Journey to Work	3 50
$DC(2) = C I_{abar} Parama$	1.50
PC(2)-6C, Labor Reserve	1.50
PC(2)—7A, Occupational Characteristics	3.50
PC(2)—7B, Occupation by Earnings and	
Education	2.00
PC(2)-7C Occupation by Industry	1.25
PC(2) 7D Characteristics of Topphone	56
PC(2)—ID, Characteristics of Teachers	.00
PC(2)—IE, Characteristics of Professional	
Workers	1.00
PC(2)—8A, Inmates of Institutions	2.00
PC(2)-8B. Income of the Elderly Population	1.50
PC(2)-8C Veterans	70
HC Concus of Depulation Malance Y	.10
U.S. Census of Population, Volume II	,
Selected Area Reports	
PC(3)—1A, State Economic Areas	\$2.75
PC(3)—1B, Size of Places	.65
PC(3)-1C Americans Overseas	1.95
PC(3)-ID Standard Matronalitan	1.20
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Statistical Areas	4.50
PC(3)—IE, Type of Place	3.75
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Series P-23: Technical Studios	
Series P-25' Population Estimate	
Series P_27. Form Dominates	
Series P. 29. Cardina Contraction	
Series F-20: Special Censuses	
Series P-60: Consumer Income	
Series P-65: Consumer Buying Intention	ns

## 7. Construction Reports, Building Permits, Housing Authorized in Permit-Issuing Places—Summary Statistics, Series C-42

U.S. Bureau of the Census, Washington, D.C. 20233; annual subscription in 1965, \$1.00. This is a monthly publication started in 1960 with an annual summary, which provides number of units and valuation of private housing units authorized by permits in structures containing 1-unit, 2 to 4 units and 5-ormore units as well as public contract awards. The data are available for the United States, census region and sub-regions, state and metropolitan areas. Although data are available for all metropolitan areas in the annual summary, the monthly data are available back to 1960 for the following 99 metropolitan areas except as footnoted.

1. Akron, Ohio\* 2. Albany-Schnectady-Troy, N.Y.\*\* 3. Albuquerque, New Mexico\*\* 4. Allentown-Bethlehem-Easton, Pa.-N.J.\*\* 5. Anaheim-Santa Ana-Garden Grove, Calif.\* 6. Ann Arbor, Mich.\*\* 7. Atlanta, Ga. 8. Austin, Tex.\*\* 9. Bakersfield, Calif.\*\* 10. Baltimore, Md. 11. Baton Rouge, La.\*\* 12. Birmingham, Ala, 13. Boston, Mass. 14. Bridgeport, Conn.\*\* 15. Buffalo, N.Y. 16. Charleston, S.C.\*\* 17. Charlotte, N.C.\*\* 18. Chattanooga, Tenn.-Ga.\*\* 19. Chicago, Ill. 20. Cincinnati, Ohio-Ky. 21. Cleveland, Ohio 22. Colorado Springs, Colo.\*\* 23. Columbus, Ga.\*\* 24. Columbus, Ohio 25. Dallas, Tex. 26. Dayton, Ohio 27. Denver, Colo. 28. Detroit, Mich. 29. El Paso, Tex.\*\* 30. Eugene, Oreg.\*\* 31. Flint, Mich.\*\* 32. Fort Lauderdale-Hollywood, Fla.\* 33. Fort Worth, Tex. 34. Fresno, Calif.\*\* 35. Gary-Hammond-East Chicago, Ind.\*\* 36. Grand Rapids, Mich.\*\* 37. Hartford, Conn.\* 38. Honolulu, Hawaii 39. Houston, Tex. 40. Huntsville, Ala.\*\* 41. Indianapolis, Ind. 42. Jacksonville, Fla. 43. Jersey City, N.J.\*\* 44. Kansas City, Mo.-Kans. 45. Knoxville, Tenn.\*\* 46. Lansing, Mich.\*\* 47. Las Vegas, Nev.\*

48. Lexington, Ky.\*\* 49. Little Rock-North Little Rock, Ark.\*\* 50. Los Angeles-Long Beach, Calif. 51. Louisville, Ky.-Ind. 52. Lubbock, Tex.\*\* 53. Madison, Wis.\*\* 54. Memphis, Tenn.-Ark. 55. Miami, Fla. 56. Milwaukee, Wis. 57. Minneapolis-St. Paul, Minn. 58. Nashville, Tenn.\* 59. New Haven, Conn.\*\* 60. New Orleans, La. 61. New York, N.Y. 62. Newark, N.J.\* 63. Newport News-Hampton, Va.\* 64. Norfolk-Portsmouth\* 65. Oklahoma City, Okla.\* 66. Omaha, Nebr.-Iowa\* 67. Orlando, Fla. 68. Paterson-Clifton-Passaic, N.J.\* 69. Philadelphia, Pa.-N.J. 70. Phoenix, Ariz. 71. Pittsburgh, Pa. 72. Portland, Oreg.-Wash.\* 73. Providence-Pawtucket-Warwick, R.I.-Mass.\* 74. Reno, Nev.\*\* 75. Richmond, Va.\*\* 76. Rochester, N.Y.\* 77. Sacramento, Calif. 78. St. Louis, Mo.-Ill. 79. Salt Lake City, Utah\* 80. San Antonio, Tex.<sup>1</sup> 81. San Bernardino-Riverside-Ontario, Calif. 82. San Diego, Calif. 83. San Francisco-Oakland, Calif. 84. San Jose, Calif. 85. Santa Barbara, Calif. 86. Seattle-Everett, Wash. 87. Springfield-Chicopee-Holvoke, Mass.-Conn.\*\* 88. Stockton, Calif.\*\* 89. Syracuse, N.Y.\* 90. Tacoma, Wash.\* 91. Tampa-St. Petersburg, Fla. 92. Toledo, Ohio-Mich.\*\* 93. Trenton, N.J.\*\* 94. Tucson, Ariz. 95. Vallejo-Napa, Calif.\*\* 96. Washington, D.C.-Md.-Va. 97. West Palm Beach, Fla.\* 98. Wilmington, Del.-N.J.-Md.\*\* 99. Youngstown-Warren, Ohio\*\*

•Monthly data available beginning January 1964. •Monthly data available beginning June 1965. •Monthly data available beginning January 1965.

#### 8. Current Housing Reports

This report consists of the quarterly Series H-111, Housing Vacancies and the periodic Series H-121, Housing Characteristics. In 1965, these reports, which are published by the Bureau of the Census, were available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for a combined annual subscription rate of \$1.00. Rental and homeowner vacancy rates are available for

the United States, the four major census regions and inside and outside SMSA's. Data on characteristics of vacancies are also available.

## 9. Housing and Planning References

This is a bi-monthly publication of the U.S. Department of Housing and Urban Development, which contains a selected list of publications and an index of articles on housing and planning. In 1965, this publication was available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for an annual subscription price of \$2.25. This publication may be available in public or university libraries.

## 10. Construction Reports, Sales of New **One-Family Homes, Series C-25**

Published jointly by the U.S. Department of Commerce and the U.S. Department of Housing and Urban Development since 1963. This is a monthly and quarterly report with an annual summary on the sale of new onefamily homes in the United States. Data are available by such characteristics as sales price, type of financing, location by major census regions and selling time. Annual summary contains comprehensive detailed data on one-family sales housing as well as one-family contractor-built homes. In 1965, this publication was available from the Bureau of the Census, Washington, D.C. 20233 for an annual subscription price of \$2.50. A similar report on completed rental housing (structures with 5-or-more units) is being planned starting in 1967 along with a report on the characteristics of occupants of new sales and rental housing.

## 11. Small-Area Data Activities

This publication, Small-Area Data Activities, was first published in 1965 and is issued and distributed by the U.S. Bureau of the Census on an irregular schedule. Its purpose is to serve as an information exchange to keep both the users and producers of small-area data informed as to needs, new programs, new publications, and other relevant items which may be of interest. Small areas generally refer to census tracts, individual places, metropolitan areas, urban regions and State small area programs. Individuals and organizations interested in the development and use of small-area statistics may receive subsequent issues by writing to Small-Area Data Advisory Committee, Bureau of the Census, Washington, D.C. 20233.

## 12. Measuring Markets A Guide to the Use of Federal and State Statistical Data

This 94 page publication was prepared by the U.S. Department of Commerce in 1966 and is available from the U.S. Government Printing Office. Washington, D.C. 20402 for \$.50. Contained in this publication are sources of data by geographic coverage, type and frequency for such items as population, income, employment, industry employment and sales statistics. References are made to both Federal and State data sources. A bibliography on sources of statistical data includes both governmental and nongovernmental sources.

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