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MULTIFAMILY HOUSING DEMAND: 1975–2000

A STUDY

PREPARED FOR THE USE OF THE

SUBCOMMITTEE ON PRIORITIES AND ECONOMY IN GOVERNMENT

OF THE

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES



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(II)

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LETTERS OF TRANSMITTAL

November 6, 1978.

To the Members of the Joint Economic Committee:

Transmitted herewith for the use of the members of the Joint Economic Committee and other Members of Congress is a study entitled "Multifamily Housing Demand: 1975–2000."

The views expressed in this study are those of its authors and should not be interpreted as representing the views or recommendations of the Joint Economic Committee or any of its members.

Sincerely,

RICHARD BOLLING, Chairman, Joint Economic Committee.

OCTOBER 31, 1978.

Hon. RICHARD BOLLING, Chairman, Joint Economic Committee, U.S. Congress, Washington, D.C.

DEAR MR. CHAIRMAN: I am pleased to transmit herewith a study prepared for the Subcommittee on Priorities and Economy in Government entitled "Multifamily Housing Demand: 1975-2000." The study was conducted by Profs. George Sternlieb and Robert W. Burchell of the Urban Policy Research Center at Rutgers University.

In addition to analyzing the Nation's multifamily housing demand through the year 2000, the study discusses potential problems to meeting the anticipated demand. I am hopeful that this study will prove useful to Congress in formulating future housing policy.

The views expressed in this study do not necessarily reflect the views of the subcommittee members.

Sincerely,

WILLIAM PROXMIRE, Chairman, Subcommittee on Priorities and Economy in Government.

OCTOBER 25, 1978.

Hon. WILLIAM PROXMIRE,

Chairman, Subcommittee on Priorities and Economy in Government, Joint Economic Committee, U.S. Congress, Washington, D.C.

DEAR SENATOR PROXMIRE: Transmitted herewith is a study entitled "Multifamily Housing Demand: 1975–2000," prepared by Profs. George Sternlieb and Robert W. Burchell with assistance provided by William G. Rainwater. This study was conducted under direction of and reviewed by Deborah Norelli Matz of the committee staff. The committee is appreciative to Morton J. Schussheim of the Congressional Research Service, Raymond J. Struyk of the Department of Housing and Urban Development, and John Pitkin of the Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University for their comments and suggestions in the preparation of this study. Sincerely:

JOHN R. STARK, Executive Director, Joint Economic Committee.

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MULTIFAMILY HOUSING DEMAND: 1975-2000

By George Sternlieb and Robert W. Burchell*

PRÉCIS

Using Annual Housing Survey data on multifamily structure occupancy by household type for 1975, together with number of household projections from the Department of Agriculture, a gross level of multifamily housing demand is projected. Allowance is made for a 2 percent replacement rate of the total stock as well as a 5 percent vacancy figure for new household demand. Assuming that: (1) there is no massive shift away from one-family ownership to multifamily units, and (2) the present level of conversions from one-family units to multiple occupancy continues to offset the trend of conversion from rental multifamily units to condominium status, then total future demand for multifamily rental units is well within current construction levels.

We are presently building one and one-half times the demand of 416,000 units per year projected for 1975-80.

The demand from 1980 to 1990 decreases to 367,000 new units annually.

This is further reduced to 335,000 units annually for the period 1990-2000.

The major determinants of future demand will focus on the scrappage rate of extant facilities and the regional shifts of population.

The future supply of multifamily structures depends on an abatement of construction costs and interest rates, and/or massive levels of Government subsidy.

There is evidence that operating cost rises are challenging the financial integrity of multifamily structures. This is manifested by the HUD and private market mortgage delinquency and foreclosure rates.

Policy focus for the future should emphasize the minimization of both construction and operating costs rather than augmented delivery rates.

(1)

^{*}Director and Research Professor, respectively, Center for Urban Policy Research, Rutgers University, New Brunswick, N.J. Mr. Sternlieb and Mr. Burchell were assisted by William G. Rainwater.

INTRODUCTION

Multifamily housing and indeed rental housing generally is the stepchild of Government attention to shelter requirements. While just prior to World War II less than half of all American households owned their own residences, the positive relationship between housing acquisition costs, operating elements and incomes has permitted a vast expansion of ownership.

The massive shift from a predominantly renter society to one of ownership is shown in exhibit 1. From 1890 to 1930 the proportion of total housing units occupied by renters stayed between the 52 and 54 percent level. The enormous toll taken in America's household incomes in the Depression is reflected by an abrupt increase to 56 percent renters in 1940. Forced saving of the World War II years, combined with vigorously productive Government policies, made possible rapid shift to ownership after this period. In 1950, there were 4 million more owner occupied housing units than renter equivalents; by 1975, nearly two-thirds of all American households lived in their own facilities. In the 5 years from 1970 to 1975, the United States added 7 million net new owner-occupied housing units compared with barely 2 million units for renters-and this despite the very brisk upsurge in the latter as a function of Government subsidy implementation. In turn, rental housing, particularly large scale multifamily facilities, have been seen as a largely transi-tional provision for a good many of its occupants until they can reach the new appropriate standards—a house of their own.¹ Indeed, one of the major objections to the large central city was that this latter type of provision simply could not be met there-and that often occupants in such areas had no choice but the "inferior" rental housing.²

EXHIBIT 1

OCCUPIED HOUSING UNITS BY TENURE (U.S. TOTAL, 1975)

[Units in thousands]

	Total	Owner occu	upied	Renter occu	upied
Year	occupied - units	Number	Percent	Number	Percen
390	12, 690	6, 066	47.8	6, 524	52.
900	15, 964	7, 455	46.7	8, 509	53.
310	20, 256	9, 301	45.9	10, 954	54.
320	24, 352	11, 114	45.6	13, 238	54.
30	29, 905	14, 280	47.8	15,624 19,659	52.
40	34, 855	15, 196	43.6	19,659	56.
50	42, 826	23, 560	55.0	19, 266	45.
60	53, 024	32, 797	61.9	20, 227	38.
70	63, 450	39, 885	62.9	23, 565	37.
73	69. 337	44, 653	64.4	24, 684	35.
74	70, 830	45, 784	64.6	25,046	35.
75	72, 523	46, 867	64.6	25,656	35.

Source: U.S. Department of Housing and Urban Development, "HUD Statistical Yearbook, 1976" (Washington, D.C., Government Printing Office, 1977), p. 261.

See Fisch, Oscar, "Dynamics of the Housing Market," Journal of Urban Economics, October 1977.
 Sternlieb, George and Robert W. Burchell. Residential Abandonment: The Tenament Landlord Revisted (New Brunswick, N.J.: Rutgers University, Center for Urban Policy Research, 1972).

Homeownership has been the beneficiary of positive attention from practically all groups within our society. As indicated by poll after poll it is the keystone of the good life for most Americans. Thus the literature on homeownership, both popular and technical, is vast.³

Large scale multifamily housing on the other hand has uniquely been undertaken by the professional developers and managers. These relatively specialized individuals are competent to deal with the increasing role of Government both directly and indirectly in its provision.⁴ The bulk of these interventionary mechanisms is by no means the province of the Federal Government. While conventional tract developers bemoan the increasing load of locally mandated requirements; minimum lot size, subdivision controls and the like; acquisition of land for individual dwellings, though frequently costly, has been far more popularly accepted than equivalent provision for multifamily units. Even at luxury rent levels the latter are frequently barred from suburban locations.⁶ Multifamily housing is viewed as the city, as crowding, as changing the nature of the suburban-exurban setting of the homeowner. When the development incorporates low-income housing-the situation is even further accentuated.⁶ The post-World War II shift of the basic shelter ethic of the United States from rental accommodations to those offering home ownership has reinforced this feeling. The resulting stress, as reflected in the escalation of the costs of land appropriately zoned for multifamily housing in desirable locations has been enormous.⁷

In the last several years the real housing buying power of American households has been substantially reduced. Inflation in land, in building cost and, most of all, operating elements have begun to far outstrip post-tax incomes.⁸ Despite this situation, Americans continue to pursue onefamily homeownership with increased vigor. Some observers believe this represents the desperation of buyers who desire homeownership at any price today, fearing that tomorrow it will be even further out of their reach. Such a condition is by definition precarious. While we may hope for the abatement of housing cost inflation, the changing demographic characteristics of America's population, together with a vast level of internal mobility, reinforces the belief that renewed attention to the multifamily housing development area is past due.

SEQUENCE OF THE PAPER

This paper has as its prime target the definition of future demand for multifamily housing. In order to achieve this, the presentation will

 ⁸ See for instance: Marcuse, Peter. The Financial Attributes of Home Ownership for Low and Moderate Income Families (Washington, D.C., The Urban Institute, 1972); Struyk, Raymond J., Urban Homeowner-ship: The Economic Determinants (Lexington, Mass., Lexington Books, 1976); Burnbaum, Howard and Rafael Weston, "Homeownership and the Wealth Position of Black and White Americans" (Cambridge, Mass.: Program on Regional and Urban Economics, Howard University, 1972); Heald, David, "The Ameri-can Dream: Fact or Fiction," Real Estate Appraiser, July-August 1977.
 ⁴ U.S. Department of Housing and Urban Development. HUD Condominium/Cooperative Study (Wash-ington, D.C.: Government Printing Office, 1974); James, Franklin, The Return to the Central City (Washing-ton, D.C.: The Urban Institute, 1973); Sternlieb, George and Kristina Ford, Loft Conversion in New York City (New Brunswick, N.J.: Rutgers University, Center for Urban Policy Research, 1978).
 ⁵ See Williams, Norman, Jr. and Thomas Norman, "Exclusionary Land-Use Controls: The Case of North-eastern New Jersey" Syracuse Law Review, Vol. 22, 1971, "Suburban Snobbery" The New Republic, June 26, 1971.

eastern New Jersey" Spratuse Law Review, vol. 22, 1917. Subdivisit Subdively The New Infpance, Julie 26, 1971.
 Masotti, Louis H. and Jeffrey K. Hadden, The Urbanization of the Suburbs (Beverly Hills, California: Sage Publications, Inc., 1973); Sternlieb, George, The Garden Apartment Development: A Municipal Cost-Revenue Analysis (New Brunswick, N.J.: Burean of Economic Research, 1964).
 ^{*} Williams and Norman, op. eit., Babcock, Richard F., "The Courts Enter the Land Development Marketplace." City, January/February 1971; Mandelker, Daniel R., "Controlling Land Values in Areas of Rapid Urban Expansion," University of California at Los Angeles, Law Review, Vol. 12, p. 734.
 ^{*} George Sternlieb, et al., "The Private Sector's Role in the Provision of Reasonably Priced Housing," Federal Home Loan Bank Board Journal, spring 1976.

turn first to data on who lives in rental housing partitioned by the type of structure they occupy. By matching these characteristics to future projections of America's population (which is undertaken in the section that follows) a preliminary profile of future rental demand emerges. This is refined by unit size configuration to reflect only multifamily (five units or more) rental housing. This in essence raises the question, "If all elements other than changing demographic characteristics of the population are equal, what would be the demand for multifamily rental housing?"

Clearly, however, these stable conditions rarely are maintained. Thus, the third section of the study looks at the supply elements and the factors which impact upon them. This, in turn, reflects upon some of the underlying dynamics which may well significantly alter the demand silhouette generated in the preliminary approach. The last section of the study concludes with a summary of basic findings together with their implications for national housing policy.

I. WHO LIVES IN RENTAL HOUSING: A MARKET PROFILE

INTRODUCTION

Practical forecasting requires a firm foundation in the present. Rental housing, particularly in larger structures, appeals to certain segments of our population. This section of the study is devoted to defining these elements. Some tenants are there by choice—others by necessity, some are long-term residents and some are transients, either in hope or reality, on their way to one-family facilities. In any case, this type of profile when applied to future demographics provides a first rough estimation as a basis for more refined subjective elements.

HOUSING AND POPULATION CHARACTERISTICS: HOUSEHOLD SIZE BY STRUCTURE

There were more than 25 million renter households in the United States as of 1975. Typically these were relatively small households in terms of the number of people within them, indeed the median figure for all renter households was 2.1. Slightly less than one-third are oneperson households, with a nearly matching proportion containing two persons. Households with five or more persons make up only one in nine of all renter units.

See Exhibit 2.

	Total			Struct	ure size			Mobile
Persons	(U.S.) renter	1 unit	2 to 4 units	5 to 9 units	10 to 19 units	20 to 49 units	50-plus units	home or trailer
Total	25, 656	8, 432	6, 772	3, 028	2, 514	2, 058	2, 332	519
1 2 3 4 6 or more	8, 262 7, 733 4, 187 2, 719 1, 392 1, 364	1, 589 2, 313 1, 630 1, 293 740 867	2, 175 2, 153 1, 181 724 318 221	1, 119 966 443 343 130 127	1, 019 832 377 155 81 51	936 665 261 116 45 35	1, 279 650 189 113 53 48	145 153 106 75 25 16
Median (United States)	2.1	2.7	2.1	1.9	1.8	1.6		2.3
	N	ortheast	North-	Central		South		West
Regional rental units (total) 1 unit Mobile/trailer		6, 690 982 46		5, 938 1, 918 98		7, 763 3, 610 272		5, 254 1, 922 103

EXHIBIT 2,-RENTAL HOUSING-HOUSEHOLD SIZE BY STRUCTURE SIZE (U.S. TOTAL, 1975)

[In thousands]

Source: U.S. Department of Commerce, Bureau of Census, "Annual Housing Survey (1975)," table V-53-45 (unpublished).

Most renters do not live in large-scale structures.¹ Approximately

¹ Kristof, Frank S., "Urban Housing Needs Through the 1980's" (Washington, D.C.: U.S. National Commission on Urban Problems Research Report No. 10, 1968).

In general, household size decreases with the scale of the structure. Thus, for structures with one-rental unit the median size is 2.7, for the five- to nine-unit structure it is 1.9, for the 20- to 49-unit structures 1.6; in structures with 50 or more units, over half of the apartments have only one person. There are less than 200,000 families with five or more persons in large scale structures—those with 20 or more units [a rather substantial proportion of these are probably public housing]. In sum, therefore, the most important configurations in the world of renter shelter are small-scale structures and these are particularly skewed toward smaller households, contrary to common perception. This latter element is particularly the case in large-scale rental structures (five units or more) which are substantially the domain of small households rather than large sized families.²

REGIONAL VARIATION

At the bottom of exhibit 2 is shown data by region for rental housing and some of its elements. There is an unfounded belief that it is the Northeast which is the dominant province of rental shelter. Clearly, as shown in the data, this is not the case. The South actually has more rental housing units than the other regions shown, with the Northeast second, and the West last.

Included is further information indicating the number of rental units which are in one structure as well as mobile homes or trailers. The resulting skew in regional allocation is evident. The Northeast has the smallest number of one-unit rentals as well as the smallest number of mobile homes or trailers used for residence. These two groups combined, make up less than one-sixth of the total rental units in the region. In the South, on the other hand, more than half of all rental facilities are in one-unit structures, mobile homes, or trailers. The equivalent for the North-Central and Western States is roughly one-quarter and one-third, respectively. Thus it is the Northeast which, by far, has the greatest number of multifamily rental structures. In that region structures with two or more units shelter a total of more than 5½ million individuals to the South's less than 3 million. ³ ⁴ The other two regions are intermediate.

HOUSEHOLD TYPE

The data on number of persons per household earlier presented mask a substantial skew of sex distribution within households. Rental housing is much more the province of female-headed households, for example, than holds true of owner-occupied units. As shown in exhibit 3, one out of six of all renter housing units in the United States is occupied by a female-headed household; in owner-occupied facilities, the equivalent is one in nine. Less than one-quarter of these rental facilities is occupied by husband and wife plus children under

·····

² Ibid. ³ For comparison purposes "multifamily rental structures" are used here as structures for rent with two units or more. In a subsequent portion of this paper this will be narrowed to the more traditional definition of structures of *five units or more*. ⁴ George Sternlieb and Hughes, James W., *Revitalizing the Northeast* (New Brunswick, N.J.: Rutgers University, Center for Urban Policy Research, 1978).

the age of 18 and, as would be guessed, the bulk of these are in smallscale structures. When examination was undertaken of female-headed households with two or more persons, there was little in the way of a regional skew.

	T .1.1			Struct	ure size			Mobile
Household composition	Total - (U.S.) renter	1 unit	2 to 4 units	5 to 9 units	10 to 19 units	20 to 49 units	50-plus units	home or trailer
1-person households 2-or-more person household	8, 262 17, 394	1, 589 6, 843	2, 175 4, 597	1, 119 1, 909	1, 019 1, 495	936 1, 123	1, 279 1, 053	145 375
Husband and wife	11, 632 (6, 069) 1, 463 4, 299	4, 992 (3, 025) 471 1, 380	2, 911 (1, 473) 370 1, 316	1, 173 (598) 184 552	913 (377) 154 428	688 (238) 143 291	693 (197) 98 262	263 (161) 43 70
	Ne	ortheast	North	Central		South		West
1-person households 2-plus-person households, female headed		2, 215 1, 179		2, 041 922		2, 226 1, 349		1, 780 850

EXHIBIT 3.—RENTAL HOUSING—HOUSEHOLD TYPE BY STRUCTURE SIZE (U.S. TOTAL, 1975) [In thousands]

Source: U.S. Department of Commerce, Bureau of Census, "Annual Housing Survey (1975)," table(s) V-53-4 to V-53-7 (unpublished).

In sum, husband and wife households represent a minority of the occupants of rental housing. This is particularly the case in large-scale units with barely one-third of the households in 20-or-more unit structures having this configuration.

RACE

While blacks make up 10 percent of total American households, they occupy 1 in 6 of all rental units.⁵ Indeed, in the South more than one-quarter of all rental units are so occupied. There is significant regional variation along this line. In the West blacks occupy 1 in 12 of the rental units, in the North-Central States 1 in 7, and in the Northeast 1 in 6.

As shown in exhibit 4, the distribution of blacks to whites as a function of structure size has little consistent variation until we turn to the structures of 50 or more units. Here blacks make up fully 19 percent of the occupants—this is probably due to the inclusion of large-scale public housing facilities within this structure size grouping.

EXHIBIT 4.—RENTAL	HOUSING-RACE	BY STRUCTURE	SIZE (U.S.	TOTAL, 1975)
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[In thousands]

	Tatal			Struct	ure size			- Mobile
Race	Total (U.S.) renter	1 unit	2 to 4 units	5 to 9 units	10 to 19 units		50-plus units	home or trailer
Total	25, 656	8, 432	6, 772	3, 028	2, 514	2, 058	2, 332	519
White Black Other	20, 788 4, 252 616	6, 862 1, 428 142	5, 521 1, 164 88	2, 411 514 103	2, 027 412 75	1, 715 264 79	1, 771 436 124	481 34 5
	N	ortheast	North	Central	_	South		West
Regional rental units (total) Black Other		6, 690 1, 036 143		5, 938 804 69		7, 763 1, 979 88		5, 254 433 315

Source : U.S. Department of Commerce, Bureau of Census, "Annual Housing Survey (1975)," table V-53-1 (unpublished).

⁴ George Sternlieb and Lake, Robert W., "Aging Suburbs and Black Homeownership," The Annals of the American Academy of Political and Social Science (Vol. 42, November 1975).

EDUCATION

There are few more inclusive socioeconomic indicators in a society such as ours than education. In this context it is particularly noteworthy to view the educational level of the occupants of rental housing of all kinds in 1975 as shown in exhibit 5. For all the heads of household in rental units, the median figure is 12.4, i.e., slightly over the high school level. This compares with 12.2 for homeowners as a group.

	Total			Struct	ure size			
Years of school completed	(U.S.) renter	1 unit	1 to 4 units	5 to 9 units	10 to 19 units	10 to 49 units	50-plus units	Mobile home of trailer
Total	25, 656	8 432	6, 772	3, 028	2, 514	2, 058	2, 332	519
No school	260	143	59	9	16	3	29	1
Less than 8 yrs 8 yrs High school:	2, 858 2, 184	1, 300 765	695 611	272 205			222 251	47 58
1 to 3 yrs 4 yrs	4, 240 8, 062	1, 531 2, 540	1, 189 2, 271	501 932	331 799	284 635	288 679	177 200
College: 1 to 3 yrs 4 yrs or more	4, 051 4, 000	1, 155 998	1, 033 915	572 536			309 553	61 3(
	12.4	12.2	12.4	12.6	12.7	12, 7	12.6	12.2
-	No	ortheast	North	-Central	•	South		Wes
- Median education by region		12.3		12.5	_	12. 3		12.

EXHIBIT 5.-RENTAL HOUSING-YEARS OF SCHOOL COMPLETED

Source: U.S. Department of Commerce, Bureau of Census, "Annual Housing Survey (1975)," table 53-51 (unpublished).

There is little variation among renters in educational attainment as a function of structure category. There is some indication that, in general, a higher level of formal schooling tends to be found in the larger developments. The lowest level of educational attainment, 12.2 median years of school completed, is found in one-unit mobile home and trailer rentals.

On the bottom of the exhibit is shown median education of renters by region. This is roughly in accord with national trends. In any case it shows relatively slight variation.

Thus, large-scale rental housing currently is skewed toward small household sizes with a disproportionate number of them female-headed and a somewhat higher proportion of blacks than is the case for ownership housing. It should be kept in mind, however, that households in all forms of rental units, while representing some measure of dispersion, are well within the mainstream of American households generally.

II. HOUSEHOLD FORMATION AND THE FUTURE DEMAND FOR MULTIFAMILY HOUSING

INTRODUCTION

The rough base of the demand figures to be generated for future multifamily housing demand at its initial level is a projection of population growth by age and sex segment. This, in turn, when multiplied by headship rates ¹ (the proportion of people within each age and sex group who are heads of household) yields the number of renter households. Once this has been established such renter households are allocated to structure of various sizes.

HOUSEHOLD TYPE AND STRUCTURE SIZE

In exhibit 6 data by age of head are presented for various configurations of household in 1975. These are further partitioned into structure size categories.

		11	n thousanu	>]				
Household composition by age of head	Total (U.S.) renter	1 unit	2 to 4 units	5 to 9 units	10 to 19 units	20 to 49 units	50-plus units	Mobile home or trailer
Total	26, 656 8, 262 5, 559 2, 703 17, 394 11, 517 2, 299 2, 555 1, 416 1, 741 2, 399 1, 578 1, 109 1, 578 1, 109 1, 578 1, 109 3, 918	8, 432 1, 589 1, 000 589 6, 843 4, 912 811 1, 002 681 911 1, 102 399 551 508 43 1, 380 1, 238	6, 772 2, 175 1, 472 703 4, 597 2, 895 642 698 327 362 599 599 599 268 386 353 33 1, 316 1, 199	3, 028 1, 119 850 269 1, 909 1, 167 279 301 137 165 198 87 190 188 88 1 552 504	2, 514 1, 019 748 271 1, 495 913 249 237 104 96 135 91 154 150 4 428 404	2, 058 936 682 254 1, 123 682 146 145 81 145 90 150 139 10 291 271	2, 332 1, 279 700 578 1, 053 688 74 103 57 97 187 187 187 169 102 85 17 262 232	519 1455 106 38 375 260 97 655 35 35 35 32 32 32 4 4 5 45 0 70 70 68
65 yrs and over	381	142	" ii7	48	24	19	30	1

EXHIBIT 6 .- HOUSEHOLD TYPE AND STRUCTURE SIZE (U.S. TOTAL, 1975)

[In thousands]

Source: U.S. Department of Commerce, Bureau of Census, "Annual Housing Survey (1975)," table A-1 (unpublished).

By using the ratio of the number of households headed by an individual within each of the sets to the total population of that same category, we secure a ratio of households to population for each of the several categories. For example, in 1975 there were a total of 5,559,000 one-person households under age 65. The total population from 18 to 65 at that time was 124,880,000. Thus the ratio of household headship was 0.045 (heads of household under the age of 18,

Bernard J. Frieden and Solomon, Arthur P., The Nation's Housing 1976-1985 (Cambridge, Mass.: Joint Center for Urban Studies, 1977).

a very small proportion of all households, have been excluded). By then using the U.S. Department of Agriculture projections for equivalent age groups for 1980, 1990, and the year 2000, respectively, multiplied by the household headship rate as of 1975, we secure the equivalent number of renter households for each particular category. Thus, in 1980 there will be 6,085,000 one-person households under the age of 65, in 1990 6,701,000, and in the year 2000 slightly over 7 million.

By summing the total future renter households for each of the categories a first approximation of future demand is secured. From 1975 to 1980 the increase in total renter households is approximately 2.5 million units (from 25,656,000 to 28,226,000). In the decade of the 1980's using procedures described above, an increase of an additional 2.9 million renter households is observable. In the 10 years from 1990 to 2000, the increase slackens slightly to under 2 million households. See exhibit 7.

		1975		198	0	199	0	2000	
- Type of household	Households	Population in comparison category	Ratio of households to popu- lation in comparison category	Households	Population in comparison category	Households	Population in comparison category	Households	Population in comparison category
berson household: Under 65	5, 559 2, 703	1 124, 880	0.045	6, 086 3, 016	135, 252 24, 927	6, 701 3, 609	148, 913 29, 824	7, 181 3, 850	159, 578 31, 822
65-plus	2, 703	² 22, 405	. 121	5,010	24, 327	0,000		-7	
rr-more-person houshold: I. Male head (wife present, no nonrelatives): Under 25 (males 18 to 25)	2, 299 3, 971 1, 741 2, 398 1, 109	13, 910 15, 348 11, 149 20, 834 9, 176	. 165 . 259 . 156 . 115	2, 448 4, 660 1, 959 2, 423	14, 838 17, 993 12, 560 21, 069	2, 092 5, 290 2, 802 2, 558	12, 678 20, 424 17, 964 22, 244 11, 999	2, 058 4, 435 3, 161 3, 296 1, 539	12, 47 17, 12 20, 26 28, 65 12, 71
65-plus (males) II. Other male head: Under 65 (males 18 to 65)		9, 176 61, 239	. 121	1, 223 1, 595	10, 108 66, 460	1, 452 1, 759	73, 311	1, 884 153	78, 51 12, 71
65-plus (males)	1, 469 109	9, 176	. 012	121	10, 108	144	11, 999	103	12,71
III. Female head: Under 65 (females 18 to 65) 65-plus (females)	3, 918 381	63, 642 13, 228	. 062 . 029	4, 265 430	68, 791 14, 819	4, 687 517	74, 603 17, 824	5, 265 554	84, 93 19, 10

EXHIBIT 7.-FUTURE RENTER HOUSEHOLDS 1980-2000-USING SERIES II POPULATION PROJECTIONS AND CONSTANT 1975 HOUSEHOLD-TO-POPULATION RATIOS

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¹ Total population 18 to 65. ² Total population 65-plus.

33-574-

 ${\bf T}_{i}$

Source: "Annual Housing Survey (1975)," Rutgers University Center for Urban Policy Research, spring 1978.

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It must be stressed that this approach is at best a first approximation with a number of very specific limitations. Principal among them is the issue of future population growth. At least through the year 1990, however, this plays a relatively small role with all but a very few of the heads of households through that year presently countable-if subject to attrition. Even when the projection is taken to the year 2000, the vast bulk of the heads of household similarly are presently countable.

In addition, however, there is the proportion of individuals in the various age and sex cohorts who will form households. Second, within the total growth of households, will the proportion who turn to rental facilities as against ownership remain reasonably constant? Much of the housing demand since 1950 has been a function of higher headship ratesof the high proportion of individuals willing and capable of initiating new households. There is evidence that this process, particularly for large-scale facilities, has run its course. Thus, it is felt that the 1975 rates are appropriate.²

THE FIRST APPROXIMATION OF FUTURE RENTER HOUSING NEED

The number of new renter households is not directly equivalent to the number of additional rental housing units required. The principal additions lie in the issues of replacement, i.e., the loss either by demolition or conversion of extant rental units, as well as the level of vacancies that must be maintained in order to provide reasonable market fluidity. Neither of these elements is without controversy in terms of appropriate proportions.

The *replacement ratio* is a particularly controversial one. There is a substantial shift of rental units into the ownership stream through such processes as condominium conversion, the movement of partially seasonal rental housing into full-time ownership residences and the like. Offsetting this, on the other hand, are the uncounted numbers of units that shift from ownership into the rental market.³ Examples of the latter are conversion of single large units into two or more smaller rental facilities. The last section of this study will turn to some of the potentials in the conversion realm, for the moment it will be assumed that the inflow and outgo by conversion into the rental pool are relatively balanced.

THE ATTRITION PROBLEM

There is a substantial leakage from America's housing stock in the form of abandonment and demolition. In the 5 years from 1970 to 1975, the loss in structures with five or more dwelling units approximated the 2½ percent level.⁴ Much of this, based on somewhat incomplete data, was concentrated in the older cities of the Northeast. The complement of population decline, and the outmigration of the more affluent, combined with some level of provision of competitive alternative housing units elsewhere was responsible, in large part, for this occurrence.

It should be noted in this context, that the overall housing unit attrition level hovers close to the 1 percent mark, thus indicating the significant stress on larger scale structures.⁵

³ Ibid.

 ³ Michael J. Sumichrast and Seldin, Maurey, Components of Future Housing Demand (Washington, D.C.: National Housing Center, 1966).
 ⁴ Comparison of 1970 multifamily (5 units or more) housing units plus annual, multifamily housing starts

 ⁽¹⁹⁷⁰⁻¹⁹⁷⁵⁾ to multifamily housing units in 1975.
 ⁵ U.S. Department of Agriculture, Forest Service, Projections of Demand for Housing by Type of Unit and Region (Washington, D.C.: U.S. Government Printing Office, May 1972).

For the purposes of this study, a 2-percent future attrition level has been projected. This indicates an average longevity of 50 years for the multifamily stock. It assumes that while the unnatural attrition level of recent years may continue in the central cities, it will be somewhat blunted as a national statistical phenomenon by the increasing level of multifamily housing which is either relatively new and/or constructed in areas of substantial housing demand.

Vacancy levels are the essential lubricant of the market. There is no generally accepted definition of a "market" which is an appropriate balance between supply and demand. Alaska, for example, has defined a housing market with less than a 3-percent vacancy rate as being of undue rigor.⁶ The FHA, and at least in more stable areas the housing field as a whole, has used a 5-percent vacancy figure as an appropriate one.7 8 The 5-percent figure is used in terms of the additional units required by future renter households in order to provide fluidity and a competitive market.

Exhibit 8 summarizes, by type of household-(1) the number of future renter households, (2) a vacancy figure which adds 5 percent to this marginal increment, and (3) a replacement figure of 2 percent. This latter has as its base the midperiod level of units (i.e., 1975, 1985, 1995) for each of the projected time periods.

For one-person households, under the age of 65, in 1980, therefore, the figures would indicate (1) a future renter household number of 527,000 (see exhibit 7 for the origin of this figure), (2) a vacancy figure of 5 percent-or an additional 26,000 units-and (3) a 2-percent replacement requirement (582,000 housing units) based on the number of renter households within this category as of the midperiod prior to project. This yields a grand total of 1,135,000. For each of the household types, and for each of the several intervals through the year 2000, the data are presented in exhibit 8. At the very bottom of the exhibit are shown the totals for all types of rental demand using this approximation procedure. Thus, for the period from 1975 to 1980, by these calculations, nearly 5.4 million additional rental units will be required. For the decade of the 1980's the equivalent figure is close to 9.4 million; for the 1990-2000 period it is over 81/2 million additional rental units.

It is interesting to note the impact of both the baby boom and the baby bust in the data array.⁹ The first is shown by the single largest

 ⁶ See Monica R. Lett, Rent Control: Concepts, Realities and Mechanisms (New Brunswick, N.J.: Center for Urban Policy Research, 1976) p. 40.
 ⁷ This is a shade less than the current rental vacancy data. While there is some regional variation, with vacancy rates typically higher in areas with substantial construction rates (the South and West versus the North) there has been an increasing tendency to leveling across the Nation. Thus the future total vacancy rate projected here is the sum of the current rate plus the provision made for new with

 ⁸ U.S. Department of Housing and Urban Development, FHA Techniques of Housing Market Analysis
 ⁸ U.S. Department of Housing and Urban Development, FHA Techniques of Housing Market Analysis
 ⁹ De Leeuw, Frank, The Demand for Housing: A Review of Cross-Sectional Evidence (Washington, D.C.: The Urban Institute, 1971).

		1980 (1	975-80)			1990 (19	18090)			2000 (199	02000)	
Type of household	Future renter households	Vacancy (5 percent of future renter household)	Replace- ment (2 percent of existing number of units)	Total	Future household	Vacancy	Replace- ment	Total	Future household	Vacancy	Replace- ment	Total
	(1)	(2)	(3)		(1)	(2)	(3)		(1)	(2)	(3)	
1-person household:			· · · · · · · · · · · · · · · · · · ·	<u> </u>		·				•		
Under 65	527	26 16	582	1, 135 615	615	31 30	1, 278 1, 662	1, 924 1, 285	480	24 12	1, 436 770	1, 940
65-plus_ 2-or-more-person household: 1. Male head (wife present, no nonrelatives): Under 25	313	16	286	615	593	30	1, 662	1, 285	241	12	770	1, 940 1, 023
Under 25	149	7	238	394	356 -		454	98	_34		412	378
25 to 34	689	34	432	1.155	630	32	996	1.658	855	•••••	888	33
35 to 44	218	11	186	415	843	42	476	1,658 1,361 640	855 - 359 -	18 37	632	1. 009
45 to 64	25	1	240	415 266 236	135	7	498	640	738 87	37	888 632 660 308	1, 009 1, 435 399
65-plus II. Other male head:	114	6	116	236	229	11	268	508	87	4	308	399
Under 65	126	6	152	284	164	8	336	508	125	6	376	507
65-plus	12	ĭ	10	23	23	ĩ	26	50	125	U	30	39
III, Female head:		-				-			• •			
Under 65	347	17	410	774	422	21	896	1, 339	578	29	1, 054	1, 661
65-plus	49	2	40	91	87	4	94	185	37	2	110	149
Total additional rental demand	2, 569	127	2, 692	5, 388	3, 385	187	5, 784	9, 356	1, 765	132	6, 676	8, 573

•

EXHIBIT 8.-FUTURE DEMAND FOR RENTAL HOUSING-1980-2000 (ADDITIONAL UNITS)

[U.S. total, by household type, in thousands]

Source: Rutgers University Center for Urban Policy Research, spring 1978.

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sector increment-in 1975-80 period; it is in the 25-to-34 age category for male-headed households with wife present. In the next decade it is shared by the 25-to-34 and 35-to-44 year groups while in the decade of the 1990's it moves to the 45-to-64 year bracket. The baby bust, on the other hand, is shown by the two areas of decline in the decade of the 1980's and 1990's, respectively. In the first it is the male-headed household, wife present, under the age of 25---in the second, as a reflection of the age cohort advancing in time, it is the same category of household, but now aged to the 25-to-34 year mark.

It is equally important to note the striking increment in female-headed households under the age of 65 with two or more persons. This distinctive group requires more than 700,000 additional rental housing units from 1975 to 1980, over 1,300,000 in the following decade, and by the 1990's, it is the single largest of the renter household categories.

THE SHARE OF THE RENTAL HOUSING MARKET TO BE SECURED BY MULTIFAMILY UNITS

The data shown above are for all rental housing units but as shown in exhibits 9A-9C, there is substantial variations in the proportion of households of various configurations in terms of the types of rental structures in which they live. In the material which follows, incidence within various structure categories as of 1975 by household characteristic is used to pro rate the future demand for multifamily, renter-occupied units distinct from the total universe of rental housing.

The data earlier discussed in this paper for household incidence by housing type make it possible to further refine and secure a projection for the various configurations of structure which will be required to incorporate the rental units. Again it must be stressed that these projections depend upon 1975 equivalence, i.e., respective categories and preferences similar to those of the specific base year. The projections which are shown in exhibits 9-A, 9-B, and 9-C incorporate both the vacancy rates and replacement ratios earlier discussed.

They show that in the 5 years from 1975 to 1980, a total additional multifamily rental demand slightly in excess of 2 million units—2,084,000 or approximately 416,000 units per year. For the 10-year period from 1980 to 1990, the equivalent is 3,674,000 units—or just slightly over 367,000 per year. In the decade of the nineties, the multifamily demand (5 units or more) declines again to the 335,000 mark per year.

It is the scrappage and replacement level rather than new household demand which is the major factor. Thus, the success of efforts at multifamily structure rehabilitation or other forms of preservation becomes the crucial variable in assessing future needs.

	Total future demand for	Total future demand for		<u> </u>	Sti	ructure size mul	lifamily units		
Type of household	(all structure and size con- figurations) (columns a-g)	multifamily housing (5 or more units per) (columns c-f)	1 unit (a)	2 to 4 units (b)	5 to 9 units (c)	10 to 19 units (d)	20 to 49 units (e)	50-plus units (f)	Mobile home or trailer (g)
1-person households:	1, 137	610	204	301	174	153	140	143	22
Under 65 yrs	617	314	134	160	62	62	58	132	- î
65 yrs or older 2-or-more-person households:	017	514	134	100	02	UL		102	
I. Male head—wife, present no nonrelatives:									
Under 25	395	129	139	110	48	43	25	13	17
25 to 34		129 336	491	298	127		64	46	29
35 to 44	415	105	217	86	39	99 23 15 19	64 20 16 19	23 21 36	-
45 to 64	266	74	122	67	22	15	16	21	
65 or older	415 266 235	105 74 92	85	86 67 57	39 22 18	19	19	36	
II. Other male head:	200	•=	••						
Under 65	283	108	98	68	36 0	29	27	16	ç
65 or older		1	9	7	0	1	2	4	(
III. Female head:									
Under 65	775	280	245	237	100	80	54	46	1:
65 or older	91	280 29	34	28	11	6	5	7	
Total additional multifamily rental demand		2, 084	1, 778	1, 419	637	530	430	487	110

EXHIBIT 9-A.-FUTURE DEMAND FOR MULTIFAMILY (5 UNITS OR MORE) RENTAL UNITS-1980 (1975-80) (U.S. TOTAL-BY SIZE CONFIGURATION)

(in thousands)

Source: Rutgers University, Center for Urban Policy Research, spring 1978.

	Total future demand for	Total future demand for		•	Str	ucture size mult	tifamily units		
form of how shall	rental housing (all structure and size con- figurations)	multihousing housing (5 or more units per)	1 unit	2 to 4 units	5 to 9 units	10 to 19 units	20 to 49 uhits	50-plus units	Mobile home or trailer
Type of household	(columns a to g)	(columns c to f)	(a)	(b)	(c)	(d)	(e)	(1)	(g)
person household:									
Under 65	1, 926	1, 033 654	346 280	510 334	294	260	237 121	242 275	37
65 or older or-more-person household:	1, 286	654	280	334	129	129	121	275	18
 Male head-wife, present no nonrelatives; 									
Under 25	- 98	32	35	27	12	11	6	3	4
25 to 34	. 1.656	482	35 705 712	428 283	12 182 129 53	143 75 36 42	9ľ	66	41
35 to 44	1 262	344	712	283	129	75	64 39	76	23
45 to 64	. 640	178	294	160	53	36	39	50	Ē
	508	200	183	123	40	42	41	77	2
II. Other male head:	. 508	104	170						
Under 65	. 508	194 15	176 .	122 15	65 0	52 2	48	29	16
65 or older III. Female head:		15	20	15	U	2	5	8	0
Under 65	1, 340	484	422	410	173	138	94	79	22
65 or older	186	484 58	423 69	57	23	130	54	79	23
Total additional multifamily rental demand	9, 560	3, 674	3, 249	2, 475	1, 102	900	755	920	173

EXHIBIT 9-B.--FUTURE DEMAND FOR MULTIFAMILY (5 UNITS OR MORE) RENTAL UNITS-1990 (1980-90) (U.S. TOTAL-BY SIZE CONFIGURATION)

-

[In thousands]

Source: Rutgers University, Center for Urban Policy Research, spring 1978.

	Total future	Total future			' Str	ucture size mul	tifamily units		
		demand for multifamily housing (5 or more units per) (columns c to f)	(a)	2 to 4 units (b)	5 to 9 units (c)	10 to 19 units (d)	20 to 49 uhits (e)	50-plus units (f)	Mobile home or trailer (g)
erson households: Under 65 yrs	1, 942 [°] 1, 022	1, 042	349 223	514 266	297 102	262 102	239 96	244 219	37 37 14
fr-more-person households: I. Male head-wife, present no nonrelatives: Under 25. 25 to 34	377 34 1,010 1,437	123 10 255 399 157	133 14 528 660 144	105 9 210 359 97	46 4 96 119 31	41 3 55 80 33	24 2 47 88 32	12 1 57 112 61	1 1 1
65 or older II. Other male head: Under 65 65 or older	507	194 11	175 15	122 12	65 0	52 . 1	, 48 4	29 6	, ¹ 1
III. Female head: Under 65- 65 or older Total.addtional multifamily rental demand	142	599 45 3, 354	525 53 2, 819	. 508 43 2, 245	214 18 992	171 9 809	116 7 7 0 3	98 11 823	2 19

2 9016 31 - EXHIBIT 9-C --- FUTURE DEMAND FOR MULTIFAMILY (5 UNITS OR MORE) RENTAL UNITS-2000 (1990-2000) (U.S. TOTAL---BY SIZE CONFIGURATION)

[in thousands]

Source: Rutgers University, Center for Urban Policy Research, spring 1978.

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III. SUPPLY AND DEMAND FACTORS IN MULTIFAMILY HOUSING

THE PHYSICAL DEMANDS OF CONSTRUCTION.

Neither the projected number of gross rental housing units nor the proportion of them allocated to multifamily structures is such as to cause alarm over the delivery capacity of the American building industry. The target figures shown, even extending them substantially, are well within our grasp.

America's delivery capacity in multifamily housing is evidenced by its experience from 1969 through 1977 as shown in exhibit 10. The peak year was the 917,000 units in such configurations, started in 1972. This undoubtedly reflects the substantial impetus of section 236 funding.¹ The trough is in the recession of 1975 with starts at 208,000 during this year decreasing to barely 20 percent of the peak level.² For the 7 years from 1969 to 1975, we started more than 4 million multifamily units or an average slightly in excess of 600,000 per year.

EXHIBIT 10.-TOTAL (PRIVATE AND PUBLIC) MULTIFAMILY (5 UNITS OR MORE) HOUSING UNIT STARTS, 1969-77

	Total (private	Federally subsidized			
	and public) — multifamily or more)	Total (5 units or more)	Percent of total starts		
Year: 1969	590. 100)				
1970	558,000				
1971 1972	798, 500 917, 000	11 045 370			
1973	800, 300	- 1, 043, 570			
1974 1975	386, 800 208, 100				
	4, 258, 800	1, 045, 370	24.5		
1976	292, 200	54, 340	18.5		
1977	415, 200	179, 430	43.2		

1 Cumulative, 1969-75.

Note: Limitations of data do not permit precise count of the number of multifamily units in nonrental forms. Even using the gross numbers of cooperative and condominium construction, shown in exhibit 13, would not alter the conclusions, however. The approximate number of multifamily (5 units or more) condominium starts was: 1974, 104,000; 1975, 26,000; 1976, 38,000; 1977, 57,000.

Source: U.S. Department of Commerce, Bureau of Census, "Construction Reports (C20–78–1)—Housing Starts," January 1978; 10th Annual Report in National Housing Goals, January 1978, Washington, D.C., GPO, 1978, p. 40.

BARRIERS TO MEETING DEMAND

High Rate of Government Subsidy and Inflation

In more recent years, a slow but increasingly significant postrecession upsurge has started with the 292,000 starts of 1976 followed by 415,000 in 1977 and somewhere on the order of 550,000 to 600,000 anticipated for 1978. It should be noted here that the new vigor is substantially a

¹ Housing and Community Development Act of 1968, "Section 236 Interest Subsidy Program." ² See George Sternlieb and Hughes, James W., Current Population Trends (New Brunswick, N.J.: Rutgers University, Center for Urban Policy Research, 1978).

reflection of an increased level of explicit government subsidy. Practically all of the increase from 1976 to 1977, for example, was the result of Federal subsidization.³

The need for this level of Federal input is a result of the growing imbalance between rent paying capacity and the rents required for unaided new multifamily units. In exhibit 11 is shown data on the evolving picture of new major structure construction together with an equivalent time series for housing costs generally as well as the changes in the cost of "all items." It is the first of these which has risen most dramatically. The cost of new major structures has gone up by nearly half [49.9 percent] from 1972 to 1977. During the same period the "all items" index rose 41.3 percent, general housing costs 42.5 percent.⁴

	Consumer Price	Consumer Price Index (CPI)		
All items	All items (percent increase)	Housing (percent increase)	(percent	
972	125.3	129.2	100.0	
973		135.0		
974	147 7	150.6		
975		166. 8	127.2	
976		177.2	137.3	
977		¥ 184. 1	149. 9	

EXHIBIT 11.-INFLATIONARY INDEXES PERTAINING TO THE HOUSING INDUSTRY, 1972-77

Apartments, hotels, and office buildings.
 41.3 percent increase over 1972.
 42.5 percent increase over 1972.

Note: CPI-1967 equals 100; Boeckh Index-1972 equals 100.

Source: U.S. Department of Housing and Urban Development "1976 Statistical Yearbook—HUD," p. 258; U.S. Depart-ent of Commerce, "Construction Review," November 1977, p. 47. ment of Commerce.

It is most striking to note that this level of inflation was undented by the massive recession in multifamily starts in 1975 which saw a precipitous downturn of nearly 80 percent. While perhaps a longer period of recession might curb the cost elements, the secondary ramifications do not make this an appealing prospect.

Land Zoning and High Interest Rates

Principal among the cost elements involved are those of land and money. The problems of zoning and the increasing flight from the dollar into land speculation have made sites which are both suitable and legally available for multifamily housing a relative scarce commodity in areas of high demand.5

The consequence in terms of the impact on the rent level requirements need little amplification. While a number of States have made slight overtures toward a broadening of land use elements, these have been relatively minor. Many of the issues of zoning for multifamily housing, therefore, have ended up in the courts, a procedure which is both costly, time consuming, and scarcely generalizable.

Obtaining land zoning through the courts is both uncertain and very expensive. The construction of multifamily housing, therefore, has

 ³ See also Donald E. Priest, "The Uncharted Trend Toward Increased Public-Private Cooperation1st Housing Development." American Real Extate and Urban Economics Association Journal (summer 1977);
 Ira G. Kawailer "The Role of Federal Subsidies in the Construction of Multi-family Homes" (paper presented at Southern Economic Association Convention, November 1977).
 ⁴ U.S. Department of Commerce, Bureau of Domestic Commerce, Construction Review, December Volume 1967-1977.

^{1967–1977.} Williams and Norman, op. cit.

become a highly riskful venture. It has not been aided by a variety of environmental protection requirements, many of which have been misused as a second line of defense by local authorities in order to avoid high density housing.

The Federal entry into land use regulation has been miniscule. While there have been occasional urges by A-95 Review Agencies to take the lead in this regard, there has been little backing when these middle level review groups come under fire from local communities and citizenry.

The cost of money, a commodity whose cheapness in the United States made our housing the envy of the world, has been rising across the board. It should be noted, moreover, that despite this overall increase, the financing of multifamily housing is not considered a desirable venture on the part of major sophisticated lenders.6

At this writing, insurance companies are actively competing for shopping center properties. Indeed, the capitalization rate on some of the very best of these has been driven down to the 7½ percent level. At the same time, the proportion of total loans by such companies in multifamily housing has declined-and the rates of return required are escalating rapidly. Current capitalization rates, for example, on prime apartment house construction are currently reaching the 10 percent level.⁷ Much of this stems from the operating imbalance endemic to this form of housing.⁸

Operating Costs Escalation and the Fear of Rent Control

The increased pressures on operating costs of multifamily housing are far from unique. They are felt in a broad spectrum of American life and industry. Within the homeownership domain, however, they can be at least partially offset by a combination of a do-it-yourself and don't-do-it-at-all approach. The homeowner can absorb some of the increases by doing more work within his residence than would otherwise be the case and simply not think of it as an expense--or otherwise reduce the levels of maintenance or resident comfort, i.e., if one's fuel bill is too high, decrease the heat level. In industry as well as shopping center operation, there have been substantial efforts to utilize a variety of capital intensive investments to reduce operating costs. Multifamily housing has not yielded to equivalent procedures. Operating standards are largely set by a combination of the market and local housing codes. There has been little in the way of innovational frontend investment to replace current practices of building operations.

At most, we see a drive toward reducing or transferring the burden of costs through separately loading operating costs. Examples of the latter include the decentralization of air-conditioning, making it incumbent upon each of the tenants to pay for his own usage, separate metering for utilities, et cetera. These provide automatic pass-alongsbut, if anything, increase the gross rents since, in general, such provision is less efficient than centralized equivalents.

<sup>See Michael A. Stegman, "Multifamily Distress and the Conservation of Older Neighborhoods: A Cause for National Concern" (Washington, D.C.: U.S. Department of Housing and Urban Development, Office of Policy Development and Research, February 1978).
Information secured from Goldman-Sachs investment research, spring 1978.
For further elaboration, see addenda.
See Stephen R. Seidel, Government Regulation and Housing Costs (New Brunswick, N.J.: Rutgers University, Center for Urban Policy Research, 1978).</sup>

Since 1970 there has been a steady rise in rent to income ratios. In part, this resulted from a shift of the more affluent renters into homeownership; in part, however, it is a reflection of the increased rents. required to meet operating costs.

In 1970, for all rental housing, gross rent as a percentage of income was 20 percent. By 1975, it had risen to 23 percent. In that year rentincome ratios were highest in large-scale multifamily housing, with the median at approximately the 24 percent level, as shown in exhibit 12. While the cost squeeze is far from unique to rental housing (increases in costs of homeownership have been higher than those of rental housing) homeownership costs have been offset by the capital gains resulting from inflation. The real costs of homeownership, at least for the more fortunate occupant, have been decreased by the increases in housing value. Thus homeownership has been sustained, despite the cost-income squeeze in this arena, by its speculative nature; by capital value increments which have abated the pressures of annual carrying costs.

Rent as a percent of income	Total (U.S.) renter	1 unit	1 to 4 units	5 to 9 units	10 to 19 units	20 to 49 units	50-plus units	Mobile- home or trailer
Total	24, 959	7, 736	6, 772	3, 028	2, 514	2, 058	2, 332	519
Less than 10 percent	3, 572 3, 990 6, 556	629 1, 215 1, 261 1, 018 1, 076 1, 668 869 22	484 987 1, 114 900 1, 121 1, 935 231 24	184 426 490 454 547 867 61 24	137 350 466 406 447 660 49 23	122 266 321 304 365 614 66 25	125 313 377 431 354 680 51 24	30 41 66 59. 80 132 ⁻ 111 26
	N	ortheast	North	Central		South		West:
Gross rent as a percent of income by region (median)		24.0		23.0		22.0		24. O

EXHIBIT 12.-RENTAL HOUSING-GROSS RENT AS A PERCENT OF INCOME (1975)

Source: U.S. Department of Commerce, Bureau of Census, "Annual Housing Survey (1975)," table 0-53-53 (unpublished).

The same does not hold true for rental housing. There is no equity buildup, the hard-pressed consumer simply finds a larger share of his or her income going for rents.

The imbalance, in a variety of areas, has brought either the reality or the threat of *rent control*. In turn, this has had a very strong chastening influence upon lender and builder willingness to become involved in the multifamily rental housing industry except under the most favorable circumstances.¹⁰ These largely revolve around luxury construction, the possibilities of condominium construction, and/or essentially a bailout Government mortgage. In this last case, the builder's profit comes not from operating the structure, but rather from its construction. The price, in turn, has been a massive wave of Government guaranteed multifamily mortgages which are in deep difficulty. As of late 1977, approximately 1 in 5 of the nearly 7,000 projects currently under Federal subsidy in the United States were

¹⁰ Emanuel Tobier, et al., Mortgage Financing and Housing Markets in New York State: A Preliminary Report (Albany, New York: New York State Legislature, May 1977).

either in a state of mortgage default or assignment, or the projects themselves have been acquired by HUD through foreclosure."

In the privately financed areas, the situation is not nearly as serious—but there is some indication of an increased level of mortgage delinquency. The drive toward condominium conversion bears strong witness to the reluctance of private operators to continue despite preferential tax legislation.

Cooperative and Condominium Conversion

The growth of the condominium and cooperative form of housing, particularly the former, is shown in exhibit 13. In 1970, there were only 85,000 condominium units in the United States. In the 5 years from 1970 to 1975, more than 1 million new units were constructed. In addition, there were 100,000 conversions. While the pattern in cooperatives clearly shows a preference for conversions, it also indicates new construction equal to 20 percent of the base in the 5 years from 1970 to 1975. By 1975, condominiums made up 1.85 percent of all occupied housing units of all configurations and cooperatives an additional 0.65 percent. While many of these were in townhouse configurations, as shown in the exhibit, a substantial proportion were high-rise and garden configurations, i.e., within the multifamily domain.¹²

EXHIBIT 13 .- CONDOMINIUM AND COOPERATIVE HOUSING STOCK (U.S. TOTAL)

[in thousands]

	Existing, 1970	New construction, 1970–75	Conversion, 1970–75	Removals, 1970–75	Inventory	Percent of all occupied units, 1975	
Condominiums	85	1,078	100	11	1, 252	1.85	
	351	70	25	7	439	.65	

DISTRIBUTION OF CONDOMINIUMS BY STRUCTURE TYPE

[ln	parcent	
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	Northeast	North- Central	South	West	United States
Townhouse Garden Highrise	55 35 10	35 40 25	40 40 20	55 40 5	45 40 15
Total	100	100	100	100	100

Source: U.S. Department of Housing and Urban Development, "HUD Condominium/Cooperative Study, Vol. 1--National Evaluation," p. 111-2, 1974; 111-25.

... Will the condominium or co-op replace the necessity for additional rental units? Certainly the preference for ownership, strongly supported both by inflationary considerations and the tax code, is substantial.

Broader public policy is caught on the horns of a dilemma: on the one hand, resident ownership has definitively been linked with positive conditions such as the maintenance and care of structures. On the other hand, given the mobility required by a technological society, one would

¹¹ Richard D. Baron, Beverly B. Huchman and Robert Kolodny, Preserving DUD. Assisted Multifamily Housing: An Affirmative Role for the Area Office (Working Submission to the U.S. Department of Housing and Urban Development, November 1977); see also HUD, Budget, Justification for 1979, Part 1, G2.
¹² For elaboration on this issue, see addenda.

have to view the potential shift toward the relative immobility of homeownership with some measure of concern. Rental housing for those without the required downpayment for home acquisition, for those in transit to more permanent location, and for those individuals who require the delegation of all the managerial function of ownership to others, should not pass from the scene—and, given its key nature and scale of its incidence, undoubtedly it will not.

Conclusions

The need for multifamily housing is a function of both household formation, and the share of those households who will find this type of shelter most appropriate to their needs and resources. Given a continuance of the 1975 market share by household type, we can forecast (after appropriate allowance for vacancy and demolition), a demand for multifamily housing well within our production capacity. Indeed, the production anticipated for 1978 is nearly 1½ times the annual requirement for 1975-80, slightly more than that ratio for the years in the decade of the 1980's and nearly twice as much as required in the 1990's. The "housing problem" has shifted from the provision of gross number of units—to a struggle for controlling their costs.

However, we caution that the aforementioned problems—high level of Government subsidy, high rate of inflation, high interest rates, escalating operating costs, the fear of rent control and condominium conversions are indeed serious and pose potential problems to the delivery of new multifamily units.

We have a significant need for increased provision of multifamily rental housing. We have the experience, the skilled manpower and the competence to construct it. We have yet to attack the issues of the costs and with them the adequacy of existing housing programs to deal with the problem.

The Federal efforts to decrease housing costs have largely revolved around cheapening the cost of money through subsidizing interest rates and/or extending the longevity of mortgages and thus reducing amortization. Despite efforts in this regard, the imbalance between rent and incomes has continued.

Under HUD section 8, we have approached the problem differently, in essence grouping all of the subsidy mechanisms into a rent allowance.¹³ By making the manifold stream of subsidies explicit and amassing them into one figure, we may have created a politically self-defeating program.¹⁴ The large scale of the annual subsidies involved raises some concern as to their potential longevity. We still have not come to grips with the basic cost issues in multifamily shelter, neither in land acquisition, construction, nor most significantly, in operation. In this last area; while there was an aborted attempt by HUD to develop a national training program and research activity, it is noted for its lack of accomplishment.

The gap between our production capacity and future need provides an opportunity to refine our approaches to providing new housing as well as offering a significant potential for additional upgrading of existing housing—increasing the demolition ratio.

 ¹³ Housing and Community Development Act of 1974, "Section 8 Housing Assistance Payment Program."
 ¹⁴ For elaboration on this issue, see addenda.

National data can be misleading. A vacancy in New York City does not provide housing opportunity for the family which has moved to Houston. Much of the challenge of the future must involve a selective pruning of archaic and faulty multifamily structures from areas of declining need, while maintaining an appropriate fiscal maintenance balance for the remainder. At the same time, however, the responsibility for developing new facilities for regions of high growth will be substantial. The increased trend toward government financing of multifamily housing indicates a weakness in their market viability—an inadequate balance between construction costs, financing, operating costs and rents. However, there is strong reason to believe that unless there is a significant shift out of one-family housing, a ver strong and critical review should be required of major incentive programs to increase the flow of multifamily units in any substantial measure in excess of the target figures presented here.

We have been coping with housing production in a relatively shortterm frame of reference. Even the 10-year projections of a decade ago, and the famous 26 million unit figure which resulted, failed to grasp the longevity of housing.¹⁵

Large-scale shelter structures make sense only with long-term utility. The apartment house built today must have utility for a minimum of 35 to 40 years, otherwise its real "costs" both to its developer and to the Nation as a whole may be completely inordinate. In turn, this basic arithmetic indicates the necessity for market projections certainly through the year 2000 and beyond.

¹⁵ Housing and Urban Development Act of 1908.

ADDENDA

I. THE COMPETITIVE FINANCIAL DISADVANTAGE OF MULTIFAMILY HOUSING

In our paper we have pointed to the inbalance between current capitalization rates for multifamily housing (in most areas of the country now in excess of 10 percent) versus the equivalent for shopping centers with recently consummated sales at the $7\frac{1}{2}$ percent mark. They are both forms of income property and historically have partaken of the same financial markets. They both represent avenues for highly leveraged investment through the use of long-term debt financing. Why the difference?

The variation lies primarily in the relative ease with which the shopping center leasing format adjusts to inflation. Typical leases involve a base rent charge with a percentage override past certain minimal sales volume. Assume that the physical volume of goods—the number of units and the quality thereof remains constant. Strictly as a function of inflation, once the minimal rent threshold is reached, the owner of a shopping center will receive additional rents as a percentage of the inflation in total dollar sales. The escalators are automatic, they do not require renegotiation but rather take place immediately.

While the depreciation aspects of investments in shopping centers have been somewhat altered over time through changes in the tax code, with additional limitations periodically under discussion, in a world troubled by inflation the shopping center looks relatively safeguarded. Thus, not only is the owner's equity relatively secure against the erosion of the dollar, but so is the collateral base of the mortgage holder.

In addition, there has been a rapid evolution of the variety of financial mechanisms used to underwrite such facilities with participation loans increasingly prevalent. A typical financing currently involves not merely a fixed yield mortgage but also some measure of upward flexibility, either some equity participation, a potential percentage rent override on sales past a certain level, or the equivalent. Leases with individual store tenants typically call for an instant passthrough of increased costs such as taxes. The services provided by the shopping center are precisely enumerated as are the requirements of the tenantry.

The contrast with the multifamily market is evident. Rents nationally have tended to lag the overall consumer price index, and indeed, have even more substantially lagged the costs of homeownership. Despite this there is substantial consumer resistance to rent increases commensurate with inflation. Time lags through more or less longterm leasing arrangements are not uncommonly built into the contractual arrangement.

More formidable, however, is the fear, either real or latent, of rent controls. These have tended to put a damper on increases. In a study, for example, conducted by Goldman-Sachs (the investment banking firm), the finding was made that rents generally would have to increase on the order of 20 to 25 percent before multifamily housing could be viewed as an appropriate investment vehicle for their clients.

In a sense, some multifamily housing has been the victim, at least in part, of a variety of federally or locally supported mortgage cost lowering schemes of the past. These have permitted initial financing at relatively lower interest charges than would have been required by free market rent levels. However, when mortgages are recast in order for owners to recapture equity, subsidized mortgages may not be available. An enormous gap then opens up between the capacity of the current rent levels to carry free market debt service requirements. For example, assume a building is financed under a below market rate mortgage at the 6 percent level, with the mortgage five times the rent roll of the building. In the course of time, the mortgage is paid down, and the owner wishes to recapture his equity by rolling over the indenture, i.e., refinancing it. Current market interest rates are at the 10 percent interest level. Again we will calculate the mortgage ' as five times the rent roll.

The difference in interest charges, very roughly calculated, is the 4 percent rate difference multiplied by five times the rent roll or 20 percent of the annual rent. While this illustration overstates the case rents, for example, may well have gone up since the initial mortgage was taken out—it illustrates the problem of moving from a subsidized market to a nonsubsidized one. The level of equity buildup in subsidized, rent limited structures, thus may be vastly overstated if just the level of amortization is viewed.

In the case of the shopping center, the disjuncture on refinancing is much less. While influenced by the overall increase in interest charges, there are very few that were the beneficiaries of subsidization.

The situation is further complicated by the archaic nature of operating patterns in multifamily housing. There has been little in the way of technological innovation, little in the way of labor saving devices or organizational formats which will produce real savings in operating costs. The historic capacity of the middle class to live in multifamily housing without subsidization was in very large part a tribute to the availability of inexpensive labor, of janitors and superintendents paid trivial sums of money plus perhaps a marginal basement apartment in return for a 60-hour workweek. The rapid unionization of this sector in some areas, the disappearance in all areas of equivalent adequate labor, imposes a very substantial operational stress. It has resulted with dissatisfaction toward the level of services on the part of tenants on the one hand and/or increased operating costs on the other.

The rent levels in multifamily housing are also limited by the tax benefits and investment opportunities available through alternative forms of housing. There is substantial evidence of a cream skimming procedure—a shift of more affluent tenantry over time to the onefamily market. While this may be attuned to national objectives, it leaves the remnant tenant pool much more limited in rent paying capacity (and for that matter, will).

It should be noted, in this latter context, that while a variety of Government aid programs for renters trigger in at 25 percent of income (less appropriate allowances for scale of family et cetera), there is substantial evidence that occupants of one-family housing are paying substantially higher proportions of their incomes for this privilege thus indicating relative preference in the marketplace for the latter shelter format.

In sum, therefore, sophisticated investors view the multifamily structure, except under unique circumstances and unique locations, as a relatively riskful, noninflation proof investment.

We have had substantial involvement in interviewing on an offthe-record basis, both major mutual savings banks and insurance companies which were once major investors in this form. Suffice it to say that, in general, it is now only of marginal interest.

II. THE FUTURE OF SECTION 8

The history of section 8 and the stipulations (subsequently generally violated) of the original enabling legislation and administrative requirements illustrates the frustrations, limitations, and learning about housing of a whole generation of programs. The legislation was an effort to take the Federal Government out of the real estate business—out of the production subsidy business, out of the locational problems and move rather to a revival of the low income market through direct subsidies to consumers. Its ideal was mixed income housing and the stimulation of construction and rehabilitation through the strengthening of demand. The increasing reality is one in which all or nearly all the tenants in a building are under section 8, of a constellation of aid programs used concurrently, with section 8 essentially sitting uneasily on top of them. And this is in direct contravention of its original intent as a replacement of such programs. It is one in which section 8 is increasingly used as a takeout mechanism for poorly conceived and/or financed governmental housing efforts of the past. In this latter regard, it is being utilized to relieve the fiscal pressures of FHA and State housing finance agency projects which would otherwise require refinancing.

Thus in a significant measure section 8 merely involves the propping up of older forms of Government subsidization by new forms of Government assistance rather than their replacement.

The program is enormously costly. At a time when median rental levels in New York City, for example, hover at around the \$200 per month mark, the fair market rents for new construction and substantial rehabilitation in elevator buildings within that city range from \$491 for an efficiency apartment to \$873 for a four-bedroom unit. For extant housing, the equivalent figures are \$223 and \$390. There is increasing evidence that the nominal maximums, particularly for new construction, become the minimums. There is additional evidence that there is much questionable rehabilitation being offered—and subsidized—by the program.

Certainly some of these programs are the results of administrative difficulties to be encountered by any new, complex approach to an area as varied as America's housing. However, the track record now is long enough to raise serious question.

At a minimum it will require much more in the way of supervision. We would suggest further that the unit costs are so high—the number of individuals covered by the programs so very large, as to limit its extent in the future. It does nothing to attack the basic operating cost problem, nor does it provide adequate stimulus for operational and/or construction efficiencies. The program conceptually is commendable—operationally we would view it as questionable.

III. FUTURE ADDITIONS OR REDUCTIONS OF THE RENTAL HOUSING STOCK THROUGH CONDOMINIUM CONVERSION OR SUBDIVISION OF ONE-FAMILY UNITS

The rental housing industry of the United States gives substantial indication of moving away from its unique operating pattern to one much closer to the European-particularly the French version; the condominium or co-op. In the basic paper we have cited the data which is available on condominium conversion. There is great variation in the rate at which this is taking place within the United States as a whole—and within the economic categories of tenantry as well. There is no question that for the more affluent members of our society, given current tax laws and the inability to pass through that portion of rents which go for local property taxes (an issue which is currently being raised by New York State) the condominium-co-op format has increasing post-tax virtues. These are further compounded by the possibilities it offers as a possible haven for inflation-fleeing dollar investments. We would suggest, however, that given the present income levels of the Nation's renters, the level of conversion, unless aided by some form of Government financing, will be relatively slow over time.

In terms of new construction of multifamily units, the pattern is much more forcefully toward condominiums. It should be noted that the data in these areas must be viewed with some measure of trepidation. Studies that we have undertaken in Florida, for example, indicate that a number of nominal condominium units, depending upon the vagaries of the market and specific ownership patterns are available for rent. The flow between these various forms of tenure is quite abrupt and probably at least in part, avoids the Census count net. To the degree therefore, that condo co-op replaces straight rental housing, there will be a decrease in the number of such units available.

The other side of the ledger, however, is the conversion of one-family private homes into two or more units. Though it has attracted much less attention, it may be equally forceful. Much of this is undertaken outside normal, legal procedures. Indeed, in a great many jurisdictions in which it is occurring—it is specifically illegal. We have undertaken a comparison of Census data over time which indicates for more twofamily homes than can be accounted for in terms of nominal permits and starts. The answer is conversion.

The median size of household since 1970 in the United States has gone from 3.14 persons down to the 2.8 level. The increase in homeownership costs as a percentage of income has been equally dramatic. Given these elements combined with the extraordinary number of four- and five-bedroom units, particularly in split-level configurations, yield a highly probable flow of conversion in the future.

Field studies undertaken by the Center for Urban Policy Research at Rutgers University, for example, in a classic post-World War II suburban area—Bergen County, N.J.—very specifically indicate that this process is well underway. It should be stressed that this is not merely a phenomenon of poor or central city areas—but rather one which is also taking place in the suburbs. Thus two conflicting elements are at work. The first, condominium conversion reducing the number of rental units, the second conversion of one-family homes into two or more units, increasing their availability. A side note should be entered in this reckoning which indicates some of the fiscal pressures which are at work. One of the more popular configurations of New York City housing now—and one which dominates the unaided housing starts is the so-called "illegal three." This is the term which is used in *official* city counts to denote structures which are nominally built and licensed for two-family occupancy but which incorporate as a matter of course a third unit. Given current real estate costs, this merely exemplifies the pressures to secure some measure of income in order to support ownership.

IV. RECOMMENDATIONS

1. HUD HAS A RESPONSIBILITY FOR ALL THE NATION'S HOUSING STOCK

The bulk of HUD programing, executive focus, and research has been devoted to the low rent-income end of the housing stock. There has been inadequate focus on the long pipeline which lies behind it, and on the enormous national investment in the general multifamily housing stock which simply cannot be replicated. Federal action, in terms of stemming the tide of abandonment and housing decay, has tended to intersect too little and too late in the process. In general, it has been based upon an inadequate comprehension of the overall dynamic. HUD simply must broaden its attention span.

2. WITHIN FHA THE LEVEL OF DATA MAINTENANCE AND COMPREHEN-SION ON MULTIFAMILY HOUSING IS TOTALLY INADEQUATE

While operating statements are required under a variety of FHA programs, they are rarely, if ever, audited, poorly reviewed, inadequately administered and standardized. Second, there is no overall attempt at analysis, at developing operating cost data, trend analysis, etc. In the absence of such devices abrupt and very costly crises which may have been long in the making come as unexpected surprises. We cannot afford the sloppiness involved. Nowhere in the United States is there adequate, impartial data on operating costs and the like for multifamily housing. We are collecting the raw elements required for such analysis but simply not closing the loop in terms of appropriate structuring and quantification.¹

8. TAX TREATMENT OF RENTS

The issue of the deductability by tenants of that portion of their rent which essentially flows through the landlord's hands to local jurisdictions in terms of real estate taxes must be reviewed. The situation is already coming to a head in New York and rather than a perfunctory acceptance or rejection of the concept a rigorous analysis of the future role of rental housing and the issue of its tax treatment should be undertaken.

¹A possible guide would be the operating data for multifamily buildings gathered under contract for New York City by the BLS.

4. THE FEDERAL ROLE IN RENT CONTROL

There should be no hesitation or reluctance to override local rent control ordinances when the latter impact the fiscal vitality of federally financed or guaranteed projects. The "on again-off again" of practice in this area has brought into question the whole validity of HUD rent guidelines. It has endangered both private and public multifamily investment and, most importantly, has left the courts and the electorate without a nonpartisan yardstick.

5. CONVENTIONALLY CONSTRUCTED MULTIFAMILY HOUSING IS TOO EXPENSIVE TO USE FOR SHORT-TERM CRISES

The scrappage rate (losses from the stock) are so high, the foreclosure and mortgage delinquency data so ominous, as to provide reason for apprehension. We have been much readier with subsidy mechanisms to launch multifamily housing, i.e., through mortgage subsidies and the like, than we have been to grasp the full-life cycle and the issues of refinancing.

There is currently substantial pressure to broaden out those provisions of section 223 which permit refinancing for rehabilitation of multifamily housing. Given the relative weakness of the market this may well end up with Uncle Sam becoming the owner of structures which come under the program by default of owners. The latter will liquidate their investment at nominal face values which simply overstate their market worth. The principle of supporting conversion is essential. Its operating mechanisms, however, require much more attention.

6. THERE IS AN ENORMOUS NEED FOR OPTIMIZATION OF MANAGEMENT AND OPERATING PROCEDURES IN MULTIFAMILY HOUSING

The Federal track record in this sphere is notable by its absence. While early experience in attempting to support an operational management research activity has been sadly disappointing, reexamination of the entire area is called for. The payoffs could be most considerable. Considering the fact that government at all levels is de facto the largest single owner of multifamily housing—and there is some indication if anything, the stock in its possession will increase there is both a broad as well as a parochial necessity for such programing.

7. MOST IMPORTANTLY OF ALL, IN THE LIGHT OF THE INFLATIONARY BONANZA THAT HAS BEEN ATTACHED TO HOMEOWNERSHIP, THE DEMAND FOR MULTIFAMILY HOUSING AS INDICATED IN THE BASE PAPER WILL NOT INCREASE

Estimates given current levels of market penetration by household characteristics multiplied by the numbers of households forecast in each of the several sectors considered, indicate that substantial conservatism must be the order of the day.

This is a very harsh reality particularly in terms of immediate need. There is a contraction in the availability of such facilities. But we are not dealing with a transient good. The only way such structures make sense is in terms of a long and useful lifetime. The costs of overoptimism in this sphere could be enormous.