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Working Paper

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**Japanese Housing Trends and
Financing Arrangements**

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AND FINANCIAL ARRANGEMENTS**

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JAPANESE HOUSING TRENDS AND FINANCING ARRANGEMENTS

INTRODUCTION

Japan currently has a very strong residential housing market. To better understand this market it is the purpose of this paper to provide some background information by summarizing the housing trends and financing arrangements in Japan. This will consist of general housing statistics, housing and land costs and major methods of financing.

HOUSING STARTS IN JAPAN

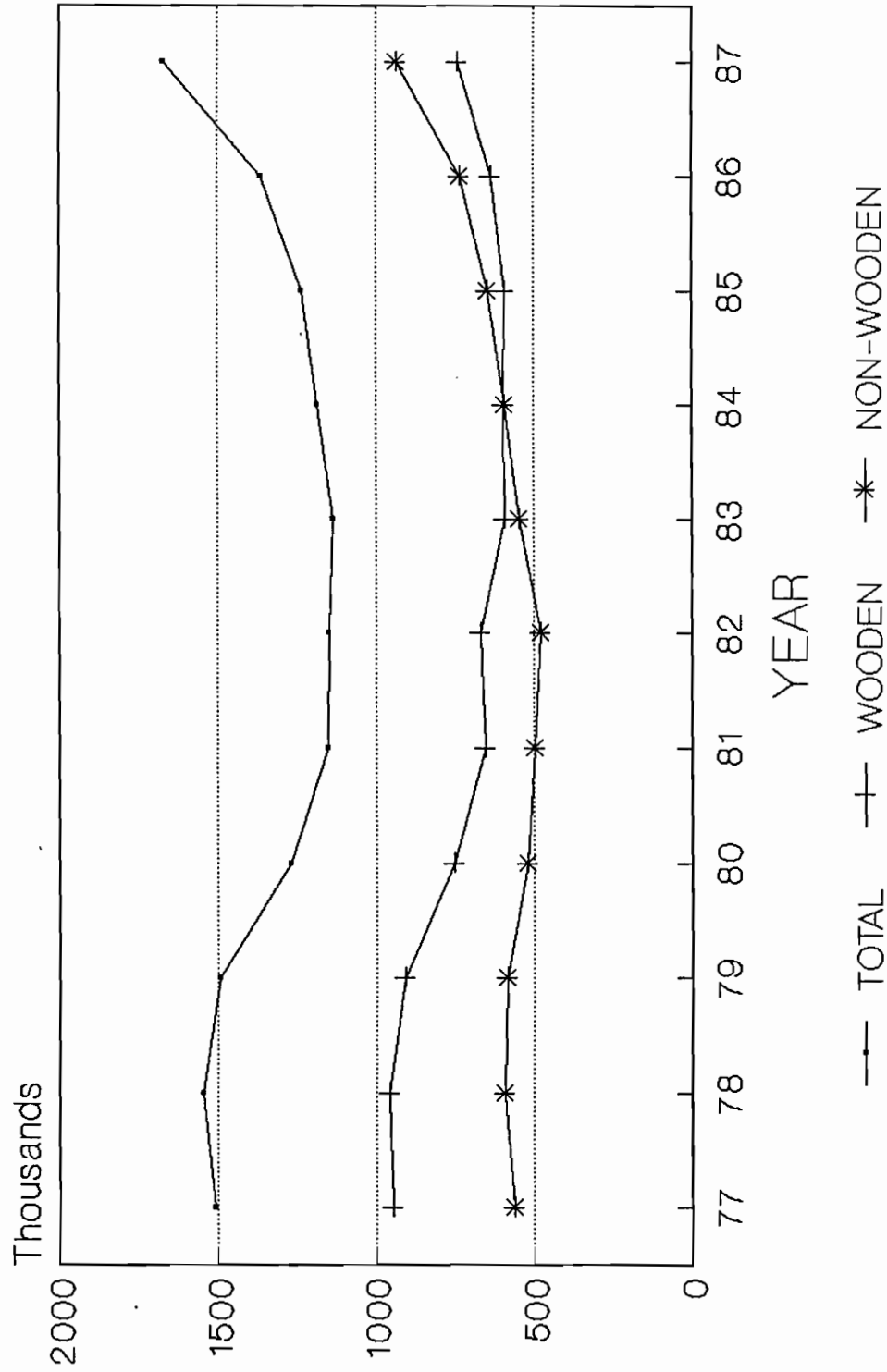
Figure 1 shows the level of Japanese housing starts for the past 10 years. After a decline in the early 1980's, housing starts realized a steady increase to a 10 year high of 1.674 million units in 1987 (NMBK, 1988). This trend is continuing in 1988 with an increase of 18% in the first two months of this year as compared with January and February 1987. It should be noted that even though there is an increase in the number of wood houses over the past 3 years, there has been a decline in the percentage of wood houses versus non-wood houses. Wood housing units have declined from a 62.7% of the total housing market in 1977 to 44% of the total market in 1987. The non-wood housing category includes single family and multifamily housing constructed primarily from concrete and steel.

Figure 2 presents Japanese housing starts by funding source (NMBK, 1988). Public funds are made available to homeowners for both construction loans and/or mortgage loans. These funds are primarily distributed by the Government Housing Loan Corporation (GHLC) comprising approximately 80% of all public funding and approximately 40% of all housing loans.

Private funds are made up of personal savings, pension funds, banks, savings and loans, etc. As can be seen in Figure 2, they are supporting a greater number of the residential loans than are public funds. Approximately 68% of the housing starts were funded by private funds in 1987 versus only 32% by public funds. It must be remembered, however, that these figures represent number of housing units, where each apartment is considered a single unit.

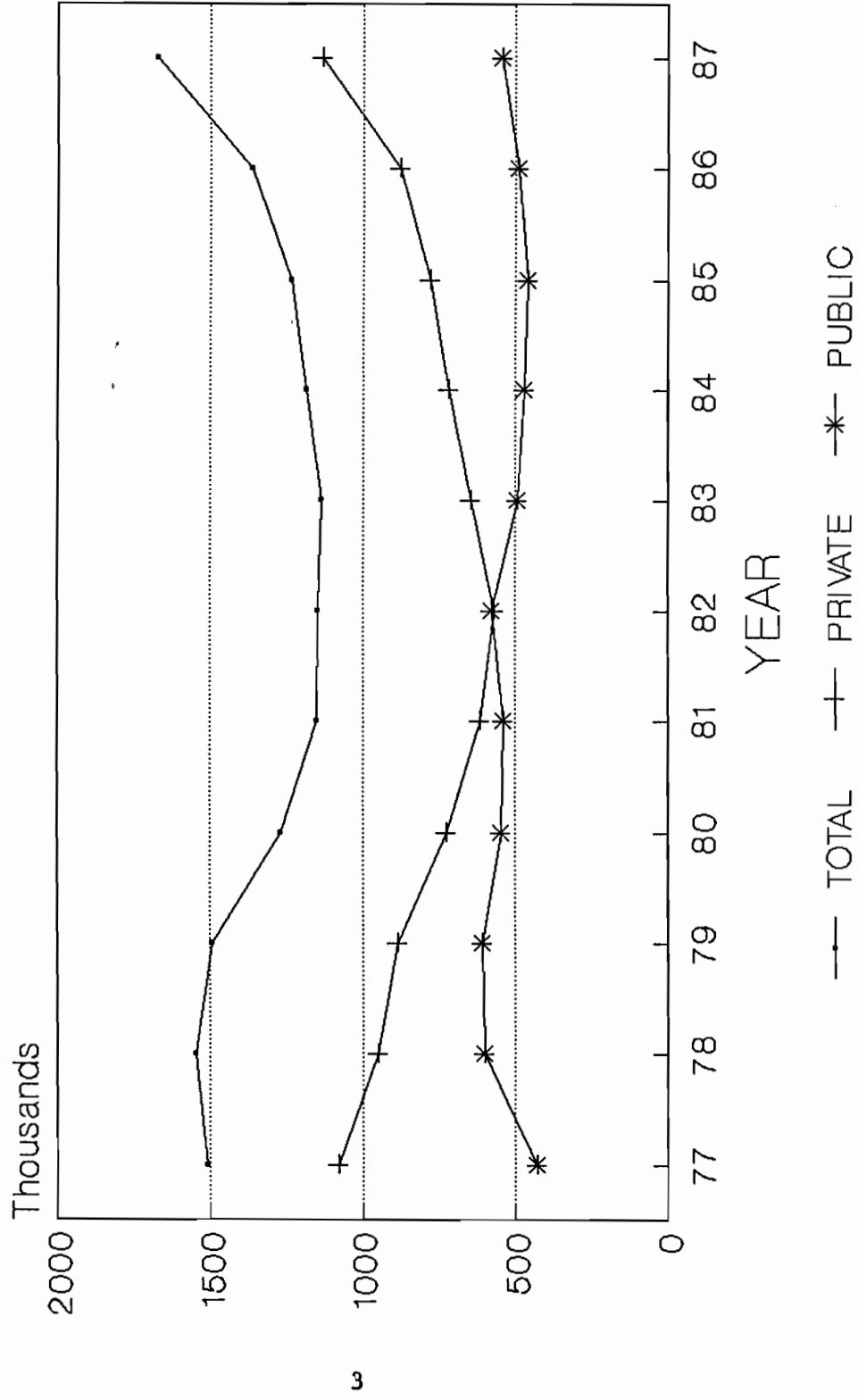
Single family housing is comprised of both wood housing and prefabricated housing. The wood housing portion contains both traditional Japanese post and beam type construction and the recently introduced 2x4 platform

FIGURE 1. JAPAN HOUSING STARTS (1977-1987)



FROM NIPPON MOKUZAI BICHIKU KIKO (4/88)

FIGURE 2. JAPAN HOUSING BY FUND SOURCE (1977-1988)



FROM NIPPON MOKUZAI BICHIKU KIKO (4/88)

frame type construction. Prefabricated housing is currently composed primarily of concrete and steel construction. In 1987, the traditional Japanese post and beam construction comprised 41.6% of the total housing starts and 2x4 platform frame construction comprised 2.4%. Prefabricated housing make up approximately 15% of the total housing starts and multiple story multifamily housing 41%.

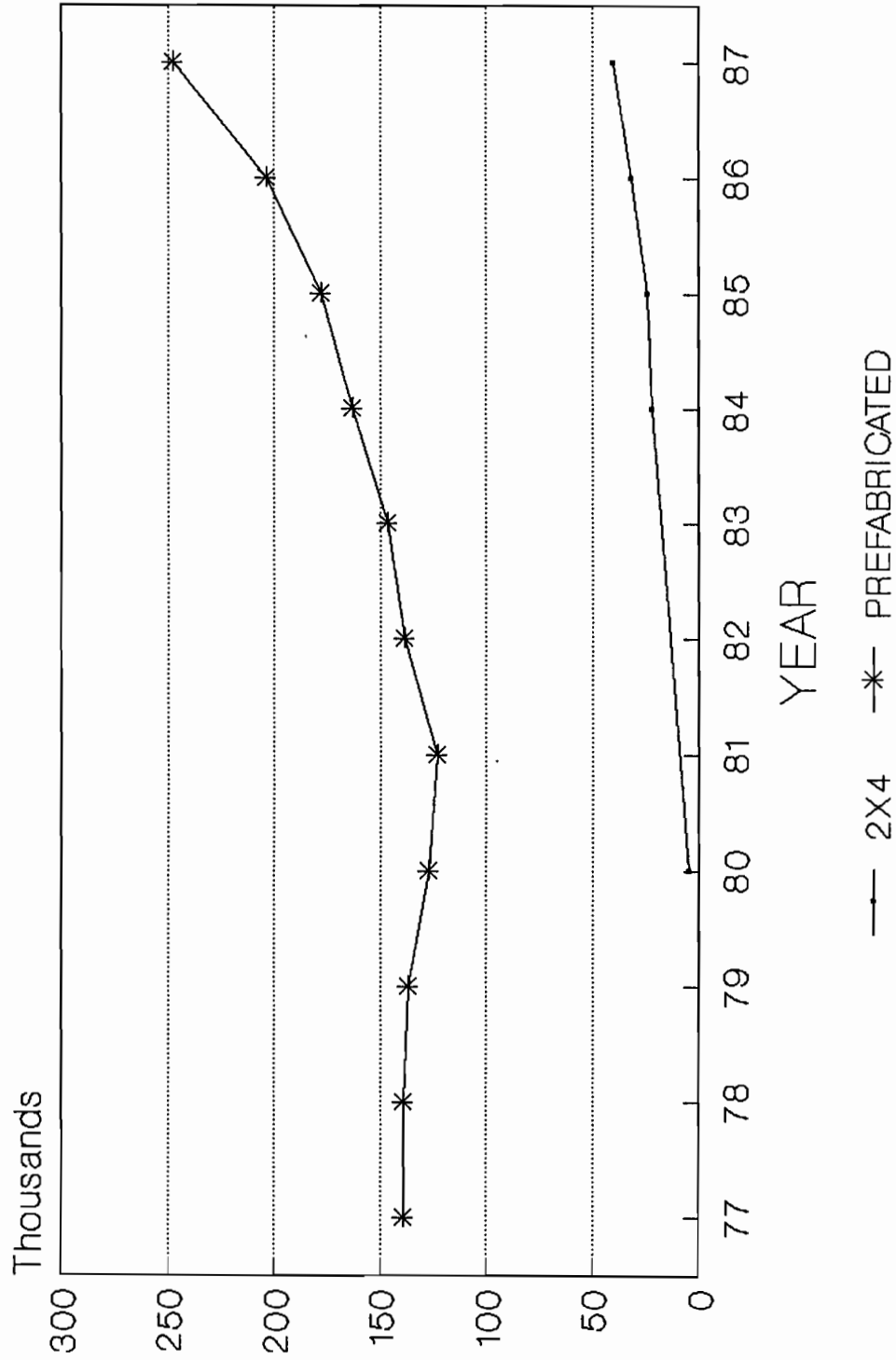
Platform frame and prefabricated housing might be considered competitors, therefore Figure 3 was produced to compare these two types (NMBK, 1988; MOC, 1985a). As can be seen, both building techniques are increasing steadily, the greater increase being enjoyed by prefabricated houses. There was a total of 247,455 prefabricated units built in 1987 versus 40,105 2x4 platform frame units.

The 2x4 platform frame housing in Japan is still primarily constructed using a 3x6 module. Studs are placed on 17 7/8 inch centers (455mm) and 3x6 plywood sheets are used. This 3x6 module originates directly from the tatami mat module used in traditional construction. Platform frame construction is also beginning to be used for multiple housing as shown in Figure 4. Even though single family housing has a larger number of housing starts, multiple family units using the 2x4 construction technique have been increasing at a greater rate (NMBK, 1988; MOC, 1985a). Of the 40,105 2x4 platform frame units built in 1987, 24,669 (61.5%) were single family and 15,436 (38.5%) were multifamily units.

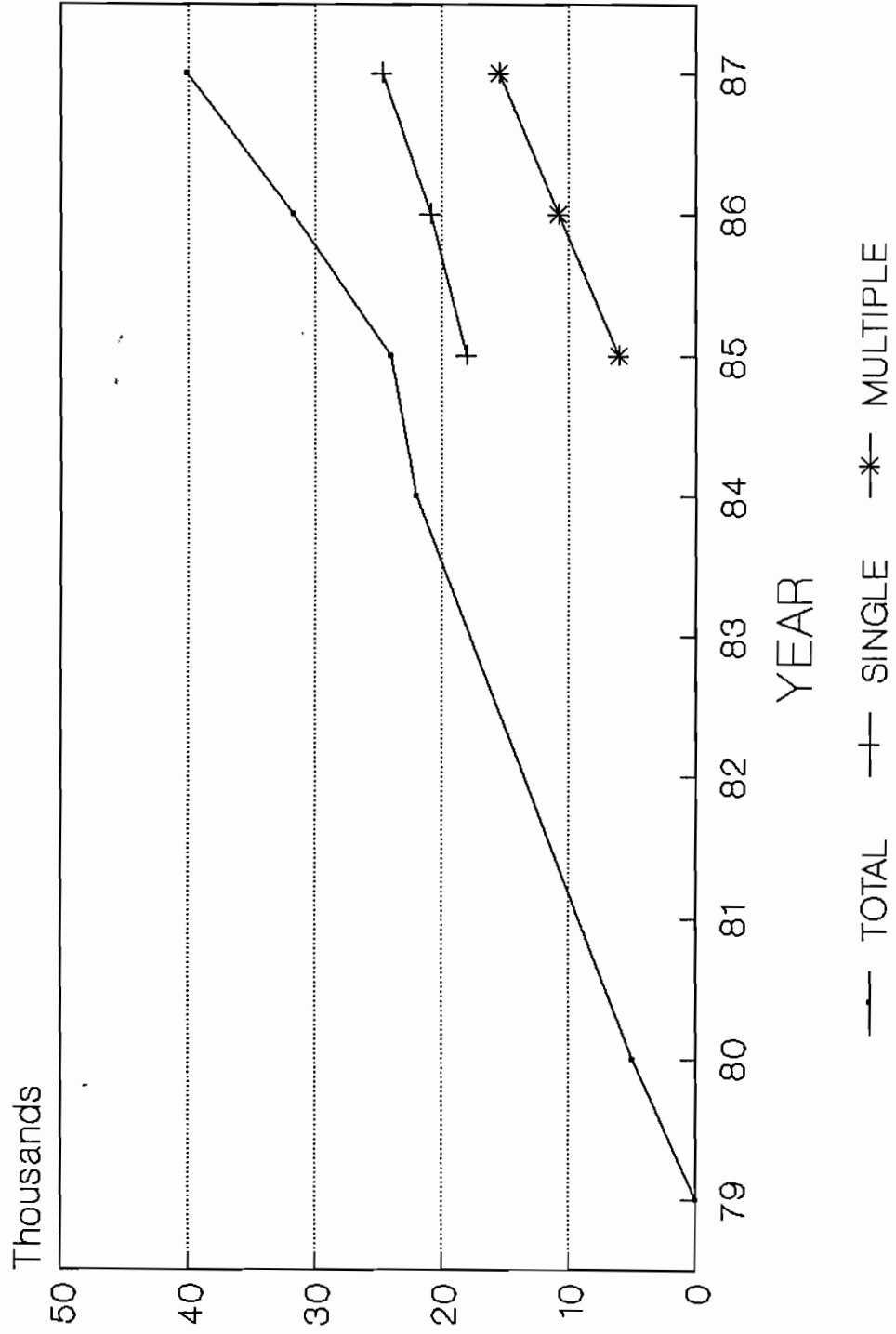
Average floor space per unit for wood housing is greater than that for non-wood housing as shown in Figure 5 (NMBK, 1988). The average square meter area for wood housing has held relatively steady while non-wood housing has been in a declining mode since 1982. These same general trends can also be seen in Figure 6 for housing funded by public funds versus private funds (NMBK, 1988). The influence of larger floor areas funded by public funds is thought to be due to greater funding of single family housing versus multifamily housing. One must be careful in interpreting these too closely, however, as they are averages and will vary depending on specific location. These values were obtained by dividing total floor space in each category by total number of housing starts in that category.

It is also interesting to note that the total floor space of wood housing units constructed in Japan in 1987 was 72.37 million square meters or 54.6% of the total whereas the non-wood housing was 60.15 million square meters or 45.4%. This indicates much greater use of wood in construction by wood housing than is indicated by number of housing units.

FIGURE 3. JAPAN 2X4 AND PREFABRICATED HOUSING STARTS (1977-1988)

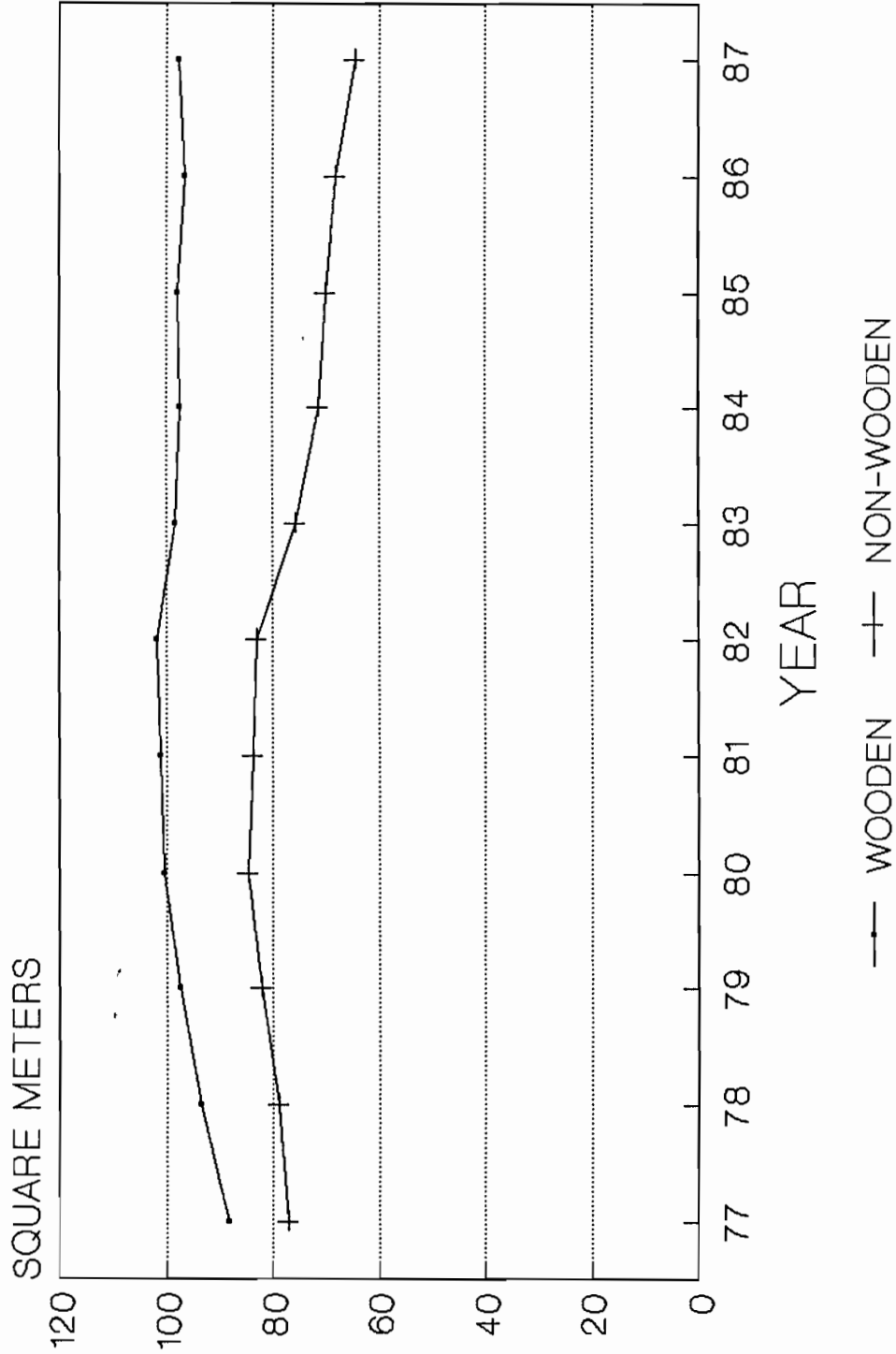


**FIGURE 4. JAPAN PLATFORM FRAME
HOUSING STARTS (1977-1988)**



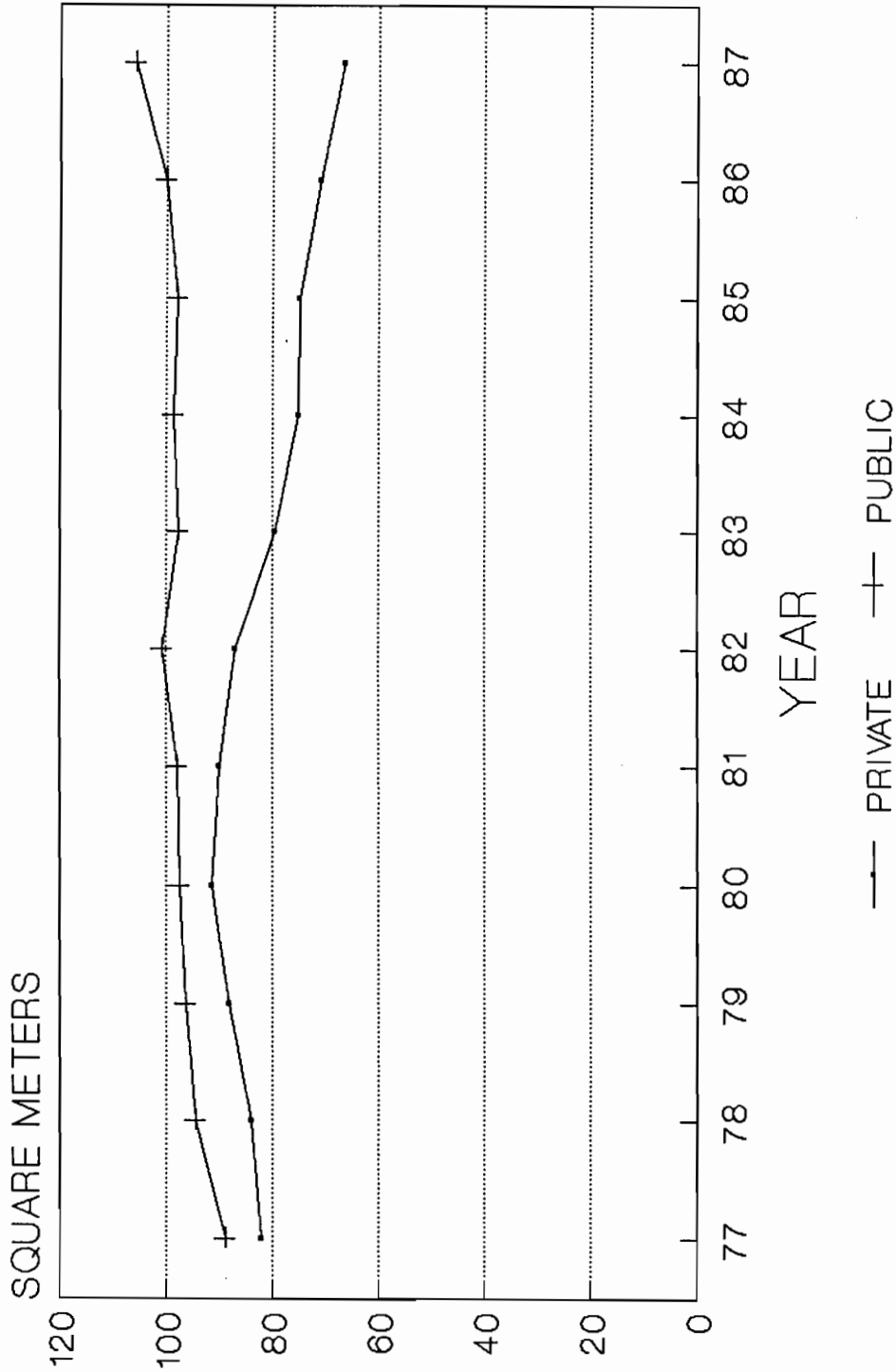
FROM MOC & NMBK

FIGURE 5. AVG FLOOR SPACE PER UNIT BY STRUCTURE (1977-1988)



FROM NIPPON MOKUZAI BICHIKU KIKO (4/88)

FIGURE 6. AVG FLOOR SPACE PER UNIT BY FUNDING (1977-1988)



FROM NIPPON MOKUZAI BICHIKU KIKO (4/88)

Lot size is also quite variable, depending on location in Japan. Land is limited, therefore a very high priced commodity and can comprise over 70% of total purchase price. Once a family owns land they tend to keep it and historically have rebuilt their homes approximately every 30 years. This also tends to keep the family in one location. It is therefore a very common practice to have three generations living in the same structure. It is expected that because of this, almost 40% of single family housing starts are in-fill, or replacement of older structures.

One current trend beginning to change this, however, is higher land prices are causing higher taxes. It is more economical or even necessary for some families, therefore to sell their high priced land in the larger cities and move to more comfortable and larger lots on the outskirts or suburban areas and commute. An hour commute is not considered unreasonable.

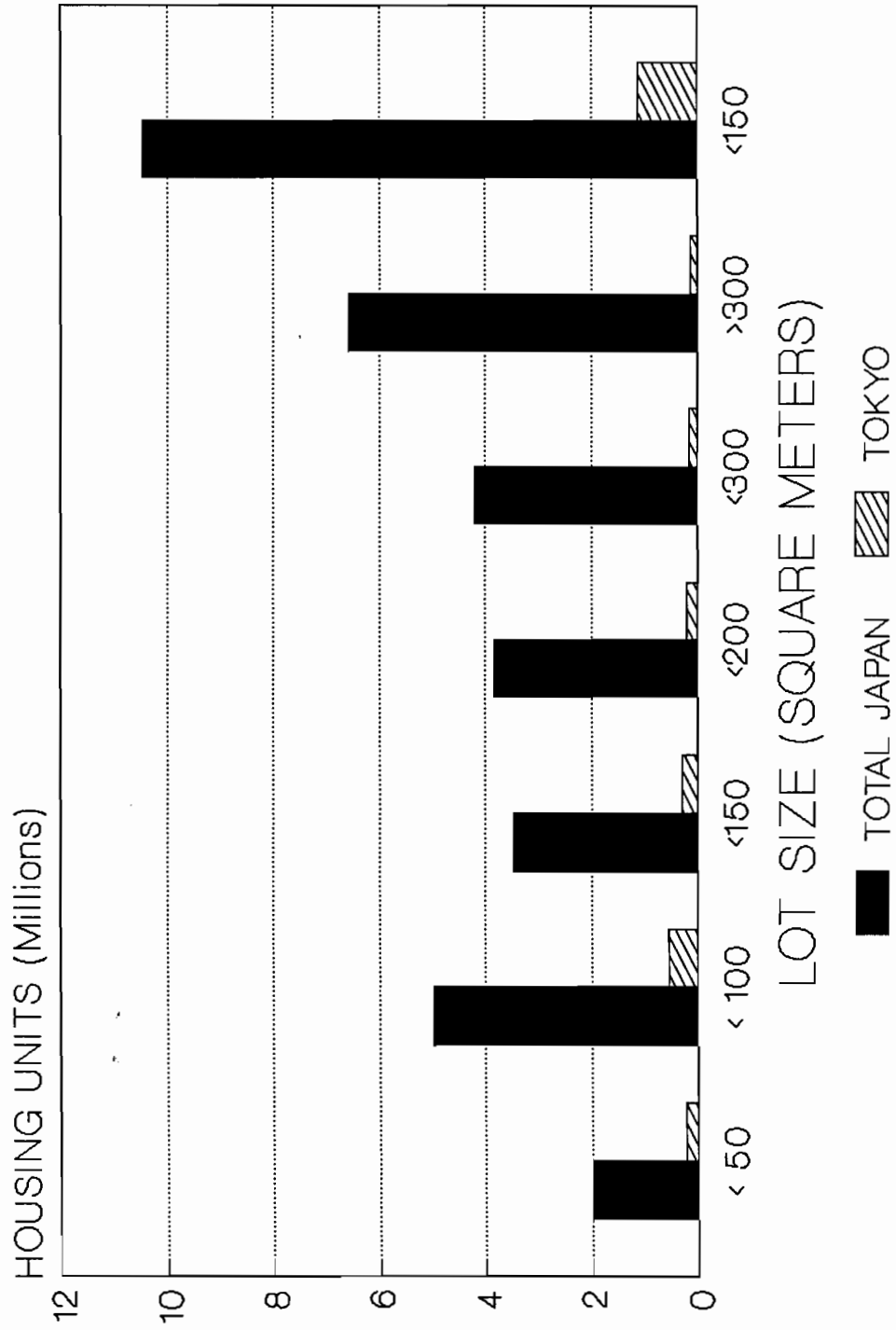
Even with the extremely high land costs, there is a large number of single family houses in Japan with lot sizes greater than 300 square meters. This amounts to 6.6 million houses or 26.1% of the total existing homes as of 1983, as shown in Figure 7 (MOC, 1985b). Lots 50-100 square meters make up 19.8%, lots 200-300 square meters 16.7%, lots 150 -200 square meters 15.3%, lots 100-150 square meters 13.8% and lots less than 50 square meters 8.0%. In the larger cities, the smaller lots are more common as would be expected. One example is Tokyo which has 64.6% of all single family lots less than 150 square meters, also shown in Figure 7.

Cost of housing in Japan depends on location and certainly type of house. On average, construction costs (excluding land) are approximately 130,000 yen per square meter for a single family dwelling and 350,000 yen per square meter (including land) to purchase a condominium [Figure 8 (GHLC, 1986)]. This amounts to approximately 3.3 times the single family homeowner's annual salary when the land is not included and 4.6 times the average salary of a typical condominium purchaser. When land cost is included for the single family homeowner, this ratio jumps to between 6 and 8 times their annual salary.

FINANCING

Methods for financing a home in Japan will depend on type of home being purchased. The steps a single family homeowner goes through is shown in Figure 9. Houses built by public agencies are built by their specifications, therefore a loan is usually easier. Still, financing procedure used requires a substantial down payment and loans from at least two institutions.

FIGURE 7. JAPAN LOT SIZES IN 1983



FROM: MOC, 1985

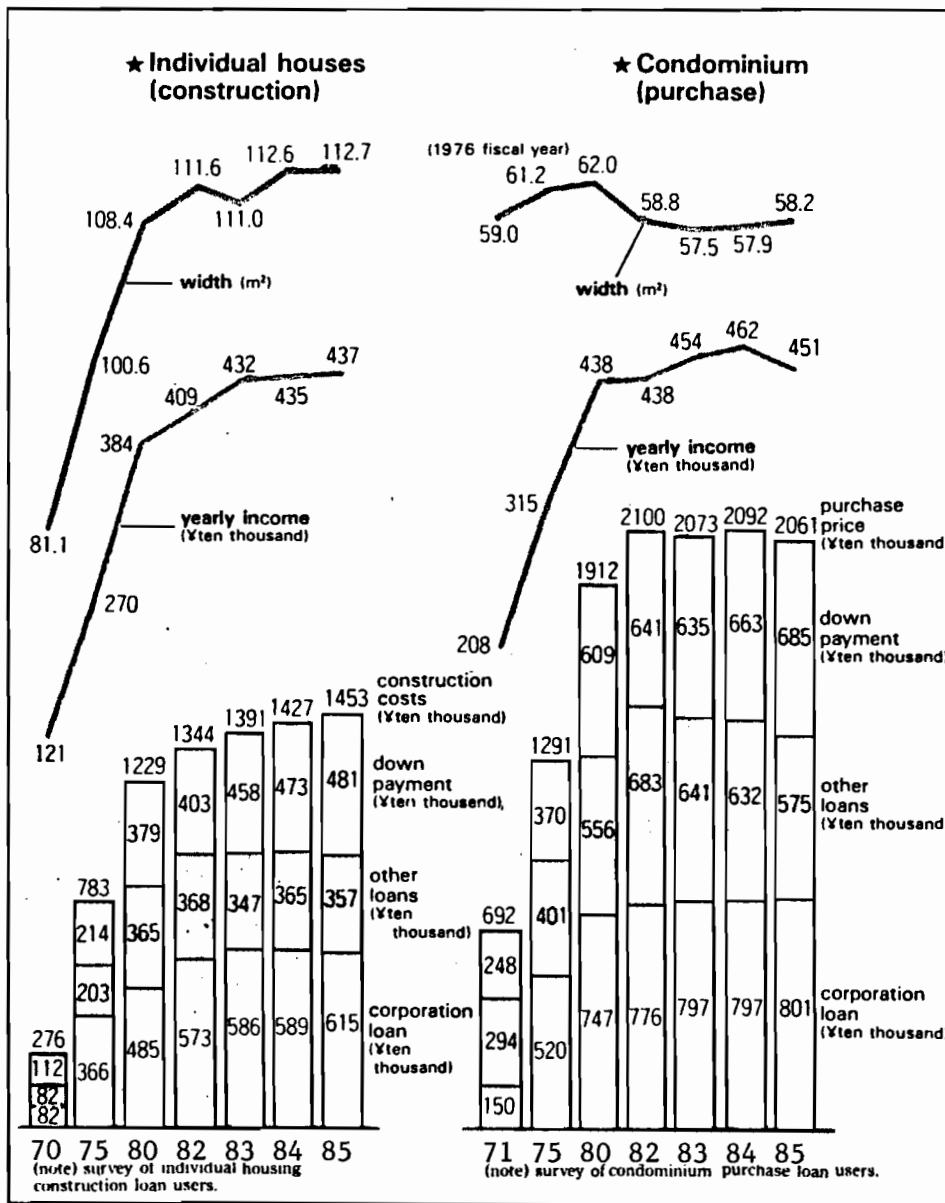
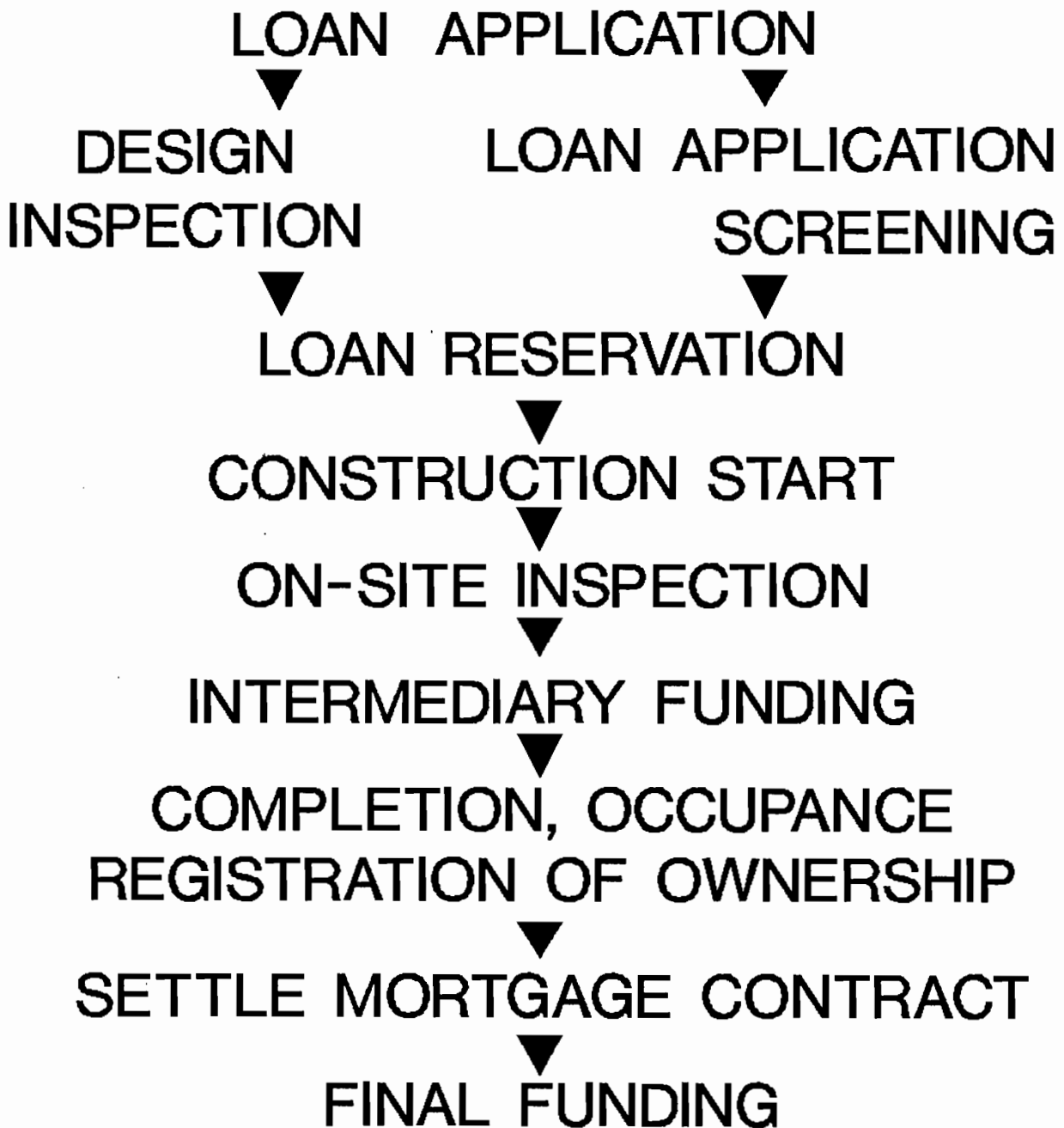


Figure 8

Construction costs for individual houses and average purchase prices for condominiums in Japan (From: GHLC 1986).

FIGURE 9. STEPS FOR RESIDENTIAL CONSTRUCTION



FROM: GHLC, 1986

The Government Housing Loan Corporation (GHLC) was established to help stimulate the economy by providing residential loans, loans for urban redevelopment and loans for rental housing as discussed previously. It is the largest single financing agency in Japan for residential loans. It is also a major force in housing development since all construction it finances has to be approved and conform to its specifications.

Table 1 is a summary of financing conditions specified by GHLC (1986). McKellar (1985) has described Japanese financing arrangements very well. His discussion will be used here verbatim.

"Public funding to increase housing supply can be divided into two categories: first, by direct public undertakings such as the construction of public housing supplied by the Housing and Urban Development Corporation (HUDC) and, second, indirectly through financial assistance to the prospective occupant. The latter includes owner-occupied houses financed by the HUDC and other public organizations. The number of owner-occupied houses financed by the GHLC on which construction was started in 1982 reached 340,000. This represents more than half of all owner-occupied houses started in that year. Houses for sale by the HUDC and the Local Housing Supply Corporation also encourage an increase in owner-occupied houses.

"The HUDC was established in 1981 as a result of a merger of the Japan Housing Corporation and the Housing Land Development Corporation. The Corporation started to construct houses in 1955 and through fiscal 1982 has supplied 430,000 houses for sale. For example, the Corporation planned to construct fifteen thousand houses for sale in 1982. These houses are eligible for long-term repayment schemes involving monthly payments on the principal and interest amortized over thirty-five years. In this case, the term of the loan is for an initial ten years at 5.5% for a value equivalent to 50 square meters or less of the total housing unit floor area. The remaining area is funded for the same term at a rate equivalent to the interest rate on the borrowing from the Treasury Loans and Investments Program Funds. This same rate also applies for the remaining twenty-five years of the Corporation's long-term special housing loan.

"The GHLC was established in 1950 in response to the severe shortage of houses. It was intended to extend long-term, low-interest housing loans which banks and other institutions were reluctant to provide. The long-term, low interest loans were to be co-ordinated with private housing loans to facilitate self-assisted acquisition of houses and to promote improvement in

Table 1
Summary of Financing Conditions Specified by GHLC
(From: GHLC 1986)

Type of loan	Classification	Interest rate (as of 8/1/86)		Financing ratio (maximum amount of loan)	Repayment terms
		1st 10 years	11th year on		
Individual houses construction	60m ² - 120m ²	5.25%	6.15%	*1 ¥6.3 mil. (wooden) *1 7.1 mil. (fireproof, quasi fireproof)	25, 30, 35 years
	120m ² - 145m ²	5.65%		*1 ¥7.0 mil. (wooden) *1 7.9 mil. (fireproof, quasi fireproof)	
	145m ² - 180m ²	6.15%		*1 ¥7.7 mil. (wooden) *1 8.7 mil. (fireproof, quasi fireproof)	
				within 80%	
Housing Supply Corporation houses for sale	General, specific	5.25%		*2 ¥8.4 mil. *3 10.1 mil. (specific within 99.45%)	Construction term
		6.8% (specific)			
		Same as private home construction			
Housing complex houses	Same as private houses construction note: home other than for-sale housing with area under 40m ²	5.65%		*4 ¥8.2 mil. *5 ¥9.1 mil.	15, 20 years
		6.15%			
Housing Supply Corporation Houses for sale	40m ² - 145m ²	5.65%		within 5 times or less as much as balance of property Accumulation Systems	25, 30, 35 years
		6.15%			
Housing complex houses	145m ² - 180m ²	5.88% (as of 8/1/86) for 5.9 mil. year 1, 2 years 5.75% 3.5 years 5.75% 6 years or more 5.88%		¥6.5 mil. (repair) ¥13.0 (construction, purchase)	10 years (including year of deterrent) 15, 20, 25, 30, 35 years (3 year of deterrent)
		5.05% (construction, purchase whole deterrents; 3.0%)			
Condominium	house improvements	5.9%		¥13.0 mil.	25, 30, 35 years (3 year of deterrent)
		5.9%			
Built houses	disaster relief houses	5.65%		¥4.9 mil. ¥3.8 mil.	15 years
		6.15%			
Used houses	Land slide etc. related houses	6.15%		within 80%	10 years (Housing Supply Corporation 20 years)
		6.15%			
Property accumulation houses	disaster-proof housing site construction	6.15%		within 80%	25 years (including 3 years deterrent)
		6.15%			
Disaster relief houses	house improvements	6.15%		within 90%	25, 35 years (owner-occupied houses)
		6.15%			
House improvements	Residential	6.15%		*2 ¥1.2 mil. *3 ¥1.46 mil.	35 years
		6.15%			
Urban redevelopment project etc.	Non-residential	6.15%		within 80%	25 years
		6.15%			
		6.15%			
		6.15%			
Medium and high-rise buildings	Rightful persons	6.15%		within 80%	25 years (including 3 years deterrent)
		6.15%			
Purchase	Housing in buildings	6.15%		within 80%	25 years
		6.15%			
Medium and high-rise buildings	Buildings etc.	6.15%		within 80%	25 years
		6.15%			
Housing Supply Corporation rental	Persons rightful buildings	6.15%		within 80% (facilities) 90% (rightful persons)	25 years (including 3 years deterrent)
		6.15%			
Private rental	General, site mortgaged	6.15%		within 75% (general) 99.45% (site mortgaged)	20 years (Regional environment adjustment: 25 years)
		6.15%			
Industrial Workers' houses	General with public houses	6.35%		75% (general) 90% (housing with public houses)	10 years (Regional environment adjustment: 15 years) (including 3 year deterrent)
		6.35%			
Public facilities etc.	General, dormitory	6.15%		within 75% (general) 80% (general)	30, 35, 50 years (Next fiscal year land: 5 years)
		6.15%			
Housing site development	Site mortgaged rental (general, specific)	6.15%		within 75% (lodging) 80% (general)	30, 35 years
		6.15%			
Loans for entrepreneurs	Town house rental	6.15%		within 99.45%	18, 25, 35 years
		6.15%			
Loans for entrepreneurs	A class, B class	6.15%		within 80%	15, 20, 25 years (including 3 years, 5 year deterrents)
		6.15%			
Loans for entrepreneurs	Public facilities, Public services	6.15%		within 80% (B class) 75% (A class, fireproof)	10 years (including 3 year deterrent)
		6.15%			
Loans for entrepreneurs	shops etc., kindergartens etc.	6.15%		within 70% (kindergartens) 75% (shops)	7 years (New town development projects 10 years)
		6.15%			
Loans for entrepreneurs	Public	6.15%		within 80% (Housing lots bonds 90%)	7 years (New town development projects 10 years)
		6.15%			
Loans for entrepreneurs	Private	6.15%		within 30% (acquired), 50% (developed)	7 years (New town development projects 10 years)
		6.15%			

*1 case of large cities *2 TOKYO, 23 wards, less than 120m built-houses; land more than 215m. ownership rights; condominium: more than 100 units, 6 floor or above, ownership rights TOKYO 23 wards.
*3 Housing complex housing (construction, purchase): 145m² - 180m², special standard houses
condominium built-houses: 145m² - 180m² Houses in buildings. etc: 145m² - 180m² *4 TOKYO, 23 wards, 6 floor or higher, ownership rights *5 TOKYO, 23 wards, 6 floor or higher, ownership rights *6 as a rule, houses which staged increase in interest rate is applied

overall housing quality. For the construction of private detached housing by individuals in 1982, the GHLC maximum loan was 6.2 million yen for up to 110 square meters and 6.5 million yen for between 110 and 165 square meters. The maximum loan for land was 5.0 million yen. For units for sale that were built by local housing supply corporations, the loan amount was 80% of the total construction cost with a maximum size of 165 square meters. In both cases, houses built by individuals and houses built for sale by local housing supply corporations, the interest rate was 5.5% for houses less than 110 square meters and 6.5% for 110-135 square meters; 7.3% for units 135-165 square meters or for those with an income per year of more than 10 million yen. In each case, the rate went up to 7.3% after eleven years. Amortization was twenty-five years for wooden houses, thirty years for semi-durable construction, and thirty-five years for fireproof construction. Principal and interest were required in the repayment schedule, and at the end of ten years there was the option of "stepping" up and/or taking over the loan privately.

"More recently, the GHLC has set upper limits on the housing unit floor space and on the value at which a house for sale is purchased. The Corporation has also employed an interest rate differential to be applied to loans, depending on income, size of house, etc. The GHLC is currently involved in about 40% of all annual housing construction in Japan.

"Private financing is available from various financial institutions, including banks, mutual banks, credit unions, and agricultural co-operative associations. Financial companies specializing in housing finance first appeared in Japan in 1971. Conditions of loans vary by institution. For example, city banks offer housing loans with the longest term (twenty years), an interest rate of 8.10%, and an annual repayment amount falling within 30 to 40% of the gross annual income. The size of the loan is restricted to 80% of value.

"Government also promotes a savings incentive system and a special tax incentive system for housing that has no North American counterparts. Interest on a housing loan, unlike in the USA but similar to Canada, is not a tax deductible expense.

"There are two kinds of savings systems. In one system, a person can receive a special public housing loan if a certain amount of money has been saved, that is, the Worker's Property Accumulation Savings System and the Housing Deposit in the Postal Savings System. In the other system, a person is given priority when purchasing a house being sold by a public corporation, that is, the

Housing and Housing Lot Bond System of the GHLC, the Acquisition of Housing for Sale by Reserve Fund System of the Local Housing Supply Corporation, and the Special Housing Bond System of the Housing and Urban Development Corporation.

"Companies and businesses may also extend housing loans to their employees at reduced rates of 4 to 5%, and these also fall under a provision of the special tax system on housing. The tax system offers various reduction and deduction measures applied to income tax, corporate tax, registration, and license taxes, as well as local taxes. These incentives were established to facilitate the acquisition of good quality owner-occupied housing, and , together with other financial systems for housing, the tax system is thus a key factor in Japanese housing policy.

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