4. *Japan*

(a) *Past trends*

The total fertility rate in Japan fell from 2.75 births per woman in 1950-1955 to 2.08 births in 1955-1960. Total fertility remained at the near-replacement level between 1960 and 1975, and it resumed falling slowly, reaching 1.49 births in 1990-1995. During the same period, the life expectancy at birth for both sexes combined increased markedly, from 63.9 years in 1950-1955 to 79.5 years in 1990-1995. The fertility decline and the increase in life expectancy in Japan brought about an increase in the proportion of the elderly. In 1995, the retired-age population (65 years old and over) represented 14.6 per cent of the total population, as compared to only 4.9 per cent in 1950. The ratio of the working-age population (15-64 years old) to the retired-age population increased from 11.0 in 1920 to 12.2 in 1950. It later decreased rapidly, to 4.8 in 1995. The notable increase in the median age of the population, from 22.3 years old in 1950 to 39.7 years old in 1995, is also indicative of the rapid demographic ageing that has taken place in Japan.

(b) *Scenario I*

The 1998 United Nations population projection assumes no net immigration to Japan from 1995 through 2050. According to the medium variant projection, the population of Japan would increase from 125.5 million in 1995 and reach its peak in 2005 at 127.5 million. Then the population would decline to 104.9 million by 2050 (the results of the 1998 United Nations projections are shown in the annex tables). The working age population (15-64 years old) of Japan is projected to decline continuously, from 87.2 million in 1995 to 57.1 million in 2050. The population aged 65 or older would increase from 18.3 million in 1995 to 34.0 million in 2045 and then decrease slightly to 33.3 million in 2050. As a result, the percentage of population aged 65 or older in the total population would more than double, from 14.6 per cent in 1995 to 31.8 per cent in 2050. The ratio of the working-age population to the retired-age population would continue declining, from 4.8 in 1995 to 2.2 in 2025 and 1.7 in 2050.

(c) *Scenario II*

As the United Nations *1998 Revision* assumes zero net migration in carrying out the population projections for Japan, scenarios I and II yield the same results.

(d) *Scenario III*

According to the medium variant projection of the United Nations *1998 Revision*, the population of Japan would reach a maximum of 127.5 million in 2005. If Japan wishes to keep the size of its population at the level attained in the year 2005, the country would need 17 million net immigrants up to the year 2050, or an average of 381,000 immigrants per year between 2005 and 2050. By 2050, the immigrants and their descendants would total 22.5 million and comprise 17.7 per cent of the total population of the country.

(e) *Scenario IV*

In order to keep the size of the working-age population constant at the 1995 level of 87.2 million, Japan would need 33.5 million immigrants from 1995 through 2050. This means an average of 609,000 immigrants are needed per year during this period. Under this scenario, the population of the country is projected to be 150.7 million by 2050. The number of post-1995 immigrants and their descendants would be 46 million, accounting for 30 per cent of the total population in 2050.

(f) *Scenario V*

Scenario V does not allow the potential support ratio to decrease below the value of 3.0. In order to achieve this, no immigrants would be needed until 2005, and 94.8 million immigrants would be needed between 2005 and 2050, an average of 2.1 million per year during that period. By 2050, out of a total population of 229 million, 124 million, or 54 per cent, would be post-1995 immigrants or their descendants.

(g) *Scenario VI*

This scenario keeps the ratio of the working-age population to the retired-age population at its 1995 level of 4.8. In order to keep this level of potential support ratio, the country would need 553 million immigrants during 1995 through 2050, or an average of 10 million immigrants per year. Under this scenario, the population of Japan is projected to be 818 million in 2050, and 87 per cent of them would be the post-1995 immigrants and their descendants.

(h) *Additional considerations*

The population of Japan aged faster between 1950 and 2000 than the populations of other developed countries owing to a rapid process of demographic change that consisted of declines in fertility and increases in survivorship. Under the assumption of zero immigration in the future, the total population as well as the working-age population of Japan is projected to decline continuously during most of the first half of the twenty-first century. Scenario III examined above suggests that, if the loss of population were to be prevented through immigration, 17.7 per cent of the population would be composed of immigrants and their descendants by 2050. Similarly, 30.4 per cent of the population would be made up of immigrants and their descendants by 2050 if the country wished to maintain the size of working-age population constant. In comparison, the proportion of foreigners among the total population is barely one per cent today. Figure 15 shows, for scenarios I, II, III and IV, the population of Japan in 2050, indicating the share that would be post-1995 migrants and their descendants.

Furthermore, if the potential support ratio were kept constant at the 1995 level, 553 million immigrants, or a number more than four times as large as the current population of the country, would be needed from 1995 through 2050. In addition, 87 per cent of the resulting population in 2050 would be immigrants and their descendants. These unlikely results suggest that substantial ageing of the population, in terms of a decline in the potential support ratio, is inevitable even if Japan increases immigration greatly.

In the absence of migration, the figures show that it would be necessary to raise the upper limit of the working age in Japan to 72.4 years to obtain a potential support ratio of 3.0 in 2050. This limit would need to increase to about 77 years in order to obtain in 2050 the same potential support ratio observed in 1995, which was 4.8 persons of working age per each older person past working age. Increasing the activity rates of the population, should it be possible, would only be a partial palliative to the decline in support ratio due to ageing. If the activity rates of all men and women aged 25 to 64 increased to 100 per cent by 2050, this would make up for only 15 per cent of the loss in the active support ratio resulting from the ageing of the population.
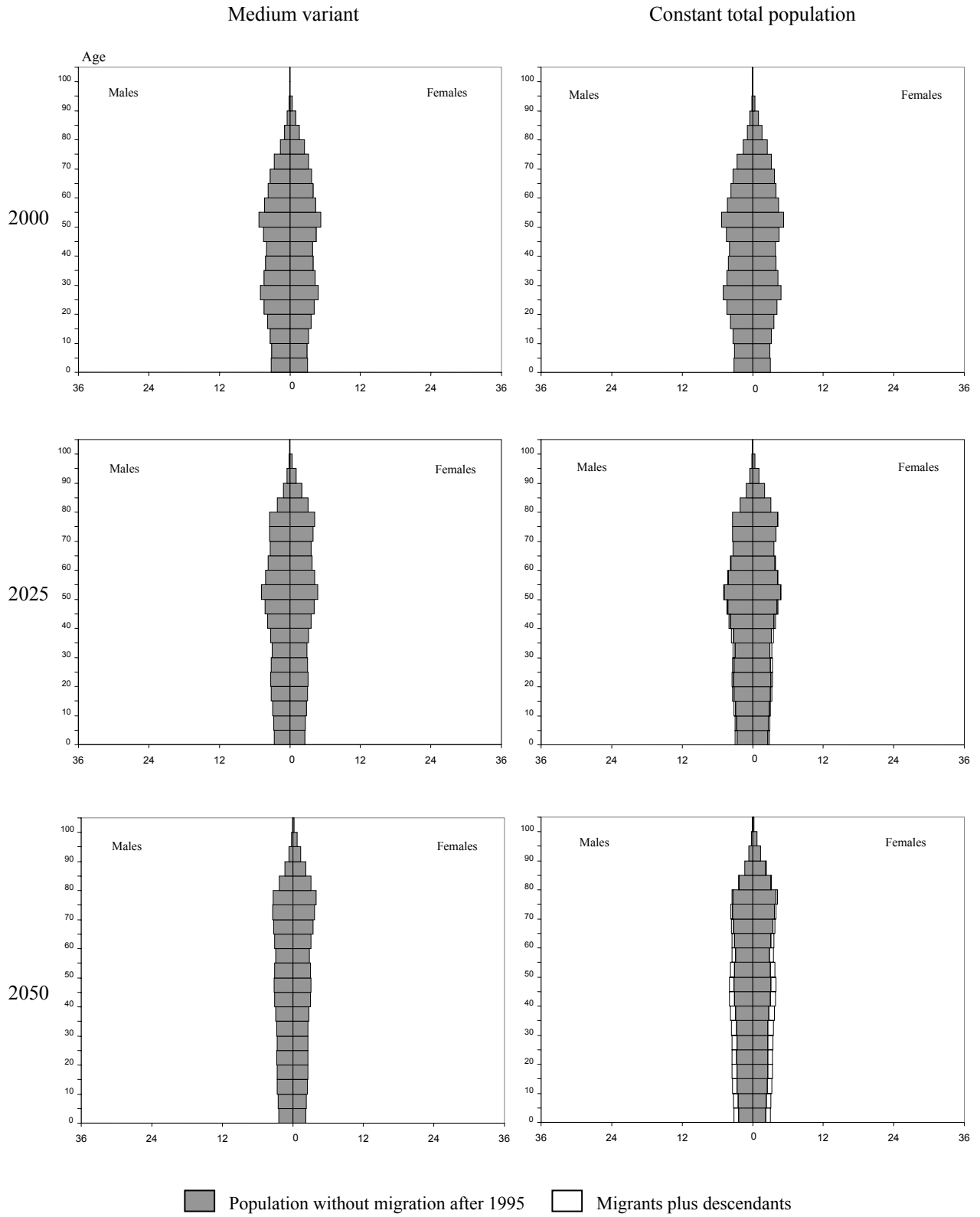
TABLE 21. POPULATION INDICATORS FOR JAPAN BY PERIOD FOR EACH SCENARIO

Period	I Medium variant	II Medium variant with zero migration	III Constant total population	IV Constant age group 15-64	V Ratio 15-64/65+ not less than 3.0	VI * Constant ratio 15-64/65 years or older
A. Average annual number of migrants (thousands)						
1995-2000	0	0	0	231	0	5 990
2000-2025	0	0	221	615	1 502	5 183
2025-2050	0	0	464	679	2 292	15 758
2000-2050	0	0	343	647	1 897	10 471
1995-2050	0	0	312	609	1 724	10 064
B. Total number of migrants (thousands)						
1995-2000	0	0	0	1 155	0	29 950
2000-2025	0	0	5 535	15 366	37 548	129 587
2025-2050	0	0	11 606	16 965	57 288	393 957
2000-2050	0	0	17 141	32 332	94 837	523 543
1995-2050	0	0	17 141	33 487	94 837	553 495
C. Total population (thousands)						
1950	83 625	-	-	-	-	-
1975	111 524	-	-	-	-	-
1995	125 472	-	-	-	-	-
2000	126 714	126 714	126 714	127 923	126 714	158 061
2025	121 150	121 150	127 457	141 877	166 849	323 376
2050	104 921	104 921	127 457	150 697	229 021	817 965
D. Age group 0-14 (thousands)						
1950	29 643	-	-	-	-	-
1975	27 109	-	-	-	-	-
1995	20 019	-	-	-	-	-
2000	18 765	18 765	18 765	19 078	18 765	26 888
2025	16 349	16 349	17 994	21 065	27 897	60 256
2050	14 511	14 511	19 297	23 619	41 266	170 785
E. Age group 15-64 (thousands)						
1950	49 847	-	-	-	-	-
1975	75 625	-	-	-	-	-
1995	87 188	-	-	-	-	-
2000	86 335	86 335	86 335	87 188	86 335	108 454
2025	72 418	72 418	76 803	87 188	104 213	217 547
2050	57 087	57 087	72 908	87 188	140 816	535 088
F. Age group 65+ (thousands)						
1950	4 135	-	-	-	-	-
1975	8 790	-	-	-	-	-
1995	18 264	-	-	-	-	-
2000	21 614	21 614	21 614	21 657	21 614	22 719
2025	32 383	32 383	32 660	33 624	34 738	45 572
2050	33 323	33 323	35 253	39 890	46 939	112 092
G. Potential support ratio 15-4/65+						
1950	12.05	-	-	-	-	-
1975	8.60	-	-	-	-	-
1995	4.77	-	-	-	-	-
2000	3.99	3.99	3.99	4.03	3.99	4.77
2025	2.24	2.24	2.35	2.59	3.00	4.77
2050	1.71	1.71	2.07	2.19	3.00	4.77

* Scenario VI is considered to be demographically unrealistic.

Figure 14. Age-sex structures by scenario for 2000, 2025 and 2050
(*Population in millions*)

Medium variant   Constant total population

Age

2000

2025

2050

☐ Population without migration after 1995   ☐ Migrants plus descendants

JAPAN

Figure 14 (continued)

Constant
age group 15-64

Constant ratio
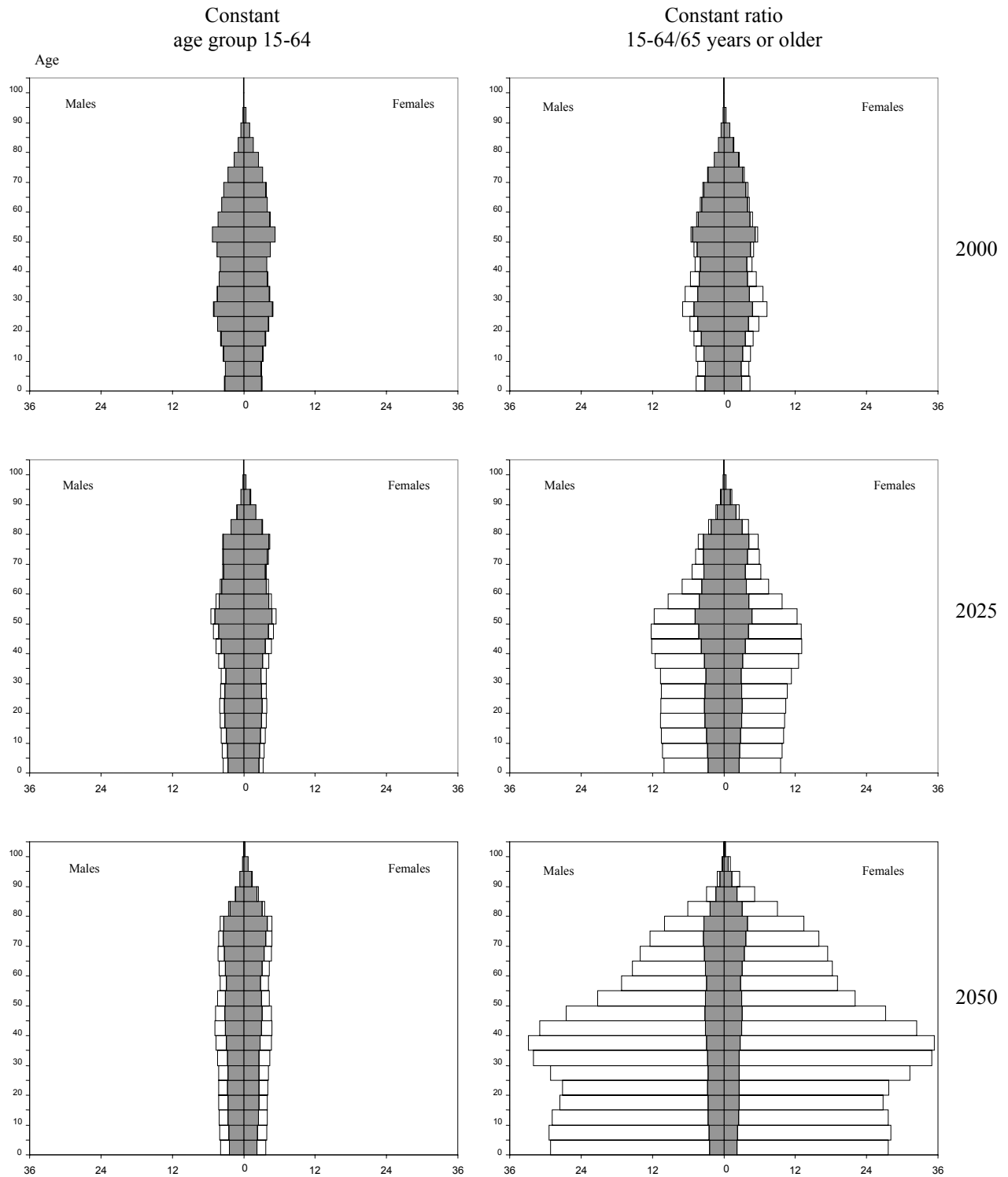15-64/65 years or older

**Figure 15. Population of Japan in 2050, indicating those who are
post-1995 migrants and their descendants, by scenario**

United Nations Population Division, *Replacement Migration*