IV. RESULTS

A. OVERVIEW

Past trends

At the middle of the twentieth century, the average fertility level stood at 2.6 children per woman in Europe and 2.4 children for the countries of the European Union (see table 5). For the countries in this study the range was from 2.2 children per woman in Germany and the United Kingdom to 2.7 children in France and in Japan. Fertility was markedly higher in the United States of America, 3.4 children, and even higher in the Republic of Korea, 5.4 children per woman. By 1965-1970, fertility had increased a little on average for the countries of the European Union, to 2.5 children per woman, but had fallen below replacement level in Japan and the Russian Federation at 2.0 children. Fertility had also decreased to 2.5 children in the United States and more slowly in the Republic of Korea, to 4.7 children. By 1995-2000, fertility was below replacement level in all countries and regions of the present study, with a relatively wide range of levels, from a high of 2.0 children in the United States to 1.2 children in Italy. The average for Europe and for the European Union was 1.4 children per woman.

As a consequence of this low, and decreasing, fertility history, coupled with a continuous decline in mortality, all populations aged rapidly. In 1950, the potential support ratio, which is defined as the ratio of the population aged 15-64 years to the population aged 65 years or older, ranged between 6 and 8 for the United States, the European Union countries, and Europe, and was 10 in the Russian Federation, 12 in Japan and 18 in the Republic of Korea. By 2000, the PSR had decreased by about 40 per cent, to 4 in the countries of the European Union and in Japan, 5 in the United States, the Russian Federation and Europe, and 11 in the Republic of Korea.

Scenario I

According to scenario I, the medium variant of the *1998 Revision,* the eight countries and two regions considered in this study would have below-replacement fertility levels until 2050 (see table 5). As a result, in all of these countries, with the exception of the United States, the total population would start declining before 2050. The population of Europe, for example, would be 101 million less (14 per cent) in 2050 than in 2000. The population of the European Union would be 44 million less in 2050 than in 2000, a 12 per cent reduction. Italy would see the largest relative loss, 28 per cent, followed by Japan at 17 per cent. The population of the United States would keep increasing significantly because its fertility does not fall far below replacement and substantial immigration is assumed to continue into the future. (The results of the *1998 Revision* are shown in the annex tables.)

All populations would continue to age rapidly. The PSR of the European Union and that of Europe would decrease by more than half between 2000 and 2050, from 4.1 to 2.0 and from 4.6 to 2.1, respectively. The largest decline, however, would be in the Republic of Korea, where the PSR would fall from 10.7 persons in the age group 15-64 years per one person aged 65 or older, to 2.4.

Scenario II

Scenario II is the medium variant of the *1998 Revision* with no migration assumed after 1995. It serves mostly as a backdrop, in order to measure by comparison the effects of the migrations assumed in the other scenarios. The European Union would lose 62 million people (17 per cent) between 2000 and 2050, and Europe would lose 123 million people (17 per cent) (see table 6). Since the migration streams assumed in scenario I are not very large, the results of scenario II are not substantially different from those of scenario I. The exception is the United States, where large flows of migration were assumed in scenario I. In scenario II the population of the United States would also start decreasing before 2050, and the increase between 2000 and 2050 would be 16 million (6 per cent), instead of 71 million as in scenario

I. In the group being studied, the only other countries where the population would be higher in 2050 than in 2000 are the Republic of Korea (10 per cent higher) and France (1 per cent higher).

In all countries and regions, the population aged 15-64 years would decline earlier and faster than the total population. For example, while the European Union would see its total population decline by 17 per cent between 2000 and 2050, the population aged 15-64 would decline by 30 per cent.

The proportion of the population aged 65 years or older would continue to increase rapidly, and in 2050 would reach 30 per cent for the European Union and 28 per cent for Europe. The highest proportion aged 65 years or older in 2050 would be in Italy (35 per cent) and in Germany and Japan (32 per cent). The lowest would be in the United States (23 per cent), with the Republic of Korea, the Russian Federation and the United Kingdom at 25 per cent, and France at 26 per cent. The potential support ratio would decrease rapidly for all countries and regions, reaching 1.9 for the European Union and 2.0 for Europe in 2050 (see table 7). The lowest level for the PSR in 2050, 1.5, would be in Italy, and the highest, 2.6, would be in the United States.

Scenario III

In the absence of migration after 1995, populations in all countries in the study and in the two regions would start declining before 2050. Scenario III keeps the size of the total population at the maximum level it would reach in the absence of migration. The dates at which this maximum would be reached differ by country. The earliest is 1995 for Germany, Italy, the Russian Federation and Europe, followed by 2000 for the European Union. The latest are 2035 for the Republic of Korea and 2030 for the United States. The total number of migrants needed to keep the total population constant at its maximum size until 2050 would be 47 million for the European Union and 100 million for Europe (see table 8). It would be 28 million in the Russian Federation, 18 million in Germany and 17 million in Japan, but only 1.5 million in France and in the Republic of Korea. In 2050 the proportion of the total population which would be made up of post-1995 immigrants and their descendants would range from 2 per cent in the United States and 3 per cent in France and the Republic of Korea, to 28 per cent in Germany and 29 per cent in Italy. The potential support ratios in 2050 would be a little higher than in scenario II, and range from 2.0 in Italy to 2.1 in Japan, 2.6 in the United States and 2.9 in the Russian Federation (see table 9).

Scenario IV

Scenario IV keeps the size of the population aged 15-64 years at the maximum level it would reach in the absence of migration. The dates at which this maximum would be reached differ by country. They range from 1995 for the European Union, Germany, Italy and Japan to 2000 for the Russian Federation and 2005 for Europe; 2010 for France and the United Kingdom; 2015 for the United States; and 2020 for the Republic of Korea. The total number of migrants needed to keep the population aged 15-64 constant until 2050 would be larger than in scenario III. The number that would be needed under scenario IV is 80 million for the European Union and 161 million for Europe (see table 8). The numbers range from 5 million in France and 6 million in the Republic of Korea and the United Kingdom to 25 million in Germany and 33 million in Japan. However, when the number of migrants is related to population size in the year 2000, it is Italy and Germany that would need the largest number of migrants over the period to 2050, respectively 6,500 and 6,000 annually per million inhabitants (see table 10 and figure 6). Among the countries studied, the United States would need the smallest number, approximately 1,300 per million inhabitants. In 2050 the proportion of the total population that would be made up of post-1995 immigrants and their descendants would range from 8 per cent in the United States to 12 per cent in France, 36 per cent in Germany and 39 per cent in Italy (see table 11). The potential support ratios would range from 2.2 in Italy and in Japan, to 2.8 in the Republic of Korea and 3.1 in the Russian Federation.

Scenario V

Scenario V prevents the potential support ratio from declining below the value of 3.0 by assuming net immigration once the PSR reaches the value of 3.0. The dates at which this occurs differ by country. The PSR reaches 3.0 in 2005 for Japan; in 2010 for Italy; in 2015 for Germany and the European Union; in 2020 for France and the United Kingdom; in 2025 for the United States and Europe; and in 2035 for the Russian Federation and the Republic of Korea. The total number of migrants that would be needed under scenario V is 154 million for the European Union and 235 million for Europe (see table 8). The numbers range from 12 million for the Republic of Korea, 14 million for the United Kingdom and 16 million for France, to 40 million for Germany, 45 million for the United States and 95 million for Japan. In 2050, the proportion of the population that would be post-1995 immigrants or their descendants would range from 17 per cent in the United States to 20 per cent in the Russian Federation, 53 per cent in Italy and 54 per cent in Japan (see table 11).

Scenario VI

Scenario VI keeps the potential support ratio at its 1995 level, which was 4.3 for the European Union, 4.8 for Europe, 4.1 in Italy and the United Kingdom, 5.6 in the Russian Federation and 12.6 in the Republic of Korea. The total number of migrants needed to keep the potential support ratio constant until 2050 is extremely large in all countries (see table 8). It is 700 million for the European Union and nearly 1.4 billion for Europe. It ranges from 60 million in the United Kingdom to 94 million in France, more than half a billion in Japan and the United States, and 5 billion in the Republic of Korea. In 2050, the proportion of the population that would be post-1995 migrants or their descendants would range from 59 per cent in the United Kingdom to 99 per cent in the Republic of Korea.

Discussion

In the absence of migration, all eight countries and the two regions with fertility below replacement will see their total population start declining before 2050, and their populations in the working-age group 15-64 years will decline even faster. Their populations will also age very rapidly. However many, if not most of them, have had immigrants in the recent past and can be expected to have immigrants in the future as well. Table 12 shows the annual net numbers of migrants for the period 1990 to 1998.

During the period 1990 to 1994, for example, the European Union received an average of a little over a million net immigrants per year and, during 1995 to 1998, a little over 600,000 per year. These numbers are quite close to the numbers of migrants that the European Union would need to receive to prevent its total population from declining: 612,000 per year between 2000 and 2025 and 1.3 million per year between 2025 and 2050. However, the annual numbers of immigrants who would be needed to prevent the population of working-age from declining are about double the numbers received in the last decade.

While the situation varies from country to country, it is somewhat similar in many of the countries with past experience with immigration. In France, Germany and the United Kingdom, the number of immigrants needed to keep constant either the total population or the working-age population varies irregularly through time because of specific age structures. These numbers are comparable to, or at most double, the number of immigrants received during the past decade. In the United States, the annual number of immigrants needed for both purposes is smaller than past immigration. In addition, the proportion in 2050 of the post-1995 migrants and their descendants in the total population (see table 11), in scenarios III and IV, is less than or equal to the proportion of migrants in the total population in 1990 in France (10.4 per cent) and in the United States (7.9 per cent). In Germany and in Italy, however, scenario III would result in about 30 per cent, and scenario IV about 40 per cent, of post-1995 migrants and their descendants in the 2050 population, which is much higher than at present (see table 13).

In scenarios III and IV, in all countries and regions, the potential support ratio would be much lower in 2050 than its 1995 level, and in some cases the decline in the PSR is substantial.

In scenario V all countries reach but do not go below the same level of PSR, 3.0 persons of active age for each older person. The number of migrants that would be needed is much larger than in the previous scenarios. These numbers are clearly politically unacceptable in all countries in the present study, except for the United States, where they correspond to the present and projected level of immigration.

The annual number of immigrants needed to keep the potential support ratios constant at their 1995 levels (scenario VI) is vastly larger, in every country, than any past experience (see figure 7). Scenario VI would furthermore result in having between 59 per cent and 99 per cent of the population of all countries in 2050 composed of post-1995 migrants and their descendants. This scenario is clearly not realistic; therefore, immigration cannot prevent ageing of the population.

In the absence of migration (scenario II), the figures show that in 2050 the ratios between the population in working-age and the population past working-age would remain at their 1995 levels if by that date, the upper limits of the working-age span should be increased from 65 years to about 72 years in the United Kingdom, 73 years in the Russian Federation, 74 years in France and the United States, 77 years in Germany, Italy and Japan, and 82 years in the Republic of Korea (see table 14).

Impact of Economic Activity Rates on Support Ratios

Except for Japan, the active support ratios for 1998 are lower than the PSRs in all countries (see table 16). For example, in France the PSR is 4.2 and the ASR is 2.9. This is the case because activity rates are lower than 100 per cent before age 65 and are very low after 65. The reductions from the PSR to the ASR range from 8 per cent in the Republic of Korea and 10 per cent in the United States, to 32 per cent in the Russian Federation and 39 per cent in Italy (see table 17). The resulting ASRs range from 2.7 in Italy, to 2.9 in France, 3.0 in Germany, 4.4 in Japan, 4.9 in the United States and 9.3 in the Republic of Korea (see table 16). In Japan, in contrast, economic activity rates are very high before age 65 and remain relatively high after 65: as a consequence, the ASR is 3 per cent higher than the PSR.

As noted, when economic activity rates between ages 25 and 64 are assumed to be 100 per cent, maximum possible gains in active support ratios are achieved. For 1998, ASR1 becomes higher than ASR by 22 per cent in Japan and by 50 per cent in Italy. The resulting ASR1s range from 3.7 in France, and 4.0 in Italy and the United Kingdom to 5.3 in Japan and 5.8 in the United States (and 12.2 in the Republic of Korea).

The support ratios (PSRs and ASRs) for the year 2050 are computed for scenario II, which assumes there is no migration after 1995, utilizing the 1998 age-specific economic activity rates. The ageing of the population between 1998 and 2050 will result in large declines of both the PSRs and ASRs, with the proportional declines in both indicators being very similar. The declines in ASRs will range from 44 per cent in the United Kingdom to 48 per cent in France, 59 per cent in the Russian Federation and Germany, 60 per cent in Japan and 81 per cent in the Republic of Korea. The ASRs in the year 2050 will range from 0.9 in Italy and 1.2 in Germany, to 1.8 in Japan and the United Kingdom, and 2.3 in the United States.

The computation of ASR1s for the year 2050 indicates that increasing activity rates to 100 per cent by 2050 for all men and women in the ages 25 to 64 would offset a relatively small part of the decline in the ASR, representing 8 per cent of the decline in the Republic of Korea, 15 per cent in Japan and 21 per cent in the United States, upto a maximum of 35 per cent in France and in the United Kingdom.

Thus, the conclusion from this brief analysis is relatively clear. Possible future increases in economic activity rates in the ages 25-64 cannot, on their own, be a solution to the decline in the active support ratios caused by ageing. If one wishes to keep active support ratios at levels closer to what they are currently, without large numbers of immigrants, serious consideration would have to be given to increasing active participation in the labour force beyond the age of 65 years.

The European Union and the United States—the world's two largest economic blocks, which are often in competition with each other—are projected to follow starkly contrasting demographic paths in the coming decades: while the population of the United States would increase by 82 million between 1995 and 2050, that of the European Union would decline by 41 million (see table 15). As a result, the population of the United States, which in 1995 was 105 million smaller than that of the European Union, would be larger by 18 million in 2050. The same trends would characterize their working-age populations: while the number of people aged 15-65 years would decline by 61 million in the European Union, in the United States this number would increase by 39 million. By 2050, the working-age population of the United States would outnumber that of the European Union by 26 million, while in 1995 the working-age population of the European Union outnumbered that of the United States by 75 million. Therefore, although the elderly population would increase more and at a faster rate in the United States than in the European Union, the potential support ratio would continue to be less favourable in the European Union compared to the United States. In 2050 the PSR would stand at 2.0 persons of working-age per elderly person in the European Union, in contrast with a PSR of 2.8 in the United States.

TABLE 5. TOTAL FERTILITY RATES, 1950 TO 2050, BY COUNTRY OR REGION
(*Number of children per woman*)

	Period				
Country or region	*1950-1955*	*1965-1970*	*1995-2000*	*2020-2025*	*2045-2050*
France	2.73	2.61	1.71	1.96	1.96
Germany	2.16	2.32	1.30	1.58	1.64
Italy	2.32	2.49	1.20	1.47	1.66
Japan	2.75	2.00	1.43	1.73	1.75
Republic of Korea	5.40	4.71	1.65	1.90	1.90
Russian Federation	2.51	2.02	1.35	1.70	1.70
United Kingdom	2.18	2.52	1.72	1.90	1.90
United States	3.45	2.55	1.99	1.90	1.90
Europe	2.56	2.35	1.42	1.67	1.78
European Union	2.39	2.52	1.44	1.45	1.80

Source: United Nations Population Division, *World Population Prospects: The 1998 Revision*.

TABLE 6. TOTAL POPULATION (ZERO MIGRATION AFTER 1995), 1950 TO 2050, BY COUNTRY OR REGION
(*Thousands*)

	Year				
Country or region	*1950*	*1975*	*2000*	*2025*	*2050*
France	41 289	52 699	58 879	61 121	59 357
Germany	68 376	78 679	80 985	72 643	58 812
Italy	47 104	55 441	56 950	50 679	40 722
Japan	83 625	111 524	126 714	121 150	104 921
Republic of Korea	20 357	35 281	46 946	53 020	51 751
Russian Federation	102 192	134 233	144 960	131 824	114 248
United Kingdom	50 616	56 226	58 600	58 768	55 594
United States	157 813	220 165	274 335	296 616	290 643
Europe	547 318	676 390	723 482	684 055	600 464
European Union	296 151	349 313	372 440	354 500	310 839

TABLE 7. POTENTIAL SUPPORT RATIO (ZERO MIGRATION AFTER 1995), 1950 TO 2050, BY COUNTRY OR REGION
(*Number of persons aged 15-64 per person aged 65 or older*)

	Year				
Country or region	*1950*	*1975*	*2000*	*2025*	*2050*
France	5.79	4.65	4.10	2.82	2.26
Germany	6.90	4.29	4.11	2.45	1.75
Italy	7.92	5.29	3.72	2.40	1.52
Japan	12.06	8.60	3.99	2.24	1.71
Republic of Korea	18.16	16.25	10.67	4.43	2.40
Russian Federation	10.49	7.66	5.51	3.63	2.41
United Kingdom	6.24	4.50	4.08	2.93	2.36
United States	7.83	6.15	5.21	3.09	2.57
Europe	7.99	5.67	4.65	3.03	2.04
European Union	6.97	4.84	4.06	2.66	1.89

TABLE 8. NET NUMBER OF MIGRANTS, 1995-2050, BY SCENARIO AND COUNTRY OR REGION
(*Thousands*)

Scenario	*I*	*II*	*III*	*IV*	*V*	*VI **
Country or region	*Medium Variant*	*Medium variant with zero migration*	*Constant total population*	*Constant age group 15-64*	*Ratio 15-64/65+ not less than 3.0*	*Constant ratio 15-64/65 years or older*
			A. Total number			
France	525	0	1 473	5 459	16 037	*93 794*
Germany	11 400	0	17 838	25 209	40 481	*188 497*
Italy	660	0	12 944	19 610	35 088	*119 684*
Japan	0	0	17 141	33 487	94 837	*553 495*
Republic of Korea	-450	0	1 509	6 426	11 595	*5 148 928*
Russian Federation	7 417	0	27 952	35 756	26 604	*257 110*
United Kingdom	1 200	0	2 634	6 247	13 674	*59 775*
United States	41 800	0	6 384	17 967	44 892	*592 757*
Europe	23 530	0	100 137	161 346	235 044	*1 386 151*
European Union	16 361	0	47 456	79 605	153 646	*700 506*
			B. Average annual number			
France	10	0	27	99	292	*1 705*
Germany	207	0	324	458	736	*3 427*
Italy	12	0	235	357	638	*2 176*
Japan	0	0	312	609	1 724	*10 064*
Republic of Korea	-8	0	27	117	211	*93 617*
Russian Federation	135	0	508	650	484	*4 675*
United Kingdom	22	0	48	114	249	*1 087*
United States	760	0	116	327	816	*10 777*
Europe	428	0	1 821	2 934	4 274	*25 203*
European Union	297	0	863	1 447	2 794	*12 736*

** Scenario VI is considered to be unrealistic.*

TABLE 9. POTENTIAL SUPPORT RATIO IN 1995, AND IN 2050 BY SCENARIO AND COUNTRY OR REGION
(*Number of persons aged 15-64 per person aged 65 or older*)

		2050					
		I	*II*	*III*	*IV*	*V*	*VI **
Country or region	*1995*	*Medium variant*	*Medium variant with zero migration*	*Constant total population*	*Constant age group 15-64*	*Ratio 15-64/65+ not less than 3.0*	*Constant ratio 15-64/65 years or older*
France	4.36	2.26	2.26	2.33	2.49	3.00	*4.36*
Germany	4.41	2.05	1.75	2.26	2.44	3.13	*4.41*
Italy	4.08	1.52	1.52	2.03	2.25	3.00	*4.08*
Japan	4.77	1.71	1.71	2.07	2.19	3.00	*4.77*
Republic of Korea	12.62	2.40	2.40	2.49	2.76	3.00	*12.62*
Russian Federation	5.62	2.43	2.44	2.86	3.12	3.00	*5.62*
United Kingdom	4.09	2.37	2.36	2.49	2.64	3.06	*4.09*
United States	5.21	2.82	2.57	2.63	2.74	3.04	*5.21*
Europe	4.81	2.11	2.04	2.38	2.62	3.00	*4.81*
European Union	4.31	1.97	1.89	2.21	2.42	3.03	*4.31*

** Scenario VI is considered to be unrealistic.*

TABLE 10. AVERAGE ANNUAL NET NUMBER OF MIGRANTS BETWEEN 2000 AND 2050, PER MILLION INHABITANTS IN 2000, BY SCENARIO AND COUNTRY OR REGION

Scenario	*I*	*II*	*III*	*IV*	*V*	*VI **
Country or region	*Medium Variant*	*Medium variant with zero migration*	*Constant total population*	*Constant age group 15-64*	*Ratio 15-64/65+ not less than 3.0*	*Constant ratio 15-64/65 years or older*
France	110	0	500	1 854	5 423	*30 430*
Germany	2 519	0	4 244	6 009	9 842	*44 825*
Italy	109	0	4 414	6 531	12 248	*39 818*
Japan	0	0	2 705	5 103	14 969	*82 634*
Republic of Korea	138	0	643	2 738	4 950	*2 184 700*
Russian Federation	752	0	3 435	4 933	3 621	*34 958*
United Kingdom	341	0	899	2 132	4 643	*20 383*
United States	2 770	0	465	1 310	3 226	*43 201*
Europe	519	0	2 650	4 460	6 450	*37 511*
European Union	724	0	2 548	4 262	8 188	*36 194*

** Scenario VI is considered to be unrealistic.*

TABLE 11. PER CENT OF POST-1995 MIGRANTS AND THEIR DESCENDANTS IN TOTAL POPULATION IN 2050, BY SCENARIO AND COUNTRY OR REGION

Scenario	*I*	*II*	*III*	*IV*	*V*	*VI **
Country or region	*Medium variant*	*Medium variant with zero migration*	*Constant total population*	*Constant age group 15-64*	*Ratio 15-64/65+ not less than 3.0*	*Constant ratio 15-64/65 years or older*
France	0.9	0.0	2.9	11.6	27.4	*68.3*
Germany	19.8	0.0	28.0	36.1	48.1	*80.3*
Italy	1.2	0.0	29.0	38.7	53.4	*79.0*
Japan	0.0	0.0	17.7	30.4	54.2	*87.2*
Republic of Korea	-0.9	0.0	3.2	13.9	21.3	*99.2*
Russian Federation	5.8	0.0	22.9	27.6	20.2	*71.9*
United Kingdom	1.9	0.0	5.5	13.6	25.3	*59.2*
United States	16.8	0.0	2.5	7.9	17.4	*72.7*
Europe	4.3	0.0	17.5	25.8	32.8	*74.4*
European Union	6.2	0.0	16.5	25.7	40.2	*74.7*

** Scenario VI is considered to be unrealistic.*

TABLE 12. NET ANNUAL MIGRATION FLOWS, 1990 TO 1998

Country or region/Year	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
France	80 000	90 000	90 000	70 000	50 000	40 000	35 000	40 000	40 000
Germany	656 166	602 563	776 397	462 284	315 568	398 263	281 493	93 433	50 821
Italy	24 212	4 163	181 913	181 070	153 364	95 499	149 745	126 554	113 804
Japan	2 000	38 000	34 000	-10 000	-82 000	-50 000	-13 000	14 000	38 000
Republic of Korea[a]	-	-	-10 000	-	-	-	-	-20 000	-
Russian Federation	164 000	51 600	176 100	430 100	810 000	502 200	343 600	352 600	285 200
United Kingdom	68 384	76 416	44 887	90 141	84 242	116 869	104 075	88 476	178 000
United States	1 536 483	1 827 167	973 977	904 292	804 416	720 461	915 900	798 378	660 477
Europe[a]	-	-	1 047 000	-	-	-	-	950 000	-
European Union	1 008 251	1 078 441	1 350 132	1 062 116	782 855	805 363	734 596	512 208	569 000

Sources: European Union, France, Germany, Italy and the United Kingdom: European Commission, Eurostat, *Demographic Statistics: Data 1960-99* (Luxembourg, 1999); Japan: Management and Coordination Agency, Statistics Bureau, *Japan Statistical Yearbook 2000* (Tokyo, 1999); Russian Federation: State Committee of Russia for Statistics, *Russian Statistical Yearbook 1999* (Moscow, 1999); United States: Immigration and Naturalization Service, *1997 Statistical Yearbook of the Immigration and Naturalization Service* (Washington, D.C., Government Printing Office, 1999); *Legal Immigration, Fiscal Year 1998*, Annual report No.2 (Washington, D.C., Department of Justice, 1999).

[a] Europe and the Republic of Korea: Averages for 1990-1995 and 1995-2000 from *World Population Prospects: The 1998 Revision*, vol.1 (United Nations publication, Sales No. E.99.XIII.9).

NOTE: Data for the United States of America contains only immigration; data for all other countries is net migration

TABLE 13. MIGRANT STOCK (FOREIGN-BORN POPULATION), 1990

Country or region	*Number of migrants (thousands)*	*Per cent of total population*
France	5 897	10.4
Germany[a]	5 037	6.4
Italy	1 549	2.7
Japan[a]	868	0.7
Russian Federation[b]	..	..
Republic of South Korea	900	2.1
United Kingdom	3 718	6.5
United States	19 603	7.9
Europe[c]	24 703	5.2
European Union	21 378	5.8

Source: *Trends in total migration stock, Revision 4* (POP/IB/DB/96/1/Rev.4), database maintained by the Population Division, Department of Economic and Social Affairs of the United Nations Secretariat.

[a] Data refer to foreign citizens.

[b] Data are not readily available.

[c] Data includes all European countries except those of the former Union of Soviet Socialist Republics and the former Yugoslavia.

TABLE 14. UPPER LIMIT OF WORKING-AGE NEEDED TO OBTAIN IN 2050 THE POTENTIAL SUPPORT RATIO OBSERVED IN 1995, SCENARIOS II AND V, BY COUNTRY OR REGION

Country or region	*Age*	
	Scenario II	*Scenario V*
France	73.9	69.0
Germany	77.2	72.4
Italy	77.3	74.7
Japan	77.0	72.4
Republic of Korea	82.2	67.6
Russian Federation	72.7	66.8
United Kingdom	72.3	68.2
United States	74.3	66.9
Europe	75.1	69.8
European Union	75.7	71.3

TABLE 15. TOTAL POPULATION IN 1995 AND IN 2050, AND GROWTH RATES BY SCENARIO, BY COUNTRY OR REGION

		2050					
		I	*II*	*III*	*IV*	*V*	*VI **
Country or region	*1995*	*Medium variant*	*Medium variant with zero migration*	*Constant total population*	*Constant age group 15-64*	*Ratio 15-64/65+ not less than 3.0*	*Constant ratio 15-64/65 years or older*
				A. Total population (thousands)			
France	58 020	59 883	59 357	61 121	67 130	81 719	*187 193*
Germany	81 661	73 303	58 812	81 661	92 022	113 181	*299 272*
Italy	57 338	41 197	40 722	57 338	66 395	87 345	*193 518*
Japan	125 472	104 921	104 921	127 457	150 697	229 021	*817 965*
Republic of Korea	44 949	51 275	51 751	53 470	60 125	65 736	*6 233 275*
Russian Federation	148 097	121 256	114 178	148 097	157 658	143 093	*406 551*
United Kingdom	58 308	56 667	55 594	58 833	64 354	74 398	*136 138*
United States	267 020	349 318	290 643	297 970	315 644	351 788	*1 065 174*
Europe	727 912	627 691	600 464	727 912	809 399	894 776	*2 346 459*
European Union	371 937	331 307	310 839	372 440	418 509	519 965	*1 228 341*
				B. Average annual growth rate 1995-2050 (per cent)			
France		0.06	0.04	0.09	0.27	0.62	*2.13*
Germany		-0.20	-0.60	0.00	0.22	0.60	*2.36*
Italy		-0.60	-0.62	0.00	0.27	0.77	*2.21*
Japan		-0.33	-0.33	0.03	0.33	1.10	*3.41*
Republic of Korea		0.24	0.26	0.32	0.53	0.69	*8.97*
Russian Federation		-0.36	-0.47	0.00	0.11	-0.06	*1.84*
United Kingdom		-0.05	-0.09	0.02	0.18	0.44	*1.54*
United States		0.49	0.15	0.20	0.30	0.50	*2.52*
Europe		-0.27	-0.35	0.00	0.19	0.38	*2.13*
European Union		-0.21	-0.33	0.00	0.21	0.61	*2.17*

** Scenario VI is considered to be unrealistic.*

TABLE 16. POTENTIAL SUPPORT RATIOS AND ACTIVE SUPPORT RATIOS, 1998 AND 2050

Country	*Measure*	*1998*	*2050*
France	PSR	4.19	2.26
	ASR	2.88	1.50
	ASR1	3.65	1.99
Germany	PSR	4.08	1.75
	ASR	2.99	1.24
	ASR1	3.89	1.67
Italy	PSR	4.42	1.52
	ASR	2.68	0.90
	ASR1	4.02	1.43
Japan	PSR	4.26	1.71
	ASR	4.37	1.76
	ASR1	5.34	2.14
Republic of Korea	PSR	10.03	2.40
	ASR	9.25	1.74
	ASR1	12.21	2.33
Russian Federation	PSR	5.57	2.41
	ASR	3.79	1.56
	ASR1	4.98	2.23
United Kingdom	PSR	4.07	2.36
	ASR	3.24	1.82
	ASR1	4.00	2.32
United States	PSR	5.37	2.57
	ASR	4.85	2.27
	ASR1	5.83	2.80

NOTES:
PSR = population (aged 15-64)/population (aged 65 or older)
ASR = active population (aged 15 or older)/non-active population (aged 65 or older)
ASR1 = active population (aged 15 or older)/non-active population (aged 65 or older), assuming that everybody aged 25 to 64 is economically active.

TABLE 17. CHANGES IN SUPPORT RATIOS
(Percentage)

	France	*Germany*	*Italy*	*Japan*	*Republic of Korea*	*Russian Federation*	*United Kingdom*	*United States*
Changes from PSR to ASR, 1998	-31	-27	-39	3	-8	-32	-20	-10
Changes from ASR to ASR1, 1998	27	30	50	22	32	31	24	20
Changes in ASR, 1998 to 2050	-48	-59	-66	-60	-81	-59	-44	-53
Changes in 2050 from ASR to ASR1, as a percentage of the changes in ASR between 1998 and 2050	35	24	30	15	8	30	35	21

Figure 6. Average annual net number of migrants between 2000 and 2050 to maintain size of working-age population, per million inhabitants in 2000

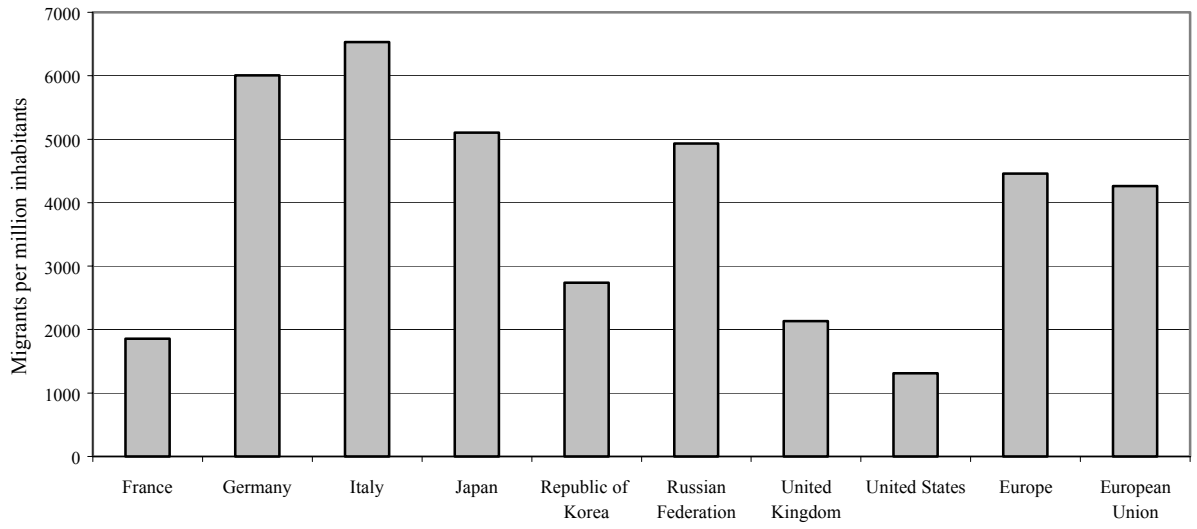

Figure 7. Average annual net number of migrants between 2000 and 2050 by scenario for the European Union