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Beyond the predictable: demographic changes in the EU up to 2050

The European Union has had a number of demographic surprises over the last 30 years. Fertility levels have dropped dramatically, life expectancy has continued to increase strongly and most Member States of the EU have become immigration countries. Consequently, the number of young people has declined significantly (by around 20%), whereas both those of working age and the elderly continued to grow in number.

What might happen in the next 50 years? Will the EU soon be confronted with a shrinking working age population? Will the under-20s be outnumbered by the over-60s? What can we say about the future demographic differences between EU countries?

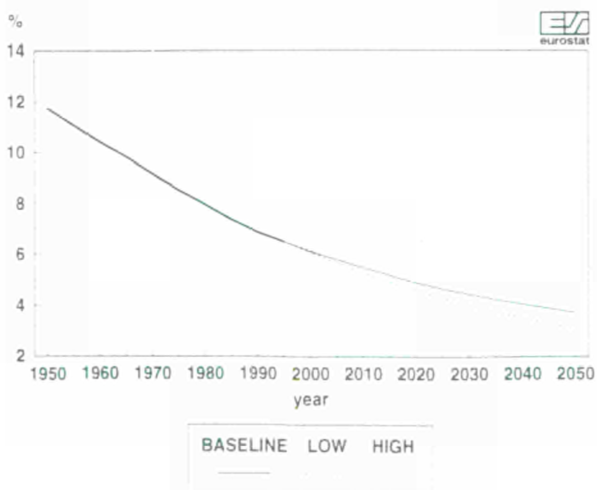
These and other questions are answered in this bulletin. Based upon five different but internationally consistent long-term population scenarios, a dozen principal future demographic trends are presented. A summary table concerning the key-assumptions of the scenarios can be found in the middle of this publication; a brief technical explanation is given at the end.

The EU's share in world population will continue to diminish

With its 373 million inhabitants on 1 January 1996, the European Union is the third largest world demographic power after China (1.204 billion) and India (944 million). It is ahead of the United States (264 million).

However, the EU's share in world population is diminishing. In 1950 the EU embraced almost 12% of mankind. Currently that figure is less than 7%, and if current fertility, mortality and international migration trends persist (baseline scenario), by the year 2050 no more than 4% will live in the EU (*Figure 1*). Even if fertility recovers and net migration returns to somewhat higher levels than actually observed (high scenario), this proportion will further decline.

Figure 1
EU population as a % of total world population



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Towards a shrinking population?

Figure 2 demonstrates that sooner or later total EU population will stagnate and decline. According to the low scenario, 'depopulation' will already occur within ten years, and by the year 2050 the total number of inhabitants will be very close to that observed in 1950.

The baseline scenario expects a population to peak around 2025, and a total population in 2050 close to the current one. Only the high scenario foresees a continuous increase over the next five decades, resulting in an EU population of 444 million in 2050. This is 20% more than the current population.

Within the Union, future population growth will be far from uniform. According to the baseline scenario, Italy will be already confronted with a population decline within 12 years, whilst both Luxembourg and Sweden will escape this experience (*Figure 3*).

Figure 2
Total population - EUR 15

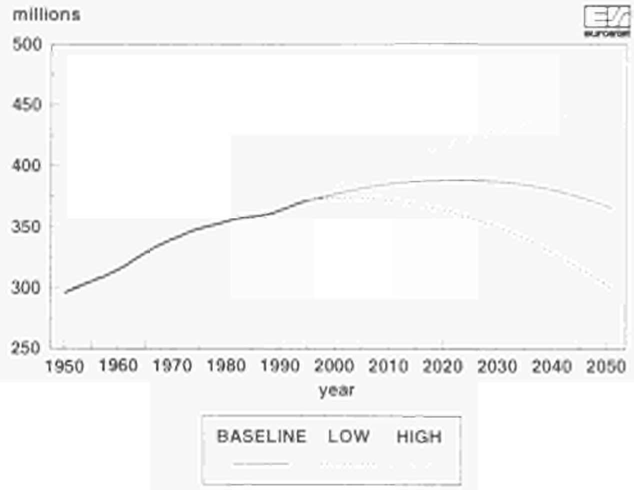


Figure 3
First calendar year of population decline - baseline scenario

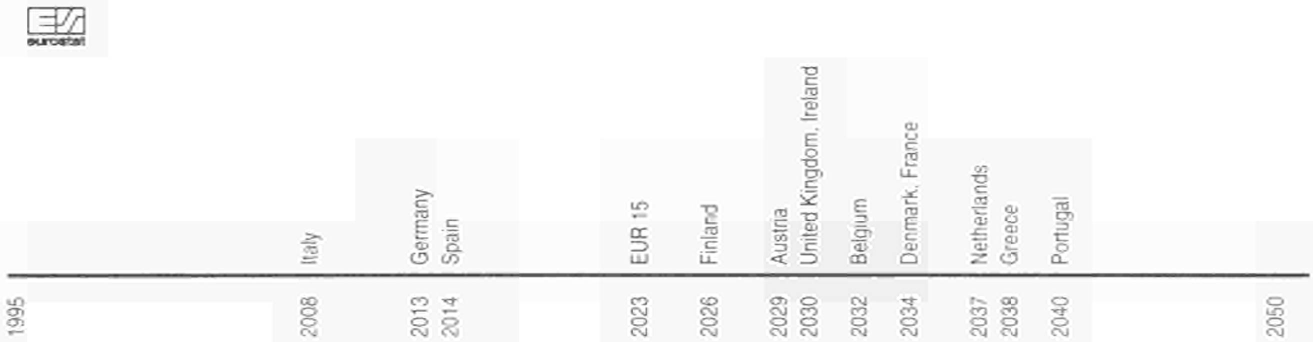


Table 1
Population at 1 January

	1995	2000			2020			2050		
	OBSERVED	LOW	BASELINE	HIGH	LOW	BASELINE	HIGH	LOW	BASELINE	HIGH
	(1000)									
EUR 15	371 575	373 791	376 951	380 545	363 785	388 232	416 382	303 475	367 729	444 821
Belgium	10 131	10 171	10 252	10 332	9 898	10 658	11 270	8 378	10 428	12 142
Denmark	5 216	5 271	5 321	5 365	5 075	5 526	5 960	4 296	5 542	6 675
Germany	81 539	82 323	83 123	84 013	79 374	84 670	91 659	63 420	77 069	94 885
Greece	10 443	10 539	10 643	10 720	10 460	11 269	11 900	9 060	11 242	12 978
Spain	39 177	39 239	39 544	39 945	37 809	40 307	43 504	30 451	36 736	45 120
France	58 020	58 815	59 179	59 710	59 307	62 831	66 896	52 349	62 063	73 940
Ireland	3 580	3 594	3 625	3 661	3 652	3 909	4 248	3 096	3 818	4 766
Italy	57 269	56 911	57 455	57 997	52 753	56 543	60 334	40 457	49 287	59 586
Luxembourg	407	428	435	440	445	501	555	408	563	714
Netherlands	15 424	15 684	15 868	15 982	15 819	17 204	18 319	13 747	17 564	20 719
Austria	8 040	8 076	8 144	8 234	7 882	8 443	9 231	6 610	8 241	10 349
Portugal	9 912	9 911	9 993	10 085	9 808	10 513	11 265	8 582	10 581	12 601
Finland	5 099	5 135	5 178	5 231	5 008	5 360	5 777	4 178	5 078	6 210
Sweden	8 816	8 852	8 932	9 034	8 792	9 470	10 248	7 964	10 082	12 210
United Kingdom	58 504	58 842	59 269	59 795	58 013	61 038	65 326	50 480	59 315	71 926
Iceland	267	276	278	279	294	311	326	260	311	352
Liechtenstein	31	31	32	32	32	35	38	26	33	42
Norway	4 348	4 421	4 462	4 498	4 494	4 851	5 156	4 095	5 161	6 065
EEA	376 221	378 519	381 733	385 381	368 605	393 429	421 902	307 855	373 234	451 280

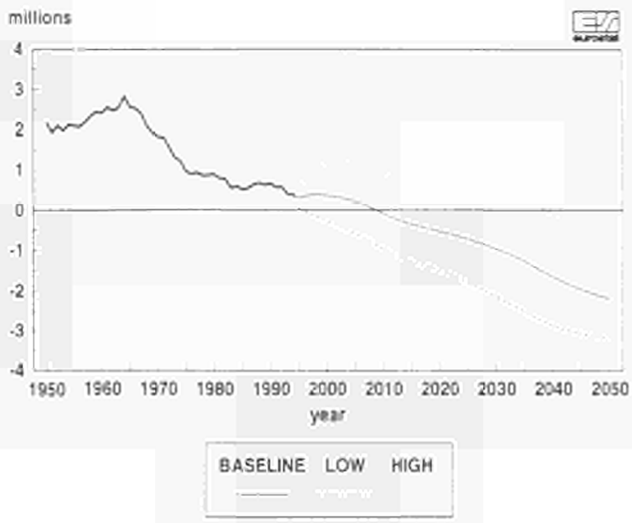
Deaths will outnumber births

The principal reason why the EU population will start to decline is the 'births deficit' of postwar generations. People born after 1945 have or are expected to have too few children to replace themselves. Therefore, sooner or later the number of deaths will start to exceed the number of live births (*Figure 4*).

If fertility levels continue to decrease (low scenario), this demographic break-even point will already have been reached in 1997. If fertility recovers considerably, to levels of about 1.95 children per woman (high scenario), natural population loss will not appear in the next 3-4 decades.

Several EU countries have already experienced natural decrease. Germany has been confronted with such a situation continuously since 1972. Currently Italy, too, is losing population through natural decrease.
In the short and medium term all the southern Member States will probably follow, as will Austria and Denmark. In the long run all other EU countries will face natural population decline.

Figure 4
Live births minus deaths - EUR 15



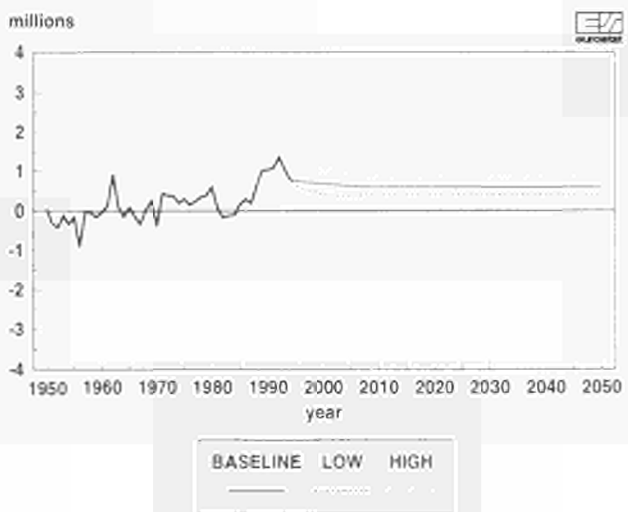
Migration will continue to play a major role

Since the mid-1980s international migration has rapidly gained importance as a component of population growth. During the period 1990-1994, net migration (immigrants less emigrants) to the EU amounted to well over 5 million people. The contribution of migration to population growth rose to around 70%.

In all scenarios it is expected that Europe will remain an attractive region for immigrants. Basically depending on economic developments and migration policies, net migration will in the medium and long run vary between 400 and 800 thousand persons a year (*Figure 5*).

Due to diminishing economic disparities and the introduction of some kind of burden sharing for asylum seekers, the southern Member States will probably get a larger proportion of the total inflow. However, Germany will continue to be the most popular immigration country *(Table 3)*.

Figure 5
Net migration[1] - EUR 15



[1] For the period 1950-1994 calculated as total population growth minus live births plus deaths

Decline in total fertility will stop

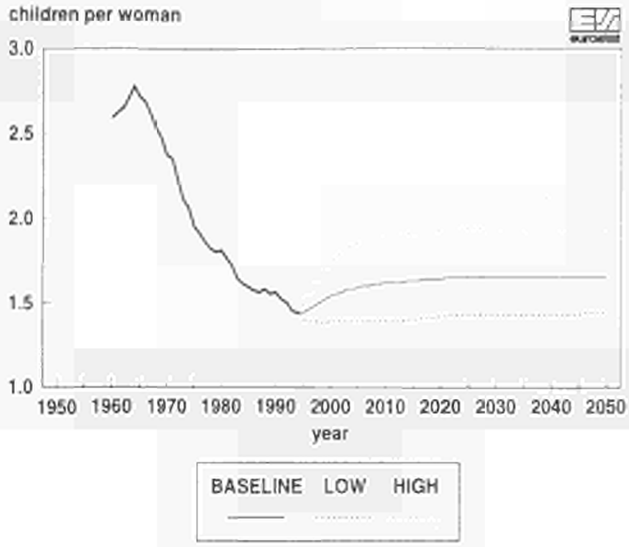
During the last 30 years the EU reproductive patterns changed considerably. A fast and still-growing proportion of women had few children and postponed motherhood. As a result the total fertility rate, which is affected by both the number and timing of births, has declined sharply to historically low levels of around 1.45 children per woman (*Figure 6*).

This trend will soon come to an end. If the vast majority of women born during the 1960s and 1970s are able to realise their family ambitions and therefore catch up rapidly with postponed births (high scenario), the total fertility rate could rapidly rise to levels very close to the observed average family size of women born in the early 1950s: 1.95 children per woman.

If these generations never catch up, and consequently around 30% of the women remain childless (low scenario), the total fertility rate will hardly change at all.

In all scenarios it is assumed that current international fertility differences will persist. Therefore, in the long run the highest total fertility rates are expected in Finland, France, Ireland, Sweden and United Kingdom, and the lowest in Germany, Italy and Spain (*Table 3*).

Figure 6
Total fertility rate - EUR 15



Life expectancy will continue to increase; gender gap might diminish somewhat

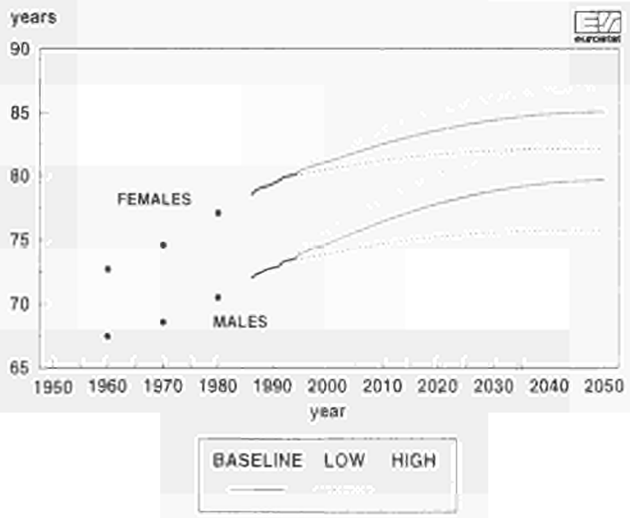
Since 1945 life expectancy at birth in the EU has increased almost continuously. The total gain amounts to well over 10 years. Based on the recently observed mortality rates, women and men are expected to live on average 80 and 73.5 years respectively (*Figure 7*).

During the next 50 years a further fairly substantial increase in longevity might occur. If medicines, preventive and curative health services, healthy life-styles, etc. continue to improve (high scenario), life expectancy at birth for women might reach around 87 years in 2050. For men maximum levels of around 83 years seem plausible, so that the gender gap might diminish somewhat.

However, if the further development of positive influences on mortality slows down shortly and is increasingly counteracted by negative influences such as cigarette-smoking and stress, progress in life expectancy could start to stagnate and the gender gap would then not narrow (low scenario).

Current differences between countries in life expectancies are assumed to remain stable (low scenario) or to narrow somewhat (baseline and high scenarios). So, Sweden and France (females only) continue to be the EU countries with the highest life expectancies, whereas the lowest levels are expected in Denmark, Ireland, Portugal and Finland (males only) (*Table 3*).

Figure 7
Life expectancy at birth - EUR 15



Fewer young people?

During the period 1975-1995 the number of people aged under 20 within the EU dropped from 110 million to 90 million (*Figure 8*) .

If current low fertility levels persist, a further reduction will take place. In this case, in 2050 the Union will comprise no more than 52 million young people. However, if fertility catches up strongly, the number of young people in the EU could steadily rise to a level of almost 100 million in 2020.

The share of the young in the total population, currently 24%, will certainly continue to decline up to the year 2000 (*Table 2*). Thereafter, this process of 'dejuvenation' might stop. By 2050 the proportion of young people could lie between 16 and 24%.

According to the baseline scenario almost all EU countries will lose young people during the period 1995-2020 (*Figure 9*). Ireland in particular will be confronted with a steep decline. Luxembourg, on the other hand, seems to escape any further decline.

The Irish population is currently by far the youngest of the Union (34%), whereas Germany and Italy are the most dejuvenated countries (21%). In the coming decades this difference will certainly diminish. By the year 2050, Finland, Ireland and Sweden could be the youngest countries (18-26%), and Italy and Spain the most dejuvenated (14-22%).

Figure 8
Population aged under 20 - EUR 15

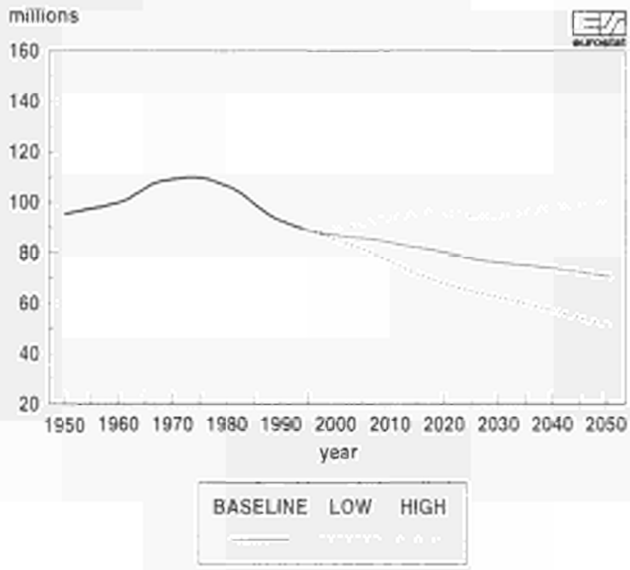


Figure 9
Population aged under 20: change 1995-2020 (%)

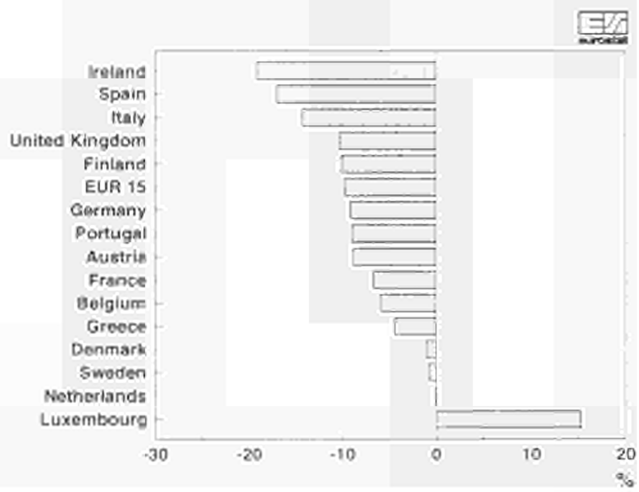


Table 2
Population aged under 20 as a % of total population

	1995	2000			2020			2050		
	OBSERVED	OLD	BASELINE	YOUNG	OLD	BASELINE	YOUNG	OLD	BASELINE	YOUNG
EUR 15	23.9	22.8	23.1	23.5	18	21	24	16	19	24
Belgium	24.1	23.3	23.7	24.0	19	22	24	16	21	25
Denmark	23.6	23.3	23.8	24.1	19	22	25	17	22	25
Germany	21.6	21.2	21.6	22.0	16	19	22	14	18	23
Greece	24.4	22.0	22.5	22.7	18	22	24	15	20	23
Spain	25.0	21.6	21.9	22.4	17	20	24	14	18	22
France	26.1	25.1	25.4	25.8	20	23	26	17	21	26
Ireland	33.9	30.7	31.0	31.2	23	26	29	18	21	26
Italy	21.5	19.6	20.0	20.5	16	19	22	14	17	22
Luxembourg	23.8	24.4	24.8	25.2	19	22	25	17	22	26
Netherlands	24.4	23.9	24.4	24.8	19	22	24	17	21	25
Austria	23.3	22.7	23.1	23.6	17	20	23	16	19	24
Portugal	26.1	23.2	23.6	23.9	20	22	25	16	21	24
Finland	25.5	24.6	24.9	25.2	20	22	25	18	21	26
Sweden	24.7	24.4	24.7	25.1	20	23	25	18	22	26
United Kingdom	25.3	25.1	25.4	25.8	20	22	25	17	21	26
Iceland	32.4	30.5	30.8	31.0	22	24	26	17	21	24
Liechtenstein	25.4	24.1	24.5	25.0	17	20	23	14	18	23
Norway	25.7	25.5	25.9	26.2	20	23	25	18	22	26
EEA	23.9	22.8	23.1	23.6	18	21	24	16	19	24

Table 3: Key-assumptions used for long-term population scenarios

	EUR15	B	DK	D	EL	E	F	IRL	I	L
Total fertility rate										
LOW/OLD										
1995	**1.41**	1.51	1.72	1.24	1.34	1.22	1.64	1.86	1.18	1.67
2000	**1.40**	1.46	1.55	1.26	1.36	1.22	1.62	1.67	1.20	1.55
2020	**1.43**	1.50	1.50	1.30	1.40	1.28	1.55	1.60	1.27	1.50
2050	**1.45**	1.50	1.50	1.30	1.40	1.30	1.60	1.60	1.30	1.50
BASELINE										
1995	**1.45**	1.57	1.79	1.28	1.40	1.24	1.66	1.90	1.22	1.71
2000	**1.55**	1.67	1.77	1.41	1.59	1.36	1.73	1.83	1.37	1.72
2020	**1.65**	1.80	1.79	1.50	1.70	1.50	1.80	1.79	1.50	1.79
2050	**1.66**	1.80	1.80	1.50	1.70	1.50	1.80	1.80	1.50	1.80
HIGH/YOUNG										
1995	**1.50**	1.60	1.82	1.33	1.43	1.30	1.72	1.94	1.27	1.74
2000	**1.75**	1.81	1.94	1.62	1.72	1.59	1.97	2.02	1.58	1.89
2020	**1.94**	2.00	2.00	1.80	1.90	1.80	2.10	2.10	1.80	2.00
2050	**1.94**	2.00	2.00	1.80	1.90	1.80	2.10	2.10	1.80	2.00
Life expectancy at birth, males										
LOW/YOUNG										
1995	**73.5**	73.3	72.6	72.9	75.0	73.6	73.6	72.7	74.2	72.6
2000	**73.9**	74.0	72.9	73.3	75.5	73.6	74.0	73.2	74.3	73.6
2020	**75.3**	75.5	74.0	74.7	76.8	74.5	75.6	74.5	75.6	75.2
2050	**75.8**	76.0	75.0	75.0	77.5	75.5	76.0	75.0	76.0	75.5
BASELINE										
1995	**73.9**	73.6	72.9	73.4	75.3	74.0	74.0	73.0	74.8	72.9
2000	**74.7**	74.8	73.7	74.1	76.3	74.4	74.8	74.0	75.1	74.4
2020	**77.8**	78.7	77.1	77.4	79.4	76.7	78.3	77.2	78.3	78.8
2050	**79.7**	80.0	79.0	79.0	81.0	79.0	80.0	79.0	80.0	80.0
HIGH/OLD										
1995	**74.3**	73.9	73.3	73.7	75.6	74.5	74.3	73.4	75.1	73.2
2000	**75.5**	75.6	74.6	75.0	77.0	75.3	75.6	74.9	75.9	75.3
2020	**80.2**	80.8	79.5	79.8	81.8	79.8	80.3	79.6	80.4	80.7
2050	**82.7**	83.0	82.0	82.0	84.0	82.0	83.0	82.0	83.0	83.0
Life expectancy at birth, females										
LOW/YOUNG										
1995	**80.1**	80.0	77.8	79.4	80.0	81.1	81.6	78.3	80.9	79.2
2000	**80.5**	80.7	77.9	79.8	80.5	81.2	82.2	78.8	81.1	79.7
2020	**81.7**	81.7	78.6	81.1	81.7	82.2	83.6	80.0	82.1	81.0
2050	**82.2**	82.0	79.5	81.5	82.0	82.5	84.0	80.5	82.5	81.5
BASELINE										
1995	**80.4**	80.2	78.0	79.7	80.2	81.4	81.9	78.5	81.3	79.4
2000	**81.1**	81.3	78.5	80.4	81.1	81.8	82.8	79.4	81.7	80.3
2020	**83.6**	84.2	80.8	82.9	83.6	84.0	85.4	82.3	84.0	83.4
2050	**85.1**	85.0	83.0	84.0	85.0	85.0	87.0	84.0	85.0	85.0
HIGH/OLD										
1995	**80.7**	80.4	78.3	80.0	80.4	81.7	82.2	78.8	81.5	79.7
2000	**81.7**	81.9	79.3	81.1	81.7	82.3	83.2	80.2	82.2	81.0
2020	**85.1**	85.7	83.1	84.4	85.1	85.4	86.6	84.1	85.4	85.3
2050	**86.9**	87.0	85.0	86.0	87.0	87.0	88.0	86.0	87.0	87.0
Net migration (1000)										
LOW/OLD										
1995	**647.1**	15.0	27.6	390.0	25.0	18.3	40.0	-10.0	20.0	4.1
2000	**410.8**	5.9	6.0	300.0	13.8	4.9	20.4	-10.0	20.0	2.0
2020	**396.0**	10.0	5.0	150.0	20.0	40.0	30.0	-5.0	60.0	1.0
2050	**396.0**	10.0	5.0	150.0	20.0	40.0	30.0	-5.0	60.0	1.0
BASELINE										
1995	**761.7**	18.0	28.6	420.0	30.0	28.5	50.0	-8.4	50.0	4.6
2000	**679.3**	10.2	11.0	390.6	21.7	31.1	50.1	-7.7	50.0	3.1
2020	**591.8**	15.0	10.0	200.0	25.0	60.0	50.0	-2.7	80.0	2.0
2050	**591.8**	15.0	10.0	200.0	25.0	60.0	50.0	-2.7	80.0	2.0
HIGH/YOUNG										
1995	**869.7**	21.0	29.6	450.0	35.0	38.7	60.0	-6.8	80.0	5.1
2000	**1009.9**	18.0	16.0	500.0	29.5	57.2	79.8	-3.4	80.0	4.3
2020	**787.6**	20.0	15.0	250.0	30.0	80.0	70.0	-0.4	100.0	3.0
2050	**787.6**	20.0	15.0	250.0	30.0	80.0	70.0	-0.4	100.0	3.0

NL	A	P	FIN	S	UK	IS	FL	N	EEA	
										Total fertility rate
										LOW/OLD
1.52	1.36	1.40	1.80	1.70	1.68	2.07	1.36	1.82	**1.42**	1995
1.47	1.34	1.38	1.68	1.63	1.59	1.87	1.34	1.65	**1.40**	2000
1.50	1.37	1.40	1.60	1.60	1.60	1.80	1.37	1.60	**1.43**	2020
1.50	1.40	1.40	1.60	1.60	1.60	1.80	1.40	1.60	**1.45**	2050
										BASELINE
1.58	1.39	1.45	1.84	1.74	1.73	2.12	1.39	1.85	**1.46**	1995
1.67	1.52	1.53	1.84	1.81	1.72	2.08	1.52	1.85	**1.55**	2000
1.80	1.60	1.69	1.80	1.90	1.79	2.08	1.60	1.89	**1.66**	2020
1.80	1.60	1.70	1.80	1.90	1.80	2.10	1.60	1.90	**1.67**	2050
										HIGH/YOUNG
1.59	1.44	1.48	1.89	1.78	1.77	2.15	1.44	1.90	**1.50**	1995
1.74	1.71	1.67	2.03	1.98	1.94	2.24	1.71	1.96	**1.75**	2000
1.99	1.90	1.90	2.10	2.10	2.10	2.30	1.90	2.09	**1.94**	2020
2.00	1.90	1.90	2.10	2.10	2.10	2.30	1.90	2.10	**1.95**	2050
										Life expectancy at birth, males
										LOW/YOUNG
74.4	73.2	70.7	72.0	75.6	73.7	76.0	74.9	74.4	**73.5**	1995
74.7	73.7	71.1	72.5	76.2	74.4	76.5	75.2	75.0	**73.9**	2000
75.7	75.2	72.3	74.0	77.7	76.0	77.9	76.3	76.4	**75.3**	2020
76.5	75.5	73.0	74.5	78.0	76.5	78.5	77.0	77.0	**75.8**	2050
										BASELINE
74.6	73.6	71.0	72.3	75.9	74.1	76.4	75.2	74.7	**73.9**	1995
75.5	74.5	71.9	73.3	77.0	75.2	77.3	76.0	75.8	**74.7**	2000
78.2	76.6	75.3	76.6	78.9	78.3	80.2	78.7	79.0	**77.8**	2020
80.0	80.0	78.0	79.0	82.0	80.0	82.0	81.0	81.0	**79.7**	2050
										HIGH/OLD
74.9	74.0	71.4	72.7	76.4	74.5	76.7	75.5	75.0	**74.3**	1995
76.3	75.3	72.9	74.3	77.6	76.0	77.9	76.7	76.5	**75.6**	2000
80.8	80.3	78.5	79.5	80.4	80.4	82.4	81.6	81.3	**80.2**	2020
83.0	83.0	82.0	82.0	85.0	83.0	85.0	84.0	84.0	**82.7**	2050
										Life expectancy at birth, females
										LOW/YOUNG
80.3	79.6	78.0	79.6	80.8	79.2	81.6	81.5	80.3	**80.1**	1995
80.5	80.1	78.4	80.1	81.2	79.7	82.5	81.9	80.7	**80.5**	2000
81.3	81.2	79.6	81.2	82.5	81.0	83.8	83.1	81.7	**81.7**	2020
82.0	81.5	80.0	81.5	83.0	81.5	84.0	83.5	82.0	**82.2**	2050
										BASELINE
80.5	79.9	78.2	79.8	81.3	79.5	81.9	81.7	80.6	**80.4**	1995
81.1	80.7	79.0	80.7	81.8	80.3	83.1	82.5	81.3	**81.1**	2000
83.3	82.4	81.9	83.3	83.4	83.2	86.0	84.8	83.6	**83.6**	2020
85.0	85.0	84.0	85.0	86.0	85.0	87.0	86.0	85.0	**85.1**	2050
										HIGH/OLD
80.7	80.2	78.5	80.1	81.5	79.8	82.1	81.9	80.8	**80.7**	1995
81.7	81.4	79.8	81.4	82.3	81.0	83.5	82.9	81.8	**81.7**	2000
84.9	84.9	83.5	85.1	86.3	84.6	87.1	87.0	85.9	**85.1**	2020
87.0	87.0	86.0	87.0	88.0	87.0	88.0	88.0	87.0	**86.9**	2050
										Net migration (1000)
										LOW/OLD
13.0	12.1	4.5	3.0	11.5	73.0	-1.3	0.0	6.5	**652.4**	1995
10.0	9.9	5.8	-0.5	6.3	16.2	0.0	0.0	4.0	**414.8**	2000
20.0	15.0	20.0	0.0	10.0	20.0	0.0	0.0	4.0	**400.0**	2020
20.0	15.0	20.0	0.0	10.0	20.0	0.0	0.0	4.0	**400.0**	2050
										BASELINE
13.5	13.3	5.0	3.5	12.0	93.0	-1.4	0.1	7.0	**767.3**	1995
33.4	14.8	12.1	5.6	15.2	38.3	0.1	0.1	8.4	**687.9**	2000
35.0	22.5	25.0	5.0	20.0	45.0	0.2	0.1	8.0	**600.0**	2020
35.0	22.5	25.0	5.0	20.0	45.0	0.2	0.1	8.0	**600.0**	2050
										HIGH/YOUNG
14.0	17.2	5.5	4.0	13.5	103.0	-1.5	0.1	7.5	**875.9**	1995
56.8	26.4	28.6	11.7	32.0	73.0	0.2	0.1	12.9	**1023.2**	2000
50.0	30.0	30.0	10.0	30.0	70.0	0.3	0.1	12.0	**800.0**	2020
50.0	30.0	30.0	10.0	30.0	70.0	0.3	0.1	12.0	**800.0**	2050

The working age population will sooner or later decline

For decades the Union possessed a strongly increasing working age population (*Figure 10*). Since the mid 1970's average growth has amounted almost 1.5 million people a year.

In the near future this growth will slow down. Heavily depending on the net inflow of migrants, the average annual increase will drop to levels between 0.2 and 0.6 million people.

Immediately after 2005, when the first, large postwar 'baby-boom' generations are leaving the working-age population, a fairly long period of decline will start. A stabilisation may take place around 2035, but only if fertility recovers structurally and net migration continues at rather high levels.

Within the Union probably all countries except Luxembourg will sooner or later be affected by this new demographic trend (*Figure 11*). Italy in particular might very soon be confronted with a sharply declining potential labour force.

Figure 10
Population aged 20-59 - EUR 15

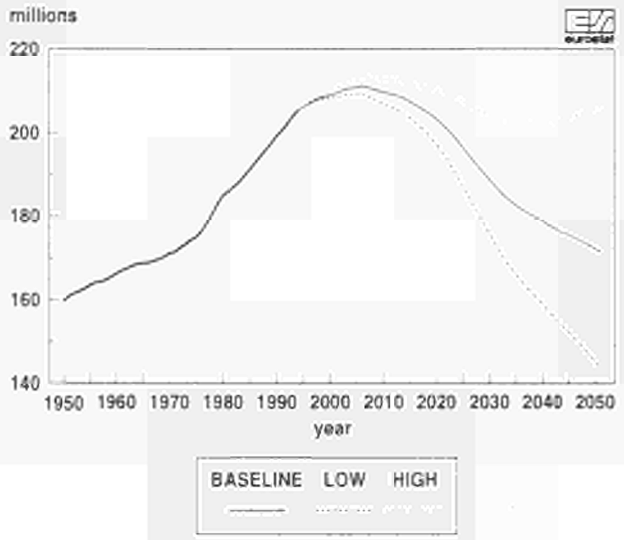


Figure 11
Population aged 20-59: change 1995-2020 (%)

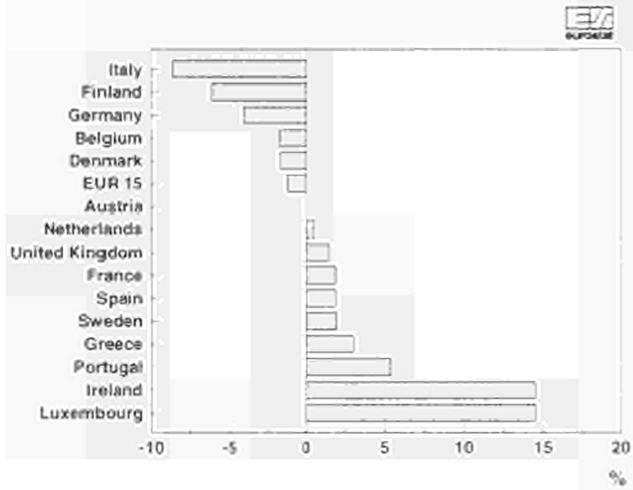


Table 4
Population aged 20-59 years

	1995	2000			2020			2050		
	OBSERVED	LOW	BASELINE	HIGH	LOW	BASELINE	HIGH	LOW	BASELINE	HIGH
	(1000)									
EUR 15	206 170	208 123	208 813	209 564	197 443	203 550	210 388	145 747	172 825	206 357
Belgium	5 533	5 577	5 588	5 609	5 263	5 430	5 592	4 085	4 950	5 670
Denmark	2 949	3 003	3 011	3 020	2 764	2 895	3 015	2 206	2 760	3 267
Germany	47 113	46 249	46 439	46 650	43 577	45 210	47 045	30 958	36 736	44 538
Greece	5 645	5 795	5 813	5 835	5 636	5 818	5 973	4 297	5 244	5 960
Spain	21 300	22 318	22 384	22 451	21 115	21 716	22 450	13 857	16 597	20 319
France	31 246	31 942	32 033	32 121	31 153	31 847	32 708	24 785	28 778	34 002
Ireland	1 818	1 928	1 938	1 953	2 002	2 081	2 174	1 469	1 784	2 203
Italy	32 233	32 193	32 296	32 394	28 641	29 444	30 263	18 679	22 485	26 957
Luxembourg	232	240	243	245	243	266	288	207	279	352
Netherlands	8 937	9 066	9 112	9 158	8 542	8 988	9 362	6 812	8 516	9 829
Austria	4 578	4 616	4 626	4 651	4 418	4 577	4 813	3 235	3 988	4 893
Portugal	5 356	5 561	5 576	5 600	5 482	5 646	5 856	4 283	5 127	5 922
Finland	2 836	2 863	2 873	2 884	2 578	2 661	2 750	2 081	2 434	2 900
Sweden	4 697	4 750	4 766	4 797	4 579	4 789	5 059	3 949	4 919	5 871
United Kingdom	31 698	32 023	32 115	32 197	31 450	32 181	33 040	24 842	28 230	33 674
Iceland	140	148	148	148	153	156	157	118	136	152
Liechtenstein	18	19	19	19	17	18	20	11	15	20
Norway	2 357	2 436	2 445	2 453	2 419	2 520	2 614	2 040	2 507	2 893
EEA	208 686	210 726	211 425	212 186	200 033	206 244	213 179	147 916	175 483	209 421

Ageing will accelerate

Apart from a short period of stagnation at the end of the 1970s, the EU population aged 60 and over has increased continuously since 1950 (*Figure 12*). Currently the annual growth of the elderly population fluctuates around a level of 0.8 million persons, or 1%.

Up to 2005 this growth rate will hardly change. However, as soon as the 'baby-boomers' start to enter this age group, the annual increase will shift to levels of around 1.1 million people. This will remain the case until the less numerous 'baby-bust' generations born in the early 1970s pass the age of 60.

The ever-increasing share of the elderly in the total EU population will also accelerate during the period 2005-2030. From 21% now and 22% in 2005, it is expected to rise to a level of around 27% in the year 2020 (*Table 5*). By 2050 the proportion might lie between 27-40%.

In all EU countries the number of old people will increase considerably (*Figure 13*). Particularly in the currently least aged Member States of the Union, Finland, Ireland, Luxembourg and Netherlands, the elderly population will grow rapidly. However, by 2050 Italy and Spain are expected to be the most aged EU countries (30-44%).

Figure 12
Population aged 60 and over - EUR 15

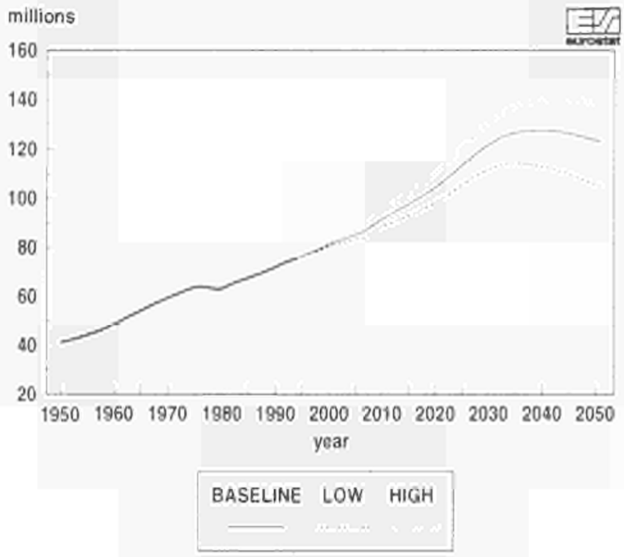


Figure 13
Population aged 60 and over: increase 1995-2020 (%)

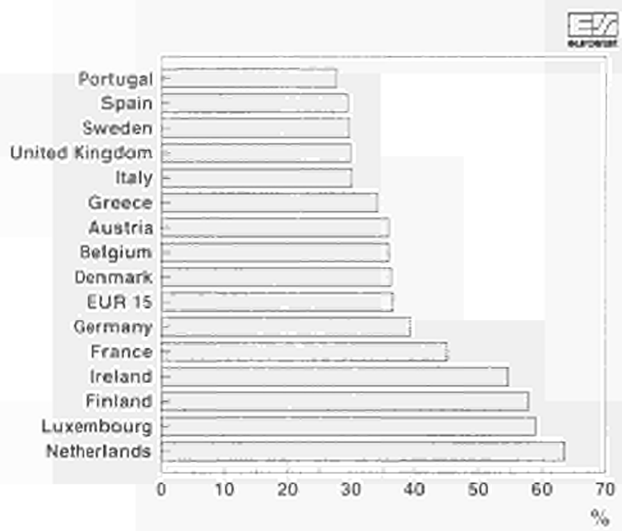


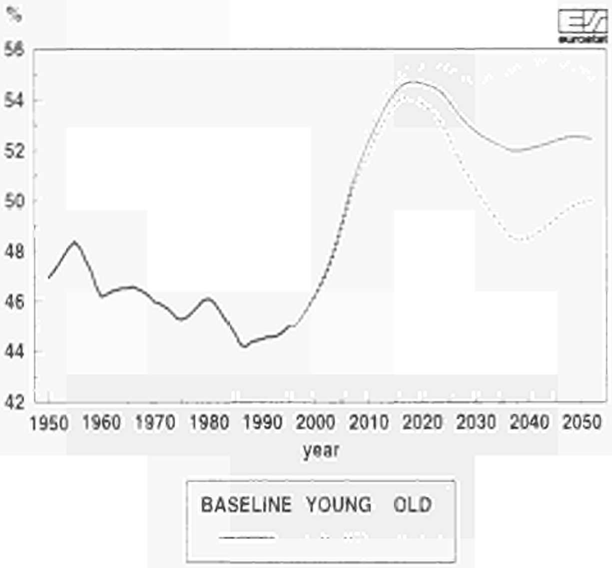
Table 5
Population aged 60 and over as a % of total population

	1995	2000			2020			2050		
	OBSERVED	YOUNG	BASELINE	OLD	YOUNG	BASELINE	OLD	YOUNG	BASELINE	OLD
EUR 15	20.6	21.2	21.5	21.8	25	27	29	27	34	40
Belgium	21.3	21.6	21.8	22.1	25	28	30	26	32	38
Denmark	19.9	19.4	19.6	19.9	23	26	28	23	29	36
Germany	20.7	22.2	22.6	22.9	25	28	30	27	34	41
Greece	21.5	22.7	22.9	23.2	25	27	29	28	33	41
Spain	20.6	21.2	21.5	21.8	24	26	28	30	37	44
France	20.0	20.2	20.5	20.7	25	27	29	26	33	38
Ireland	15.3	15.3	15.6	15.8	19	22	24	25	32	39
Italy	22.2	23.4	23.8	24.0	27	29	32	30	37	44
Luxembourg	19.1	18.9	19.2	19.6	22	25	28	23	29	36
Netherlands	17.7	18.0	18.2	18.5	24	26	29	25	30	37
Austria	19.8	19.8	20.1	20.4	23	26	28	26	33	40
Portugal	19.8	20.3	20.6	20.9	22	24	26	25	31	38
Finland	18.9	19.5	19.7	19.8	26	28	30	25	31	36
Sweden	22.1	21.5	21.9	22.2	25	27	29	24	29	36
United Kingdom	20.6	20.2	20.5	20.7	23	26	27	25	32	37
Iceland	15.0	15.9	16.0	16.0	25	26	27	30	35	41
Liechtenstein	14.9	15.2	15.5	15.8	24	27	30	28	36	44
Norway	20.1	19.1	19.3	19.6	23	25	27	24	29	36
EEA	20.6	21.2	21.5	21.8	24	27	29	27	34	40

Both the working age and the elderly population will become older

During the next 20 years the age structure of the EU population aged 20-59 will change dramatically (*Figure 14*). At present about 45% of the working age population is more than 40 years old. By 2015 this proportion will reach levels of around 55%. Naturally, this trend is mainly due to the ageing of the large postwar baby-boom generations.

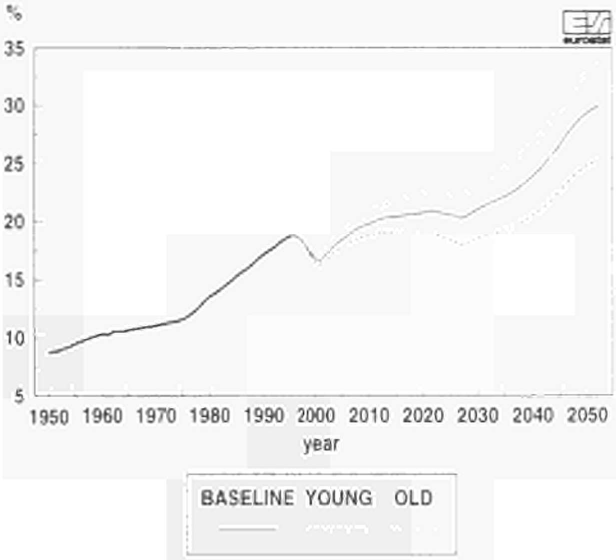
Figure 14
Population aged 40-59 as a % of population aged 20-59 - EUR 15



After 2015 the ageing of the potential labour force will stagnate and probably even reverse as the less numerous generations born in the 1970s are reaching the age of 40, while the baby-boomers are leaving the working-age population.

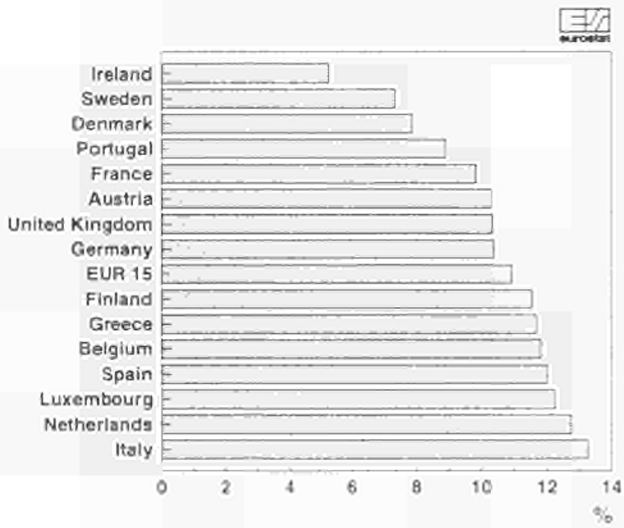
Also the EU population aged 60 and over will become older. After the turn of the century the share of the population aged 80 and over in the elderly population will increase almost continuously (*Figure 15*). Particularly after 2025, when the baby-boomers are passing the age of 80, the number of the 'very old' will rise dramatically. By the year 2050 their share of the elderly population might be more than one-third.

Figure 15
Population aged 80 and over as a % of population aged 60 and over - EUR 15



All Member States will sooner or later experience these more specific ageing trends. Particularly Italy, Portugal and Spain might be confronted with a relatively long period of an ageing potential labour force, whereas Denmark, Finland and Sweden are already in the middle of this process. The long-term ageing of the elderly population will be fairly steep and strong in Italy and the Netherlands (*Figure 16*).

Figure 16
Population aged 80 and over as a % of population aged 60 and over: increase 1995-2050



Age dependency will rise drastically

Figure 17 shows the observed and projected total age dependency ratio, i.e. the sum of the number of people aged 0-19 and 60+ expressed as a percentage of the population aged 20-59. For the Union as a whole this indicator has decreased since mid 1970s from 100% to 80%, due to the sharply declining number of young people.

In the next ten years the ratio will be fairly constant but thereafter a steady and perhaps even strong increase might occur. Especially if current low fertility levels persist and life expectancy structurally rises (old scenario), the age dependency will in the long run climb to all-time high levels of well above 120%.

Figure 18 demonstrates that during the next 25 years the increase in total age dependency will be far from uniform within the Union. The ratio will hardly grow in Portugal and Spain, whilst Finland and the Netherlands will probably have to cope with an increase well above the European average.

However, by the year 2050 Italy (107-136%) and Spain (110-138%) are expected to be the EU countries with the highest age dependency (*Table 6*).

Figure 17
Age dependency ratio - EUR 15

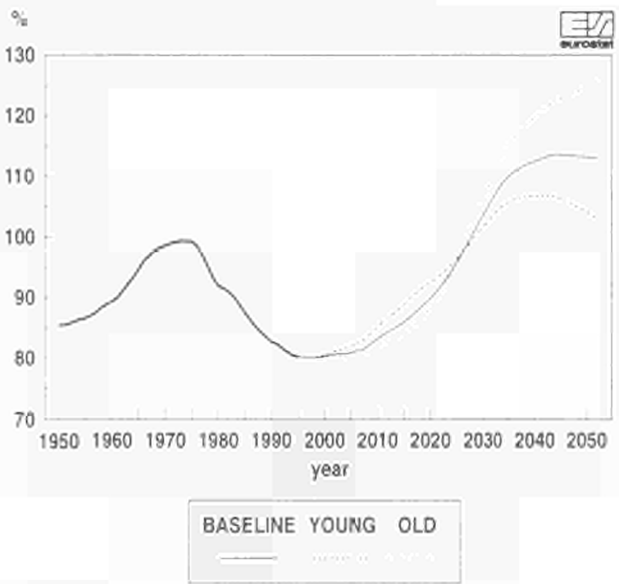


Figure 18
Age dependency ratio: increase 1995-2020 (%)

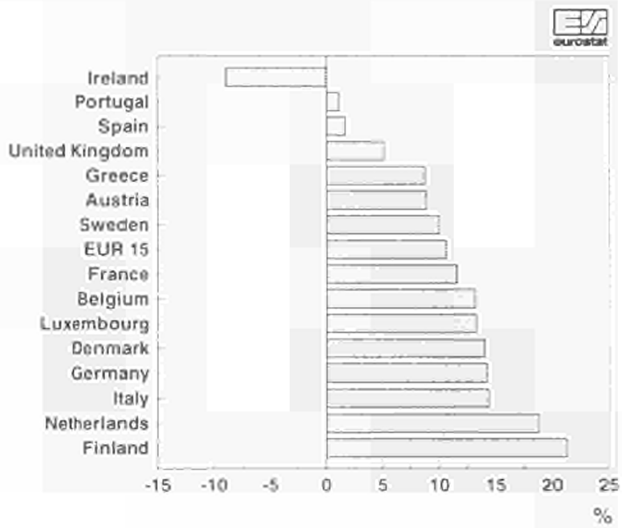


Table 6
Age dependency ratio

	1995	2000			2020			2050		
	OBSERVED	OLD	BASELINE	YOUNG	OLD	BASELINE	YOUNG	OLD	BASELINE	YOUNG
EUR 15	80.2	80.3	80.5	80.9	90	91	93	126	113	103
Belgium	83.1	83.0	83.5	83.6	94	96	96	121	111	102
Denmark	76.9	76.1	76.7	77.0	90	91	92	111	101	93
Germany	73.1	78.8	79.0	79.3	88	87	89	123	110	100
Greece	85.0	82.5	83.1	83.1	91	94	94	127	114	106
Spain	83.9	76.5	76.7	77.2	84	86	89	138	121	110
France	85.7	84.6	84.7	85.4	94	97	101	124	116	108
Ireland	96.9	87.0	87.0	86.8	87	88	91	128	114	105
Italy	77.7	77.6	77.9	78.3	90	92	94	136	119	107
Luxembourg	75.1	78.5	78.7	79.0	88	88	88	113	102	93
Netherlands	72.6	73.5	74.1	74.1	90	91	91	118	106	99
Austria	75.6	75.7	76.1	76.3	84	84	87	123	107	98
Portugal	85.1	79.0	79.2	79.3	84	86	87	119	108	99
Finland	79.8	79.9	80.3	80.8	100	101	104	117	109	102
Sweden	87.7	87.1	87.4	87.5	96	98	99	114	105	99
United Kingdom	84.6	84.5	84.6	85.0	89	90	93	119	110	102
Iceland	90.2	86.9	87.8	88.3	95	100	103	136	128	119
Liechtenstein	67.5	66.5	66.8	67.3	89	90	91	139	116	104
Norway	84.5	82.1	82.5	82.7	91	92	93	115	106	99
EEA	80.3	80.3	80.6	80.9	90	91	93	125	113	103

Eurostat's new long-term population scenarios - technical explanation

National population projections by sex and age are produced by the National Statistical Institutes (regularly and irregularly), United Nations (every 2 years) and Eurostat (every 3-5 years).

The first two agencies basically aim to make population forecasts or the 'best guess' for the next 10-15 years, usually supplemented with uncertainty variants. Eurostat produces various population scenarios for the next 5-6 decades, which attempt to explore realistic boundaries of demographic change in the long run.

The new long-term population scenarios of Eurostat, compiled in 1996 with the assistance of Statistics Netherlands, concern the 18 countries of the European Economic Area (EEA). The scenarios cover the period 1995-2050 and project the population at 1 January by sex and single years of age up to the age group of 90+. Five scenarios were prepared: baseline, low, high, young and old.

The low and high scenario can be considered as plausible extremes with respect to population growth. The low scenario describes a demographic future in which current fertility levels of around 1.45 children per woman will persist, life expectancies will hardly increase and total net immigration for the EEA will drop from 600,000 to 400,000 persons a year. The high scenario assumes a recovery of fertility to levels of around 1.95 children per woman, life expectancies continuing to increase strongly in all countries and total net inflow of migrants increasing to a level of 800,000 persons a year.

The young and old scenarios can be interpreted as plausible extremes with respect to population ageing. In the young scenario, high fertility and high net immigration assumptions are combined with low life expectancies, whereas in the old scenario high life expectancies are combined with low fertility and low net immigration.

The baseline scenario describes the 'average development' and can therefore be used as a reference. This scenario is generally fairly close to the latest population forecasts made by the national statistical institutes.

The assumptions underlying the five scenarios are summarized in the following scheme:

	Scenarios				
	BASELINE	**LOW**	**HIGH**	**YOUNG**	**OLD**
Fertility	medium	low	high	high	low
Life expectancy	medium	low	high	low	high
Net migration	medium	low	high	high	low

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