

Compendium

Migration assumptions



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1 . Introduction

This report provides detailed information on the principal and variant migration assumptions used in the 2014-based national population projections. The new long-term assumption for net migration to the UK is +185,000 each year, compared with +165,000 per year in the 2012-based projections.

All 2014-based figures in this report are rounded to the nearest hundred.

2 . Migration assumptions data and methodology

Revised methodology

Following a [methodology review \(456.7 Kb Pdf\)](#) carried out by the Economic and Social Research Council Centre for Population Change in 2012, the international migration assumptions methodology was changed in the 2012-based projections. Another recommendation was the use of migration rates for certain migrant flows. In 2014, a new method for setting and applying the cross-border (intra-UK) migration assumptions as rates rather than fixed numbers of migrants was introduced and has been applied for the 2014-based projections. More detail is available on these [new methods \(399 Kb Pdf\)](#) on our website.

International migration

Assumptions of future international migration have been derived from modelling recent trends in civilian migration to and from the UK. Migrants are defined as individuals who change their country of usual residence for a period of at least a year, so that the country of destination becomes the country of usual residence.

International migration figures are derived from a number of sources. The principal source is the International Passenger Survey (IPS). Adjustments are made to account for people who enter or leave the country initially for a short stay but subsequently decide to remain for a year or more ("visitor switchers") and people who originally intend to be migrants but in reality stay in the UK or abroad for less than 1 year ("migrant switchers"). Flows to and from the Republic of Ireland, taking into account the discontinuity in 2008 due to methodological changes, are included in the IPS flows.

The IPS also excludes most, but not all, people seeking asylum. Estimates of the flows of asylum seekers (and their dependants) not captured by the IPS are obtained from Home Office data.

Cross-border migration

A new improved method for calculating cross-border migration assumptions is being implemented for the 2014-based national population projections. The assumptions for the flows between the countries of the UK are now set as rates which are based on National Health Service Central Register (NHSCR) trend data from the previous 5 years.

Annual age and sex-specific migration rates for each cross-border flow are calculated as the number of migrants at the end of the year divided by population of the country of origin at the start of the year. An average of the rates for the last 5 years of actual data (year ending mid-2010 to year ending mid-2014) is then taken and applied to the population of the country of origin at the beginning of each projection year to calculate the projected number of migrants for each flow. The main advantage of applying rates for cross-border migration is that the migrant flows are linked to the changing underlying population size and age structure. This means that the projections cannot produce implausible values, such as negative population stocks, when projected fixed levels of emigration are greater than the initial population size.

An adjustment has also been applied to the rates to take the population of the country of destination into account, ensuring that net migration levels between countries of the UK are stabilised over the course of the projection. More detail can be found in the [cross-border methodology \(399 Kb Pdf\)](#) document on our website.

Northern Ireland

From 2008, ONS migration estimates no longer use IPS data for Northern Ireland and instead use data from the Northern Ireland Statistics and Research Agency (NISRA). In order to obtain the longest possible continuous time series, Northern Ireland data back to 1992 are therefore obtained directly from NISRA.

3 . International migration assumptions

Long-term assumptions

The long-term net international migration assumptions in the 2014-based projections take effect from the year ending mid-2021.

The new long-term assumption for net international migration to the UK is +185,000 each year compared with +165,000 a year in the previous projections. This increase in net migration results from recent changes in the UK migration figures. The annual net international migration figure of +185,000 is higher than the expectations of the expert advisory panel (+153,000). The difference is due predominantly to the emigration estimate which experts on average predicted to be 383,000 per annum, compared with a proposed assumption of 333,500.

The breakdown of the long-term net international migration assumption between the 4 countries within the UK is shown in Table 5.1. This table does not include the assumptions for cross-border flows between the constituent countries of the UK since these vary over the course of the projection due to the new rates-based method being used. The cross-border flows are considered separately.

Table 5.1: Long-term annual international migration assumptions by country, year ending mid-2021 onwards, UK

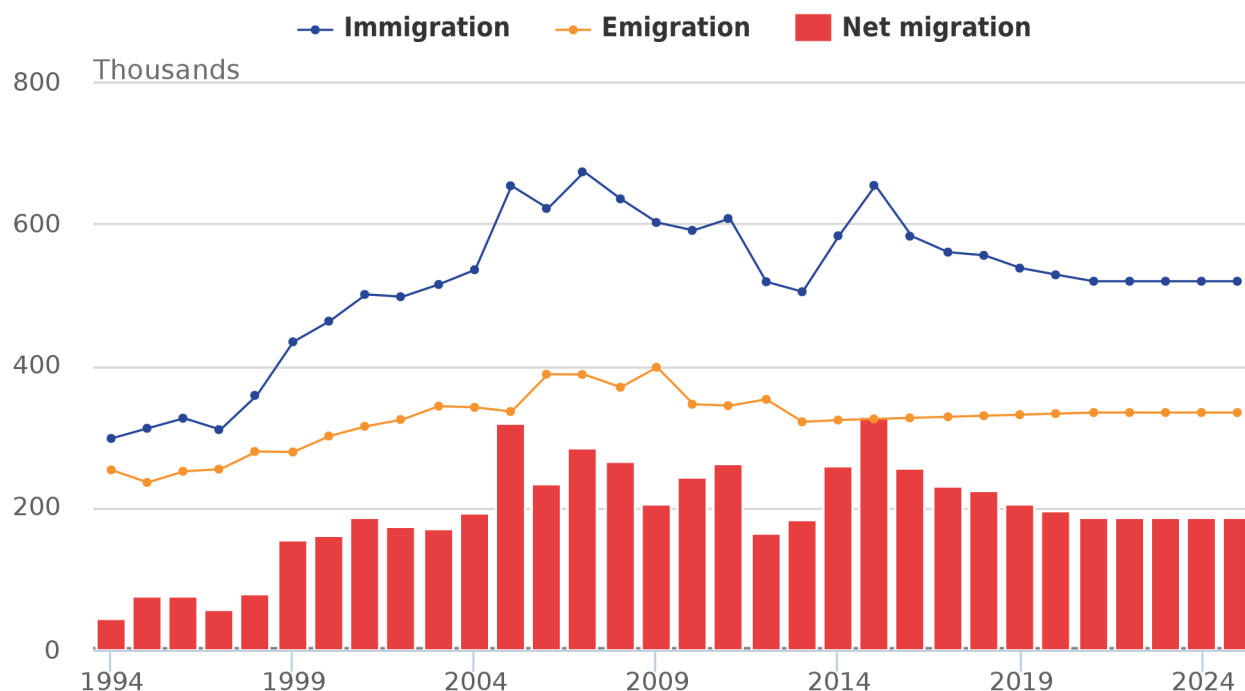
	2014- based*	2012- Difference based	
International net migration			
England	170,500	150,000	20,500
Wales	4,000	3,000	1,000
Scotland	9,500	12,000	-2,500
Northern Ireland	1,000	0	1,000
United Kingdom	185,000	165,000	20,000

Source: Office for National Statistics

Notes:

1. *2014 Figures are rounded to the nearest hundred

Figure 5.1: Total international migration, UK, year ending mid-1994 to year ending mid-2025



Source: Office for National Statistics

Notes:

1. All migration data are displayed on a mid-year basis
2. Historical international migration figures for England, Scotland and Wales are primarily based on international Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

Short-term assumptions

Special assumptions have been applied for the first few years of the projections (mid-2015 to mid-2020). These assumptions, shown in Table 5.2, have been formulated to represent a transition from the last year of actual data to the constant long-term assumptions. They also take into account the following factors:

1. further information on migration from the [Migration Statistics Quarterly Report](#), published in August 2015
2. a short-term armed forces flow, which has been included to account for the planned return of home armed forces personnel and their dependents from Germany

Table 5.2: Short-term annual net international migration assumptions, United Kingdom and constituent countries, year ending mid-2015 onwards

	Thousands				
	United Kingdom	England	Wales	Scotland	Northern Ireland
Total net international migration					
2014-15	329	304.7	7.7	13.6	3
2015-16	256	239.5	5.4	8.4	2.7
2016-17	232	216	5.1	8.6	2.3
2017-18	226	210.3	4.8	8.9	2
2018-19	206.5	191.1	4.6	9.1	1.7
2019-20	195.5	180.7	4.2	9.3	1.3
Long-term assumption (2020-21 onwards)	185	170.5	4	9.5	1
Net international migration ¹					
2014-15	329	304.7	7.7	13.6	3
2015-16	238.5	222	5.4	8.4	2.7
2016-17	227.5	211.5	5.1	8.6	2.3
2017-18	217	201.3	4.8	8.9	2
2018-19	206.5	191.1	4.6	9.1	1.7
2019-20	195.5	180.7	4.2	9.3	1.3
Long-term assumption (2020-21 onwards)	185	170.5	4	9.5	1
Returning armed forces from Germany (including dependants)					
2014-15	0	0	0	0	0
2015-16	17.5	17.5	0	0	0
2016-17	4.5	4.5	0	0	0
2017-18	9	9	0	0	0
2018-19	0	0	0	0	0
2019-20	0	0	0	0	0
Long-term assumption (2020-21 onwards)	0	0	0	0	0

Source: Office for National Statistics

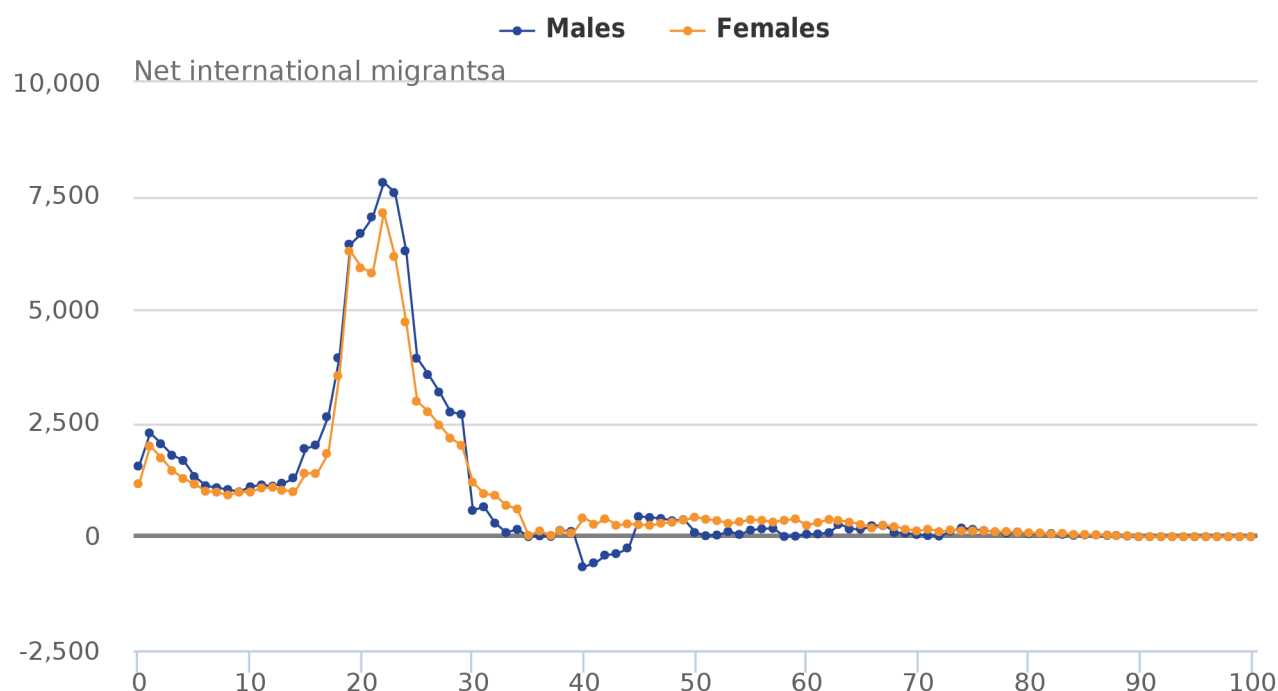
Notes:

1. International migration includes IPS flows with allowance for migrant and visitor switchers, asylum seekers and Republic of Ireland flows

Age and sex distributions

Figure 5.2 shows assumed long-term annual net international migration by age and sex for the UK from the year ending mid-2021 onwards. The international distributions are derived from an average of 5 years' unsmoothed population estimates components of change data.

Figure 5.2: Long-term annual net international migration by age and sex, United Kingdom, year ending mid-2021 onwards



Source: Office for National Statistics

4 . Cross-border migration assumptions

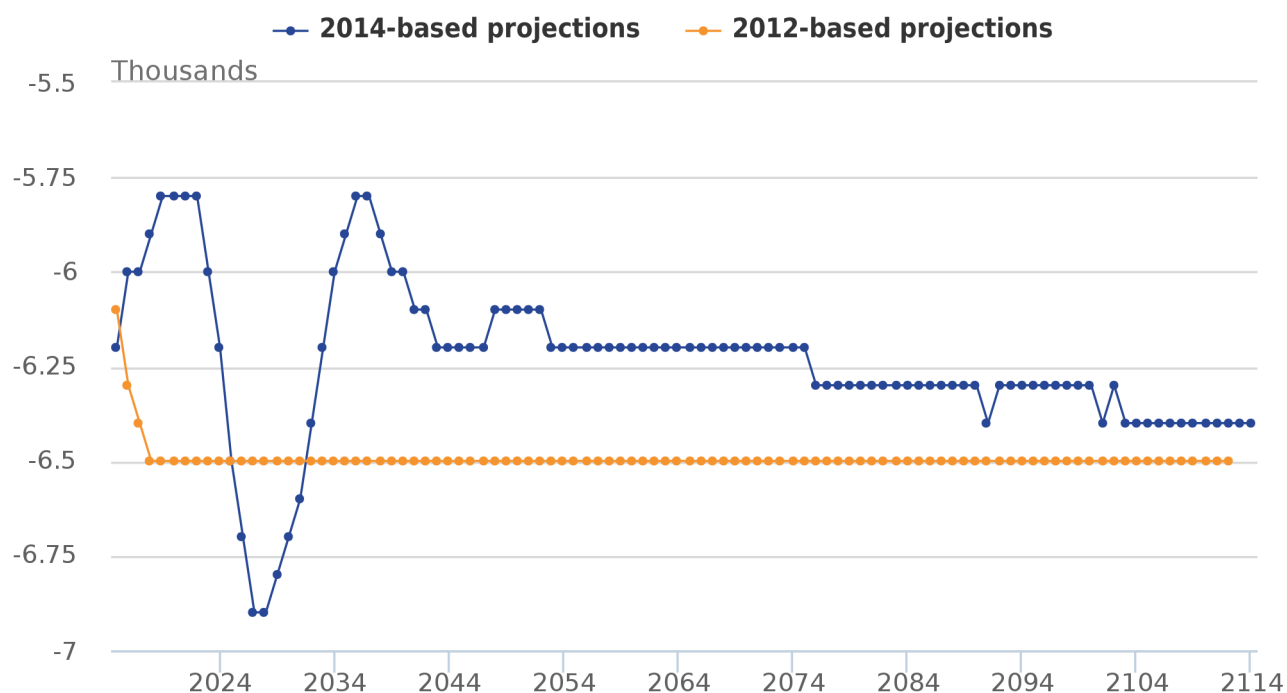
The assumptions for the flows between the countries of the UK are now set as rates instead of fixed numbers of migrants. Annual age and sex-specific migration rates for each cross-border flow are calculated as the number of migrants at the end of the year divided by population of the country of origin at the start of the year. An average of the rates for the last 5 years of actual data (year ending mid-2010 to year ending mid-2014) is then taken and applied to the population of the country of origin at the beginning of each projection year to calculate the projected number of migrants for each flow.

Figure 5.3 shows the trend in assumed net cross-border migration to England and how it compares with the 2012-based projections. The 2014-based assumptions show fluctuations in the earlier years but then stabilise, while the 2012-based assumptions were set as fixed numbers of migrants. The fluctuations occurring in the earlier years are due to the new method taking into account the underlying age and sex structure and population size of the countries.

The underlying annual age and sex-specific migration rates (adjusted and unadjusted) and the resulting number of migrants for each cross-border flow are available to download in the [reference tables](#).

The underlying age and sex distributions for cross-border migration are based on data from NISRA, NRS and ONS.

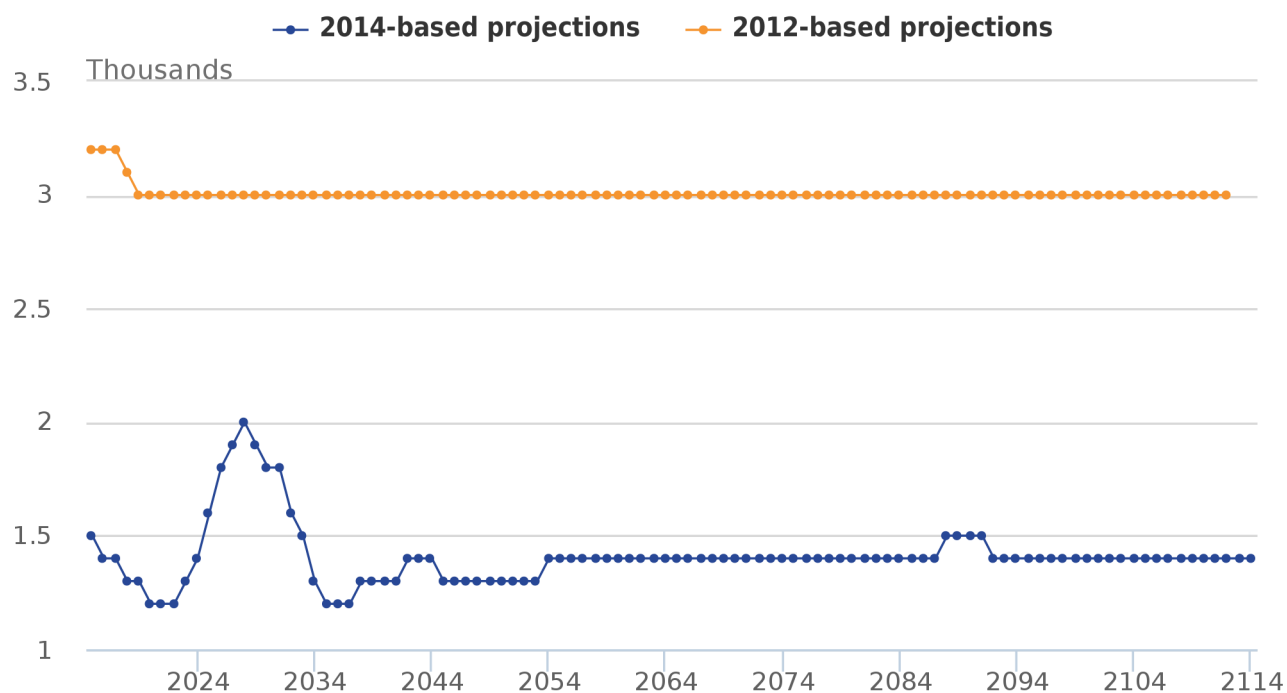
Figure 5.3: Cross-border net migration assumptions, England, for year ending mid-2015 to year ending mid-2114



Source: Office for National Statistics

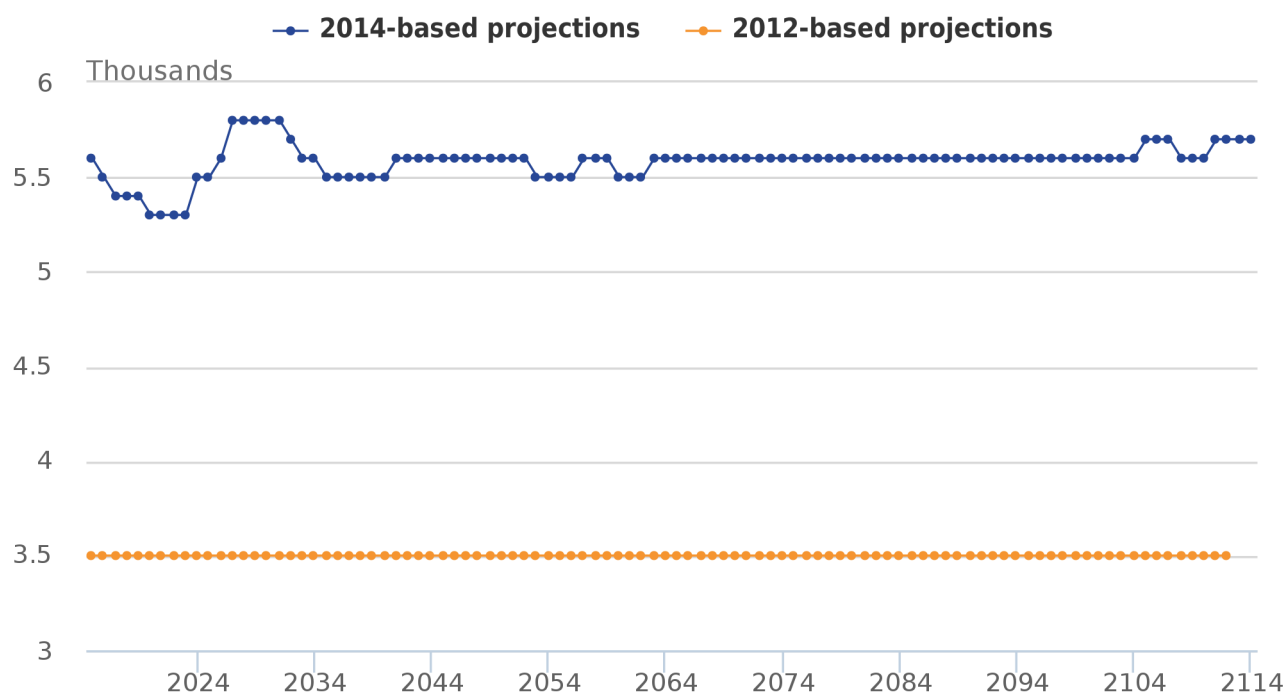
The equivalent figures for Wales, Scotland and Northern Ireland are given in Figure 5.4, Figure 5.5 and Figure 5.6.

Figure 5.4: Cross-border net migration assumptions, Wales, for year ending mid-2015 to year ending mid-2114



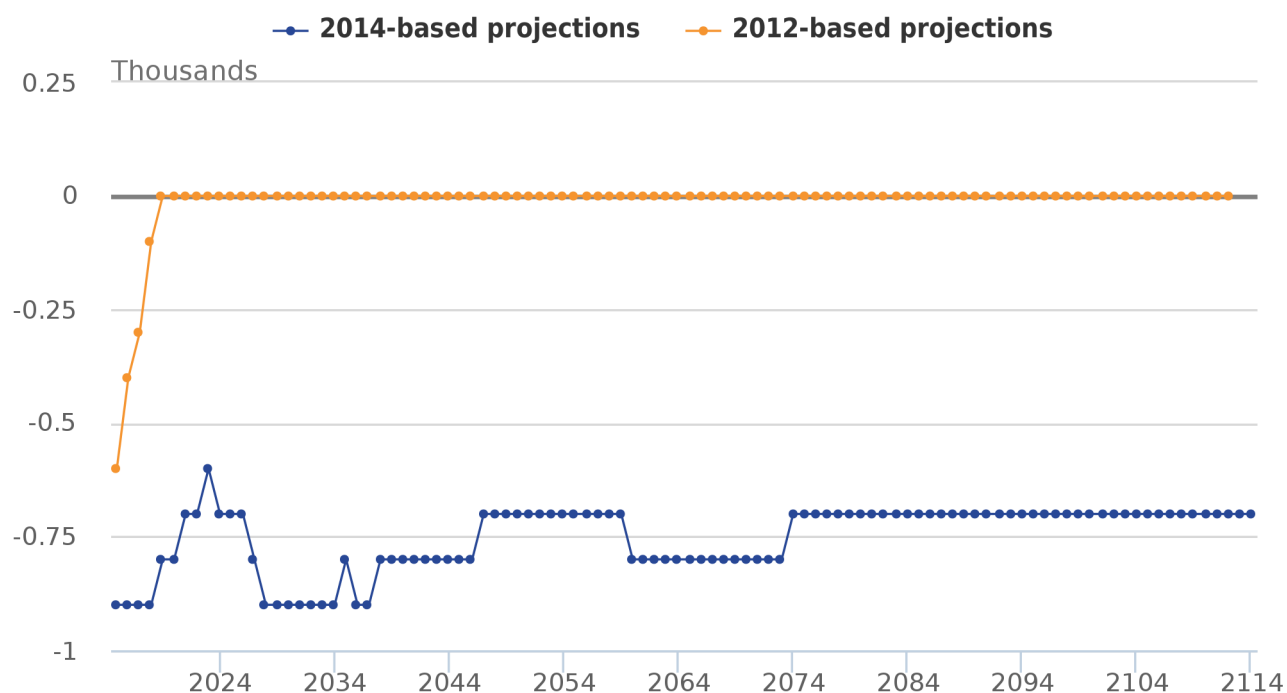
Source: Office for National Statistics

Figure 5.5: Cross-border net migration assumptions, Scotland, for year ending mid-2015 to year ending mid-2114



Source: Office for National Statistics

Figure 5.6: Cross-border net migration assumptions, Northern Ireland, for year ending mid-2015 to year ending mid-2114



Source: Office for National Statistics

5 . Migration variant assumptions

The standard high and low migration variants are produced by varying the international in- and out- flow assumptions and using the principal assumptions for all other flows.

Table 5.3 shows the assumed long-term annual net migration for the standard variants for the UK and its constituent countries. In addition to that, migration variants have also been produced for Great Britain for the first time and can be found in the published reference tables.

Table 5-3: Assumed long-term annual net international migration for the standard variants, UK

	Standard variants			Special case scenario
	High	Principal	Low	Zero net migration (natural change only)
England	233,000	170,500	108,000	0
Wales	8,500	4,000	-500	0
Scotland	18,000	9,500	1,000	0
Northern Ireland	5,500	1,000	-3,500	0
United Kingdom	265,000	185,000	105,000	0

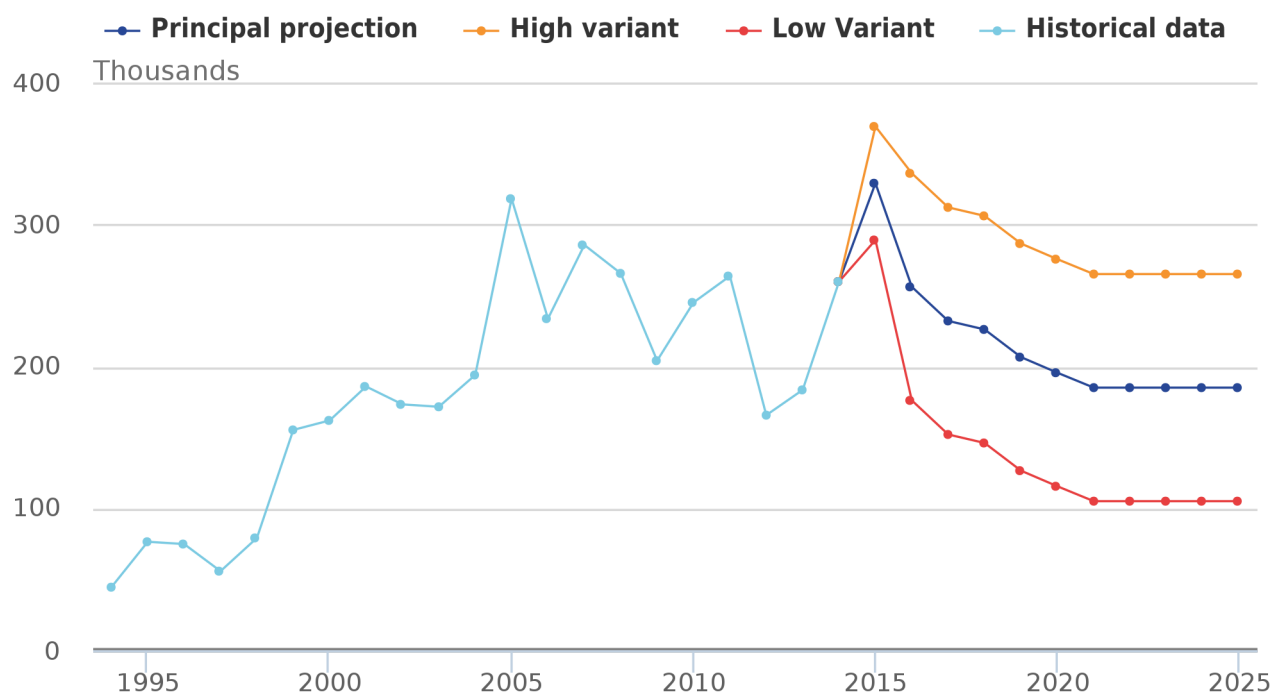
Source: Office for National Statistics

In the standard variants, the long-term levels are assumed from the year ending mid-2021 onwards. The 2014-based projections include high and low migration variants that are "additive" for the first time. This means the UK assumptions are equal to the sum of the 4 individual countries.

In the special case scenario, the projection uses the principal assumptions for fertility and mortality and assumes that there will be zero net migration for every age for each sex. When compared to the principal projection, the zero net migration projection allows the impact of the principal net migration assumption on the projected population to be assessed.

Figure 5.7 shows estimated and assumed net international migration to the UK between year ending mid-1994 and year ending mid-2025 for the principal projection and the high and low variants.

Figure 5.7: Estimated and assumed total net international migration, United Kingdom, year ending mid-1994 to year ending mid-2025



Source: Office for National Statistics

Notes:

1. All migration data are displayed on a mid-year basis
2. Historical international migration figures for England, Scotland and Wales are primarily based on International Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

The equivalent figures for the constituent countries of the UK can be found in the relevant chart section of the appendices.

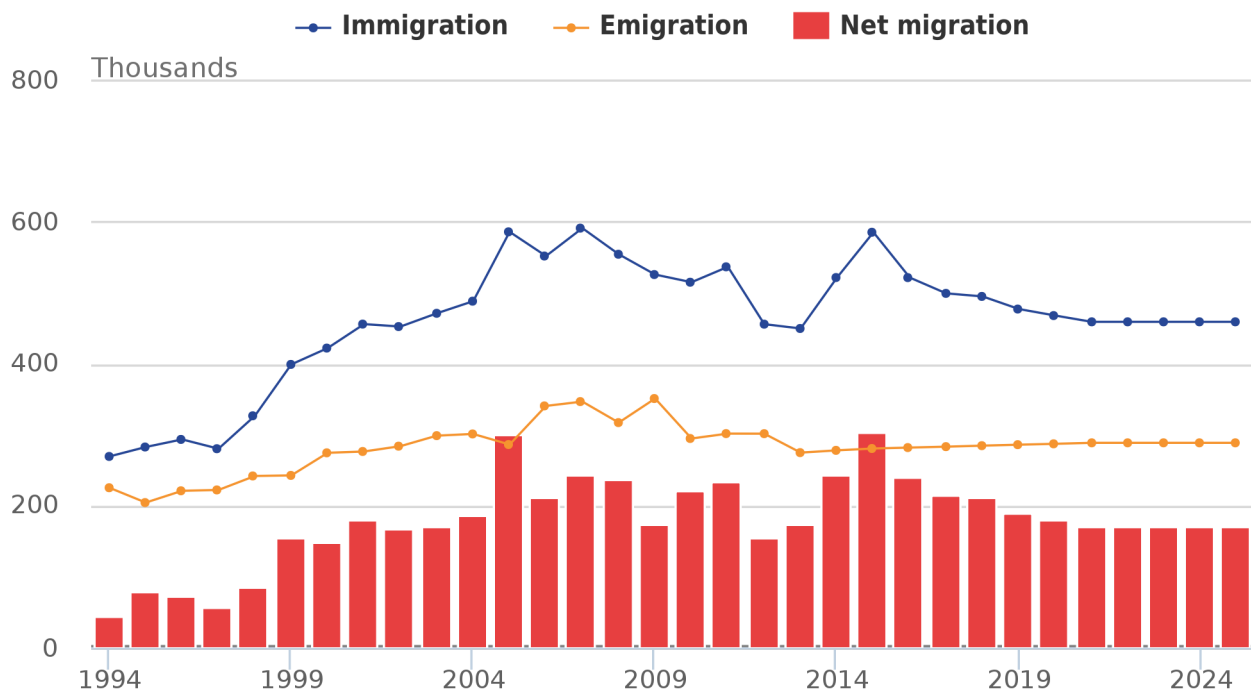
6. Background notes

1. Discussion papers showing the [background information](#) used in setting the migration assumptions are available on our website.
2. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

These National Statistics are produced to high professional standards and released according to the arrangements approved by the UK Statistics Authority.

7. Appendix A: England charts

Figure 5.1a: Total international migration, England, year ending mid-1994 to year ending mid-2025

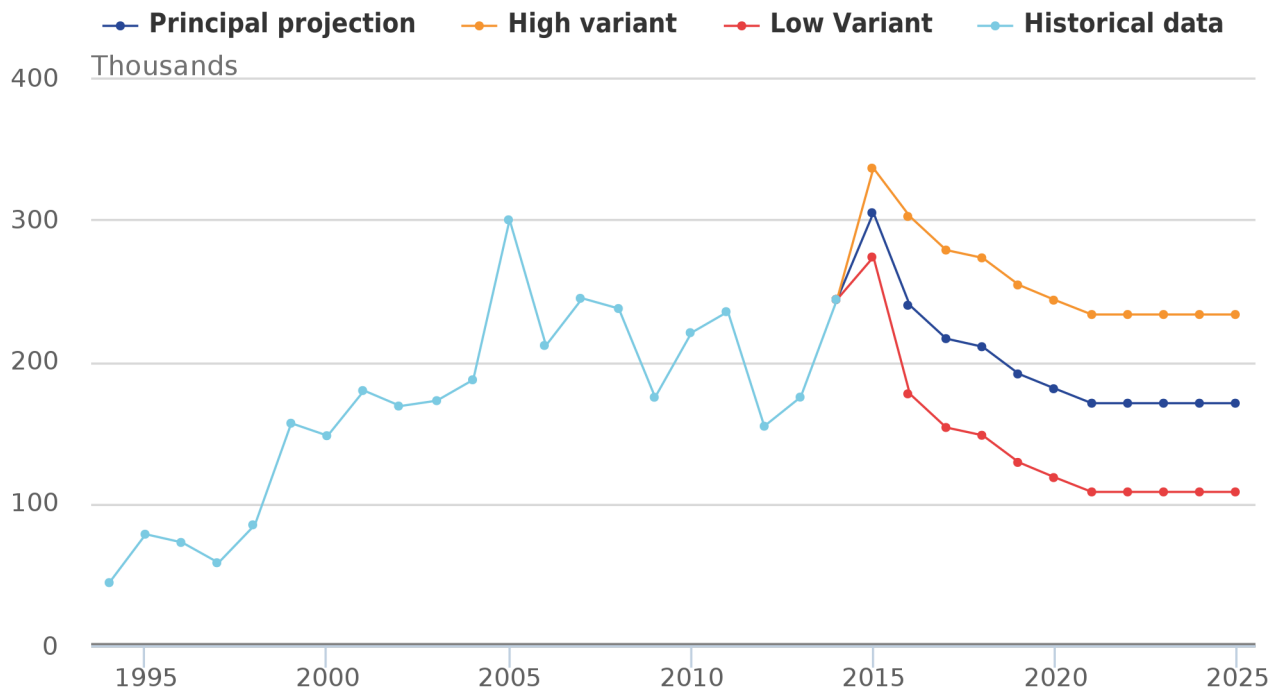


Source: Office for National Statistics

Notes:

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3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

Figure 5.7a: Estimated and assumed total net international migration, England, year ending mid-1994 to year ending mid-2025



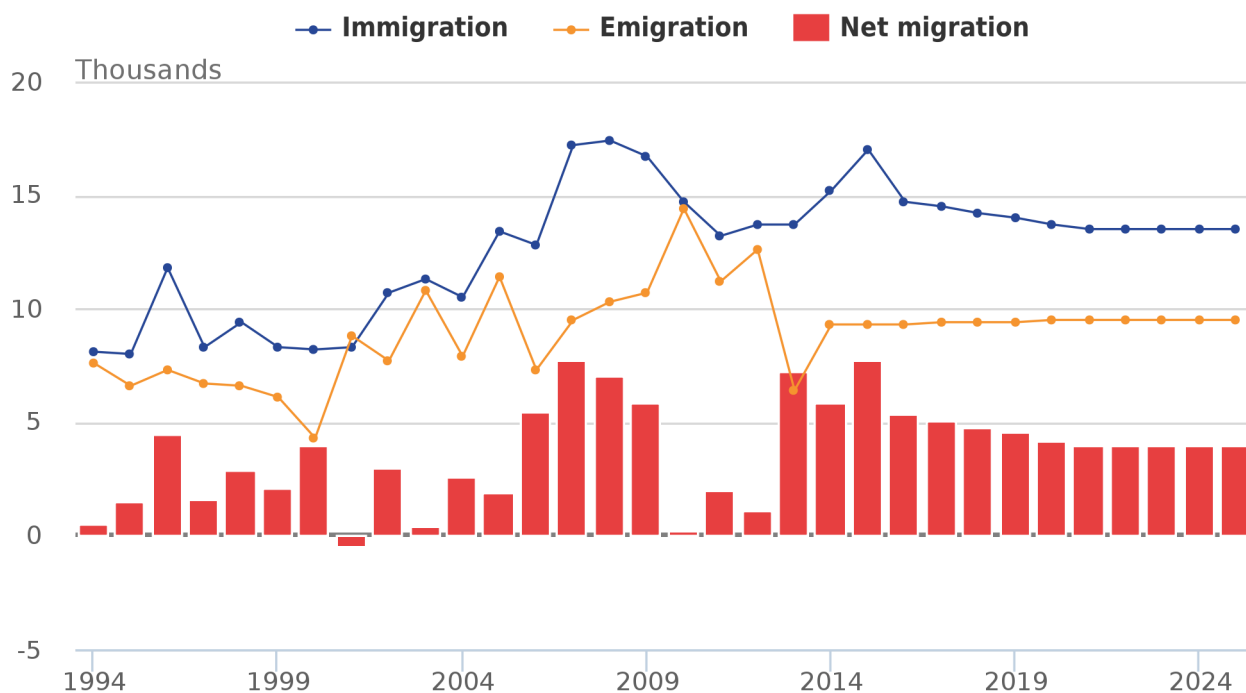
Source: Office for National Statistics

Notes:

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2. Historical international migration figures for England, Scotland and Wales are primarily based on International Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

8. Appendix B: Wales charts

Figure 5-1b: Total international migration, Wales, year ending mid-1994 to year ending mid-2025

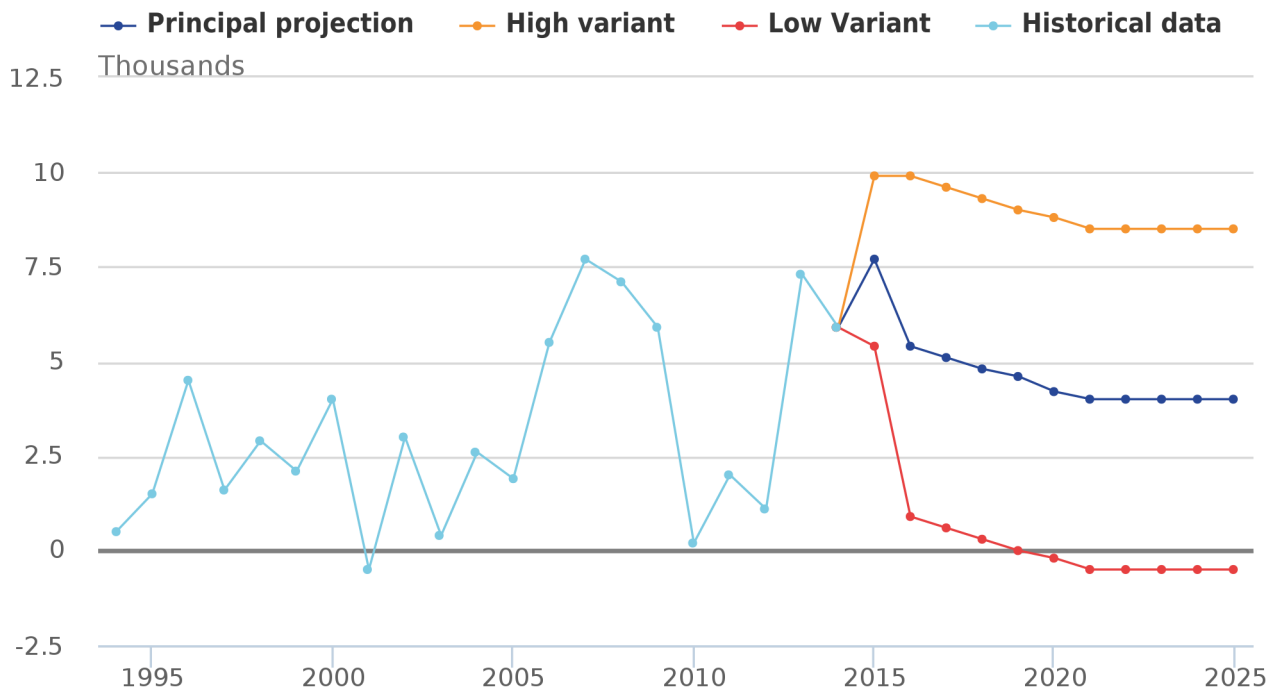


Source: Office for National Statistics

Notes:

1. All migration data are displayed on a mid-year basis
2. Historical international migration figures for England, Scotland and Wales are primarily based on International Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

Figure 5.7b: Estimated and assumed total net international migration, Wales, year ending mid-1994 to year ending mid-2025



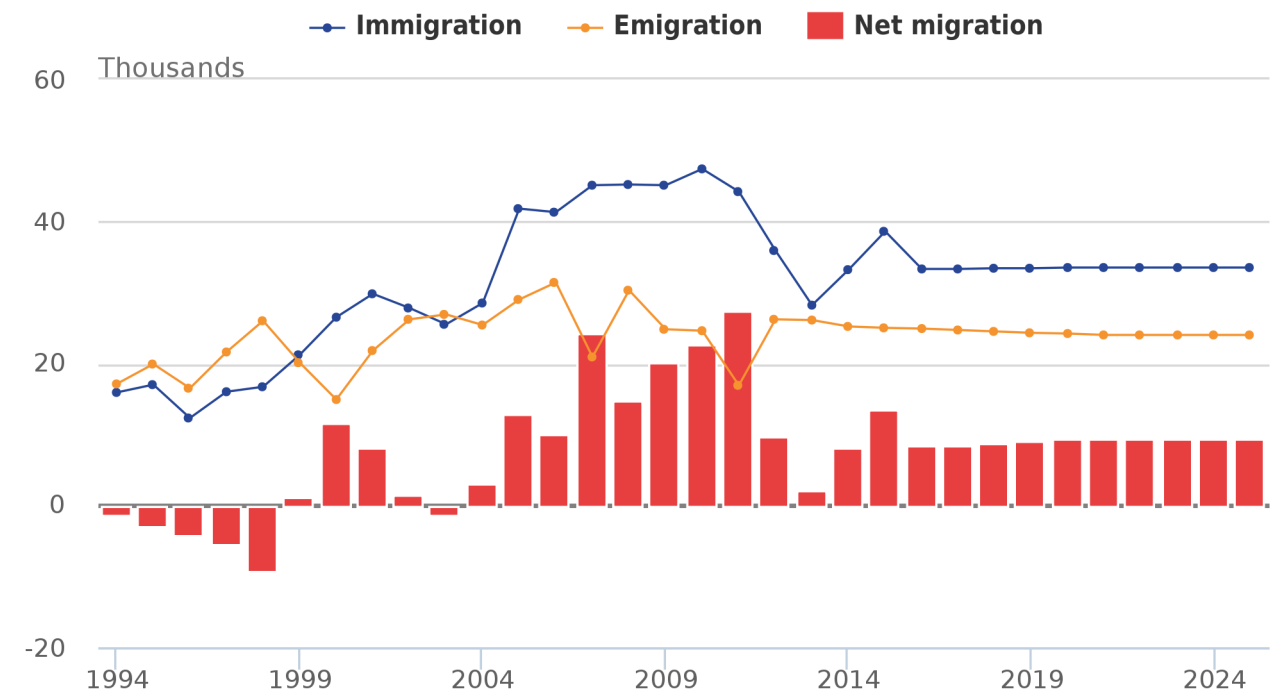
Source: Office for National Statistics

Notes:

1. All migration data are displayed on a mid-year basis
2. Historical international migration figures for England, Scotland and Wales are primarily based on International Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

9. Appendix C: Scotland charts

Figure 5.1c: Total international migration, Scotland, year ending mid-1994 to year ending mid-2025

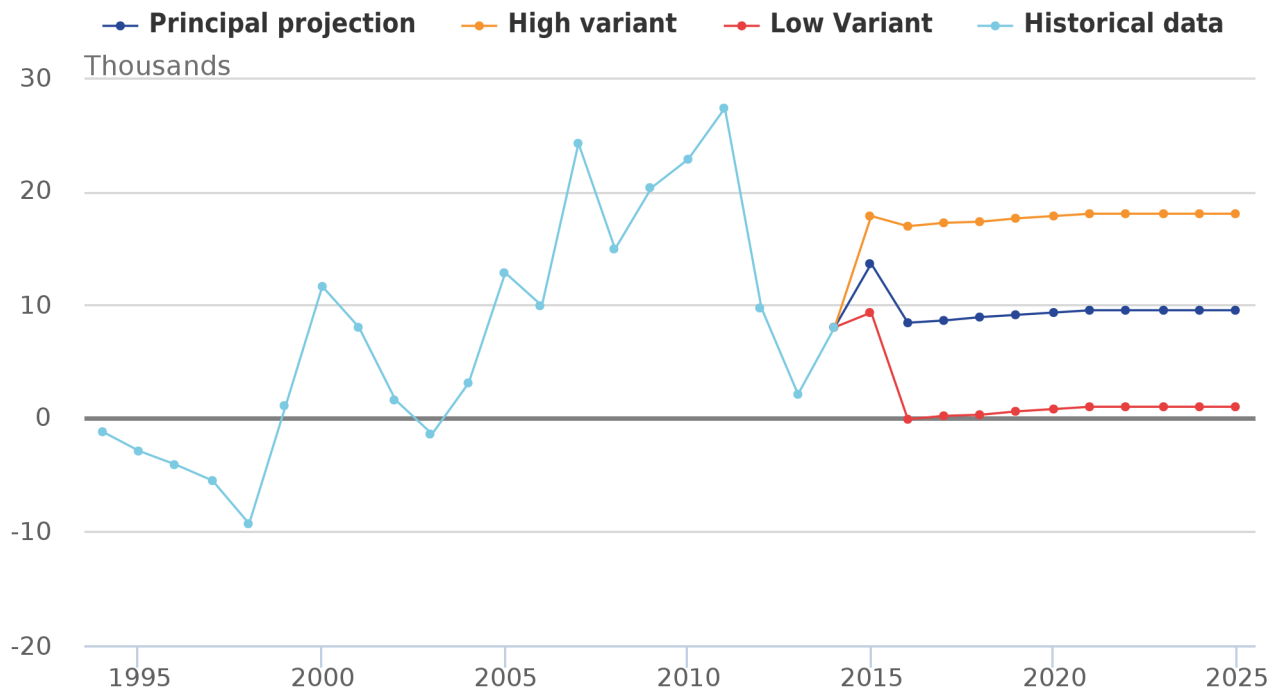


Source: Office for National Statistics, National Records of Scotland

Notes:

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2. Historical international migration figures for England, Scotland and Wales are primarily based on International Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

Figure 5.7c: Estimated and assumed total net international migration, Scotland, year ending mid-1994 to year ending mid-2025



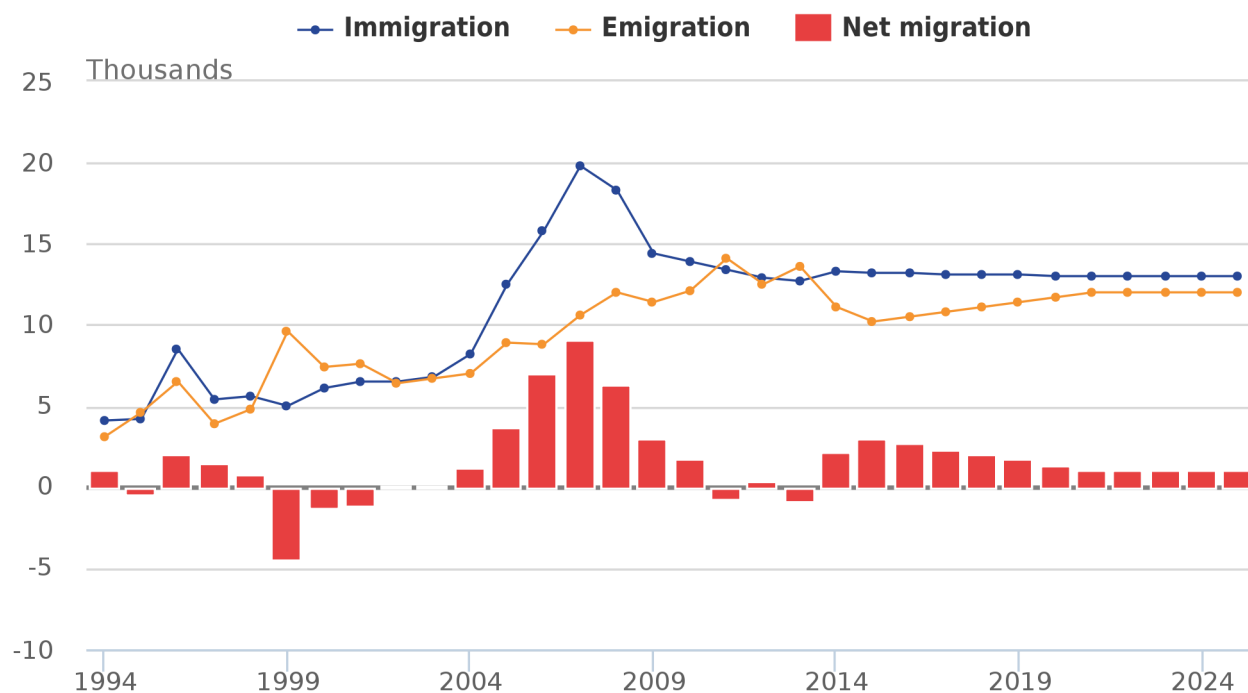
Source: Office for National Statistics, National Records of Scotland

Notes:

1. All migration data are displayed on a mid-year basis
2. Historical international migration figures for England, Scotland and Wales are primarily based on International Passenger Survey data and Northern Ireland figures are obtained directly from NISRA so aggregate totals may differ from published international migration data
3. 2002 to 2010 immigration and emigration figures reflect revisions made in light of the results of the 2011 Census; therefore the totals may differ from the published international migration data

10. Appendix D: Northern Ireland charts

Figure 5.1d: Total international migration, Northern Ireland, year ending mid-1994 to year ending mid-2025

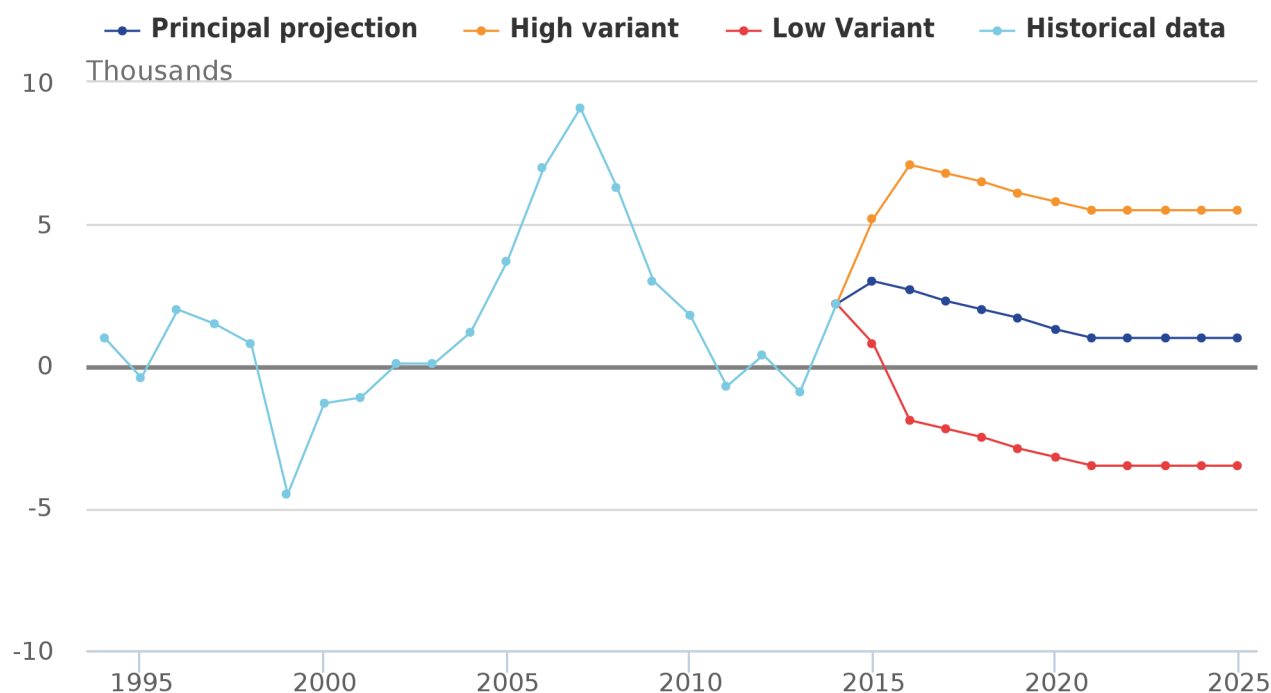


Source: Office for National Statistics, Northern Ireland Statistics and Research Agency

Notes:

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Figure 5.7d: Estimated and assumed total net international migration, Northern Ireland, year ending mid-1994 to year ending mid-2025



Source: Office for National Statistics, Northern Ireland Statistics and Research Agency

Notes:

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