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Europe's Growing Muslim Population

Muslims are projected to increase as a share of Europe's population – even with no future migration

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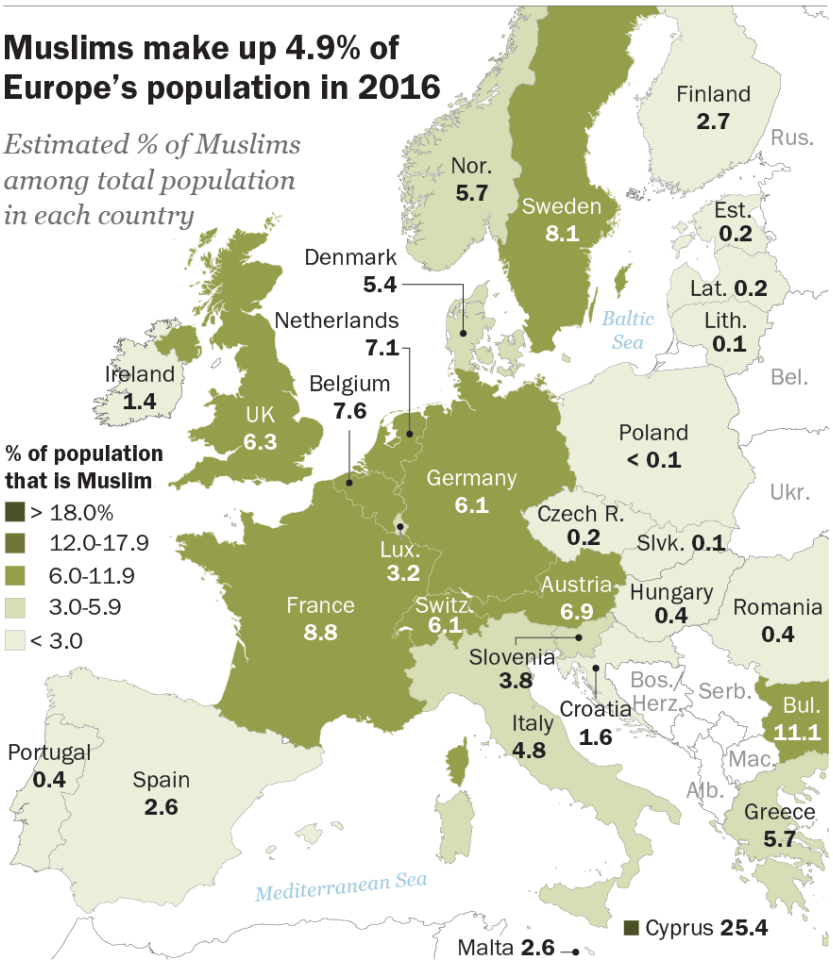
Europe's Growing Muslim Population

Muslims are projected to increase as a share of Europe's population – even with no future migration

In recent years, Europe has experienced a record influx of asylum seekers fleeing conflicts in Syria and other predominantly Muslim countries. This wave of Muslim migrants has prompted debate about immigration and security policies in numerous countries and has raised questions about the current and future number of Muslims in Europe.

To see how the size of Europe's Muslim population may change in the coming decades, Pew Research Center has modeled three scenarios that vary depending on future levels of migration. These are not efforts to *predict* what will happen in the future, but rather a set of *projections* about what could happen under different circumstances.

The baseline for all three scenarios is the Muslim population in Europe (defined here as the 28 countries presently in the European Union, plus Norway and



Estimated size of Muslim population in 2016

		% of population that is Muslim
REGION	25,770,000	4.9%
France	5,720,000	8.8
Germany	4,950,000	6.1
United Kingdom	4,130,000	6.3
Italy	2,870,000	4.8
Netherlands	1,210,000	7.1
Spain	1,180,000	2.6

Note: Europe is defined here as the 28 nations of the EU plus Norway and Switzerland. "Estimated size of Muslim population in 2016" column lists only countries with at least 1 million Muslims. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe, including roughly 320,000 Muslims in Germany and 140,000 Muslims in France.
Source: Pew Research Center estimates. See Methodology for details.
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Switzerland) as of mid-2016, estimated at 25.8 million (4.9% of the overall population) – up from 19.5 million (3.8%) in 2010.

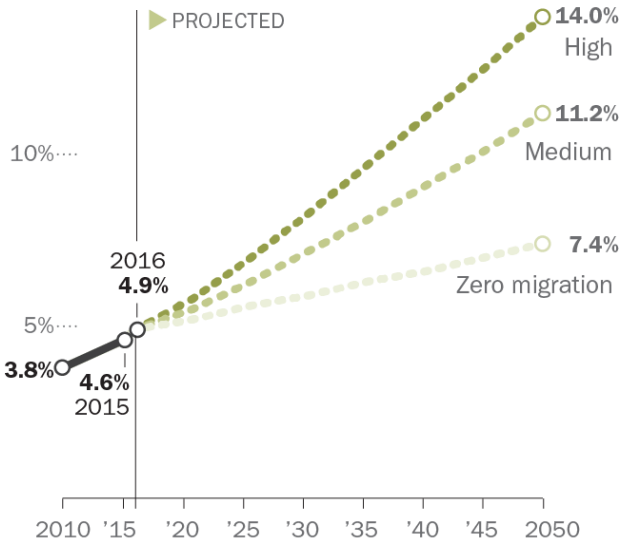
Even if all migration into Europe were to immediately and permanently stop – a "zero migration" scenario – the Muslim population of Europe still would be expected to rise from the current level of 4.9% to 7.4% by the year 2050. This is because Muslims are younger (by 13 years, on average) and have higher fertility (one child more per woman, on average) than other Europeans, mirroring a global pattern.

A second, "medium" migration scenario assumes that all refugee flows will stop as of mid-2016 but that recent levels of "regular" migration to Europe will continue (i.e., migration of those who come for reasons other than seeking asylum; see note on terms on page 6). Under these conditions, Muslims could reach 11.2% of Europe's population in 2050.

Finally, a "high" migration scenario projects the record flow of refugees into Europe between 2014 and 2016 to continue indefinitely into the future with the same religious composition (i.e., mostly made up of Muslims) in addition to the typical annual flow of regular migrants. In this scenario, Muslims could make up 14% of Europe's population by 2050 – nearly triple the current share, but still considerably smaller than the populations of both Christians and people with no religion in Europe.

Amount of growth in Europe's Muslim population depends on future migration

Muslim share of Europe's population under different migration scenarios



Note: In zero migration scenario, no migration of any kind takes place to or from Europe. In medium migration scenario, regular migration continues and refugee flows cease. In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration.
Europe defined here as the 28 countries of the European Union plus Norway and Switzerland.
Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center estimates and projections. See Methodology for details.
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The refugee flows of the last few years, however, are extremely high compared with the historical average in recent decades, and already have begun to decline as the European Union and many of its member states have made policy changes aimed at limiting refugee flows (see sidebar on page 26).

Predicting future migration levels is impossible, because migration rates are connected not only to political and economic conditions outside of Europe, but also to the changing economic situation and government policies within Europe. Although none of these scenarios will play out exactly as projected, each provides a set of rough parameters from which to imagine other possible outcomes. For example, if regular migration continues at recent levels, and *some* asylum seekers also continue to arrive and receive refugee status – but not as many as during the historically exceptional surge of refugees from 2014 to 2016 – then the share of Muslims in Europe's population as of 2050 would be expected to be somewhere between 11.2% and 14%.

How key terms are used in this report: Regular migrants, asylum seekers and refugees

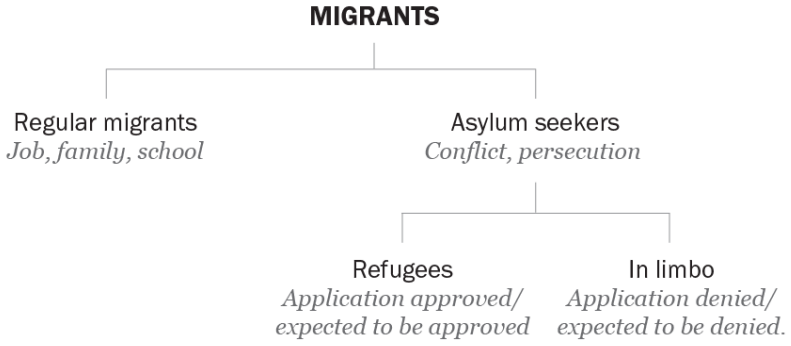
Migrants: This broad category includes all people moving across international borders to live in another country.

Regular migrants/other migrants: People who legally move to Europe for any reason other than seeking asylum – e.g., for economic, educational or family reasons.

Asylum seekers: Migrants who apply for refugee status upon entry to Europe. Asylum seekers whose requests for asylum are rejected can appeal the decision but cannot legally stay in Europe if the appeal is denied.

Refugees: Successful asylum seekers and those who are expected to receive legal status once their paperwork is processed. Estimates are based on recent rates of approval by European destination country for each origin country (among first-time applicants) and adjusted for withdrawals of asylum requests, which occur, for example, when asylum seekers move to another European country or outside of Europe.

In limbo: Asylum seekers whose application for asylum has been or is expected to be denied. Though this population may remain temporarily or illegally in Europe, these migrants are excluded from the population estimates and projections in this report.



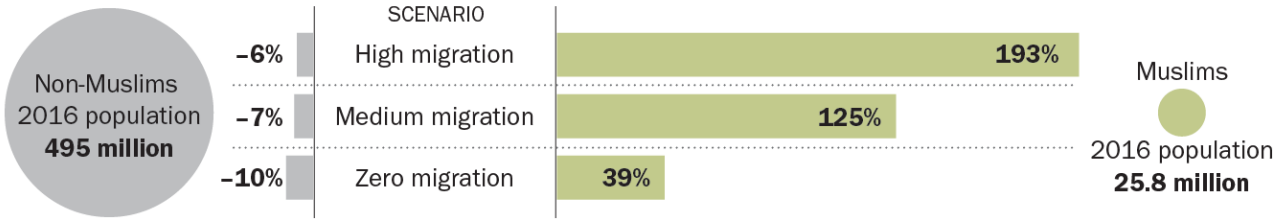
While Europe's Muslim population is expected to grow in all three scenarios – and more than double in the medium and high migration scenarios – Europe's non-Muslims, on the other hand, are projected to *decline* in total number in each scenario. Migration, however, does mitigate this decline somewhat; nearly half of all recent migrants to Europe (47%) were *not* Muslim, with Christians making up the next-largest group.

Taken as a whole, Europe's population (including both Muslims and non-Muslims) would be expected to decline considerably (from about 521 million to an estimated 482 million) without any future migration. In the medium migration scenario, it would remain roughly stable, while in the high migration scenario it would be projected to grow modestly.

The impact of these scenarios is uneven across different European countries (see maps on next three pages); due in large part to government policies, some countries are much more affected by migration than others.

In three migration scenarios, population decline for Europe's non-Muslims, population growth for Muslims

Projected percentage change in Europe's Muslim and non-Muslim population size, 2016-2050



Count estimates and projections

IN MILLIONS	2010	2016	2050 zero migration	2050 medium migration	2050 high migration
Muslims	**19.5M**	**25.8M**	**35.8M**	**57.9M**	**75.6M**
Non-Muslims	**495.3M**	**495.1M**	**445.9M**	**459.1M**	**463.0M**
Total	**514.8M**	**520.8M**	**481.7M**	**516.9M**	**538.6M**

Note: In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. In medium migration scenario, regular migration continues and refugee flows cease. In zero migration scenario, no migration of any kind takes place to or from Europe. Europe defined here as the 28 member nations of the European Union in 2016 plus Norway and Switzerland. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center estimates and projections. See Methodology for details.
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Countries that have received relatively large numbers of Muslim refugees in recent years are projected to experience the biggest changes in the high migration scenario – the only one that projects these heavy refugee flows to continue into the future. For instance, Germany's population (6% Muslim in 2016) would be projected to be about 20% Muslim by 2050 in the high scenario – a reflection of the fact that Germany has accepted many Muslim refugees in recent years – compared with 11% in the medium scenario and 9% in the zero migration scenario.

Sweden, which also has accepted a relatively high number of refugees, would experience even greater effects if the migration levels from 2014 to mid-2016 were to continue indefinitely: Sweden's population (8% Muslim in 2016) could grow to 31% Muslim in the high scenario by 2050, compared with 21% in the medium scenario and 11% with no further Muslim migration.

By contrast, the countries projected to experience the biggest changes in the medium scenario (such as the UK) tend to have been destinations for the highest numbers of regular Muslim migrants. This scenario only models regular migration.

Muslims in the EU, Norway and Switzerland in 2050: zero migration scenario

Projected % of Muslims among total population in each country

Projected size of Muslim population in 2050 under ZERO migration scenario		% of population that is Muslim
REGION	35,770,000	7.4%
France	8,600,000	12.7
United Kingdom	6,560,000	9.7
Germany	5,990,000	8.7
Italy	4,350,000	8.3
Spain	1,880,000	4.6
Netherlands	1,510,000	9.1
Belgium	1,250,000	11.1
Sweden	1,130,000	11.1

Note: In zero migration scenario, no migration of any kind takes place to or from Europe. "Size of Muslim population in 2050 ..." column lists only countries with at least 1 million Muslims.
Source: Pew Research Center projections. See Methodology for details. "Europe's Growing Muslim Population"

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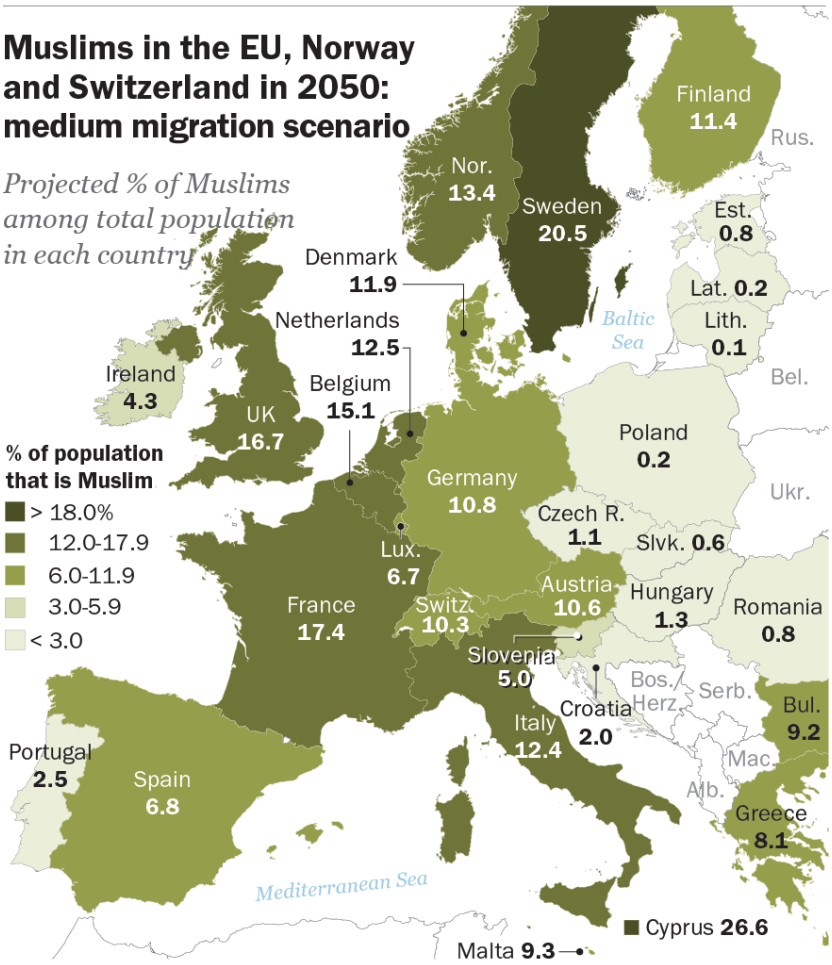
And countries with Muslim populations that are especially young, or have a relatively large number of children, would see the most significant change in the zero migration scenario; these include France, Italy and Belgium.

Some countries would experience little change in any of the scenarios, typically because they have few Muslims to begin with or low levels of immigration (or both).

The starting point for all these scenarios is Europe's population as of mid-2016. Coming up with an exact count of Muslims currently in Europe, however, is not a simple task. The 2016 estimates are based on Pew Research Center analysis and projections of the best available census and survey data in each country combined with data on immigration from Eurostat and other sources. While Muslim identity is often measured directly, in some cases it must be estimated indirectly based upon the national origins of migrants (see Methodology for details).

Muslims in the EU, Norway and Switzerland in 2050: medium migration scenario

Projected % of Muslims among total population in each country



Projected size of Muslim population in 2050 under MEDIUM migration scenario		% of population that is Muslim
REGION	57,880,000	11.2%
United Kingdom	13,060,000	16.7
France	12,630,000	17.4
Germany	8,480,000	10.8
Italy	7,050,000	12.4
Spain	2,660,000	6.8
Sweden	2,470,000	20.5
Netherlands	2,200,000	12.5
Belgium	2,050,000	15.1
Switzerland	1,140,000	10.3

Note: In the medium migration scenario, regular migration continues and refugee flows cease. "Size of Muslim population in 2050 ..." column lists only countries with at least 1 million Muslims.
Source: Pew Research Center projections. See Methodology for details.
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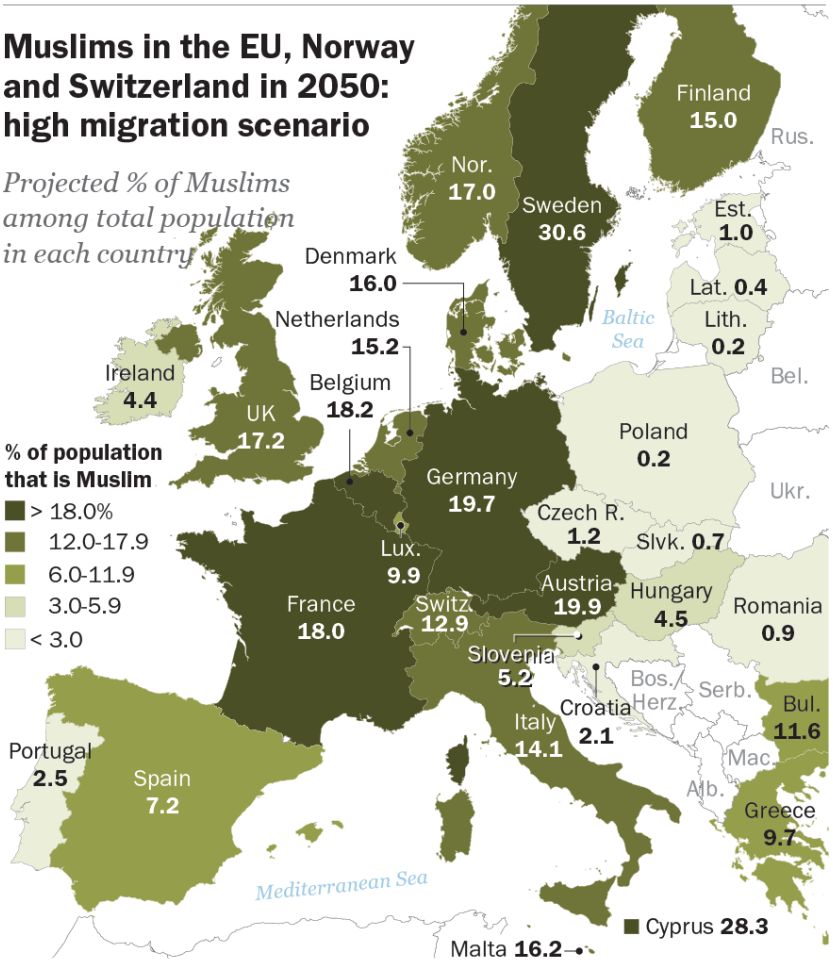
One source of uncertainty is the status of asylum seekers who are not granted refugee status. An estimated 3.7 million Muslims migrated to Europe between mid-2010 and mid-2016, including approximately 2.5 million regular migrants entering legally as workers, students, etc., as well as 1.3 million Muslims who have or are expected to be granted refugee status (including an estimated 980,000 Muslim refugees who arrived between 2014 and mid-2016).

Based on recent rates of approval of asylum applications, Pew Research Center estimates that nearly a million (970,000) additional Muslim asylum seekers who came to Europe in recent years will *not* have their applications for asylum accepted, based on past rates of approval on a country-by-country basis. These estimates also take into account expected rates of withdrawals of requests for refugee status (see Methodology for details).

Where these asylum seekers "in limbo" ultimately will go is unclear: Some may leave Europe voluntarily or be deported, while others will remain at least temporarily while they appeal their asylum rejection.



Projected size of Muslim population in 2050 under HIGH migration scenario		% of population that is Muslim
REGION	75,550,000	14.0%
Germany	17,490,000	19.7
United Kingdom	13,480,000	17.2
France	13,210,000	18.0
Italy	8,250,000	14.1
Sweden	4,450,000	30.6
Spain	2,810,000	7.2
Netherlands	2,790,000	15.2
Belgium	2,580,000	18.2
Austria	2,120,000	19.9
Switzerland	1,520,000	12.9
Norway	1,320,000	17.0
Denmark	1,100,000	16.0

Note: In the high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. "Size of Muslim population in 2050 ..." column lists only countries with at least 1 million Muslims.
Source: Pew Research Center projections. See Methodology for details.
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Some also could try to stay in Europe illegally.

For the future population projections presented in this report, it is assumed that only Muslim migrants who already have – or are expected to gain – legal status in Europe will remain for the long term, providing a baseline of 25.8 million Muslims as of 2016 (4.9% of Europe's population). However, if *all* of the approximately 1 million Muslims who are currently in legal limbo in Europe were to remain in Europe – which seems unlikely – the 2016 baseline could rise as high as 26.8 million, with ripple effects across all three scenarios.

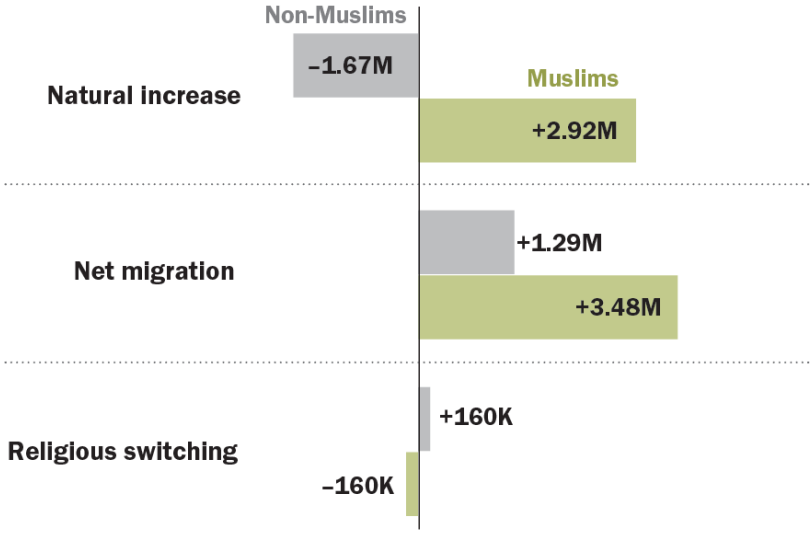
These are a few of the key findings from a new Pew Research Center demographic analysis – part of a broader effort to project the population growth of religious groups around the world. This report, which focuses on Muslims in Europe due to the rapid changes brought on by the recent influx of refugees, provides the first estimates of the growing size of the Muslim population in Europe following the wave of refugees between 2014 and mid-2016. It uses the best available data combined with estimation and projection methods developed in prior Pew Research Center demographic studies. The projections take into account the current size of both the Muslim and non-Muslim populations in Europe, as well as international migration, age and sex composition, fertility and mortality rates, and patterns in conversion. (See Methodology for details.)

Europe's Muslim population is diverse. It encompasses Muslims born in Europe and in a wide variety of non-European countries. It includes Sunnis, Shiites and Sufis. Levels of religious commitment and belief vary among Europe's Muslim populations. Some of the Muslims enumerated in this report would not describe Muslim identity as salient in their daily lives. For others, Muslim identity profoundly shapes their daily lives. However, quantifying religious devotion and categories of Muslim identity is outside the scope of this report.

Between mid-2010 and mid-2016, the number of Muslims in Europe grew considerably through natural increase alone – that is, estimated births outnumbered deaths among Muslims by more than 2.9 million over that period. But most of the Muslim population growth in Europe during the period (about 60%) was due to migration: The Muslim population grew by an estimated 3.5 million from net migration (i.e., the number of Muslims who arrived minus the number who left, including both regular migrants and refugees). Over the same period, there was a relatively small loss in the Muslim population due to religious switching – an estimated 160,000 more people switched their religious identity from Muslim to another religion (or to no religion) than switched into Islam from some other religion or no religion – although this had a modest impact compared with births, deaths and migration.[1]

Fertility and migration drove Muslim population growth in Europe between 2010 and 2016

Estimated population change between 2010 and 2016 due to three factors



Note: Natural increase is the difference between births and deaths. Net migration includes refugees and other regular migrants. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe. Europe defined here as the 28 member nations of the European Union in 2016 plus Norway and Switzerland.
Source: Pew Research Center estimates. See Methodology for details.
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By comparison, the non-Muslim population in Europe declined slightly between 2010 and 2016. A natural *decrease* of about 1.7 million people in the non-Muslim European population modestly

[1] Data on religious switching patterns come from general population surveys. In European countries, these surveys are generally sufficient for measuring rates of switching into Islam among those who were not raised as Muslims. However, due to the relatively small size of Muslim populations in European countries, these surveys typically have too few Muslims to reliably estimate patterns of switching out of Islam. Furthermore, the small number of respondents in these surveys who were raised Muslim may not be representative of all people raised Muslim in the country — respondents may be disproportionately assimilated and perhaps more likely than others in the country who were raised Muslim to report some type of religious switching. However, in France, a large, carefully designed survey provided sufficient statistical power and methodological precautions to measure switching patterns among those raised Muslim. In the absence of data on country-specific switching and retention patterns among those raised Muslim, the switching patterns of respondents raised Muslim in France have been used to model retention in and switching out of Islam in other Western European countries.

outnumbered the net increase of non-Muslim migrants and a modest net change due to religious switching.

The rest of the report looks at these findings in greater detail. The first section examines the number of migrants to Europe between mid-2010 and mid-2016, including patterns by religion and refugee status. The next section details the top origin and destination countries for recent migrants to Europe, including in each case the estimated percentage of Muslims. One sidebar looks at European public opinion toward the surge in refugees from countries like Iraq and Syria; another summarizes trends in government policies toward refugees and migration in individual countries and the EU as a whole. The following section examines more deeply the three projection scenarios on a country-by-country basis. Finally, the last two sections reveal data on two other key demographic factors that affect population growth: fertility and age structure.

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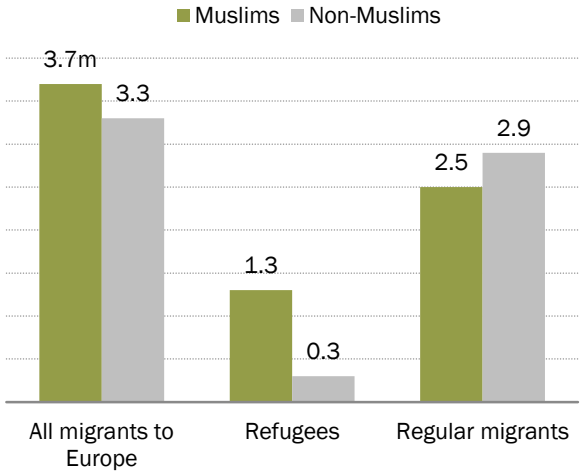
Surge in refugees – most of them Muslim – between 2014 and mid-2016

Overall, regardless of religion or immigration status, there were an estimated 7 million migrants to Europe between mid-2010 and mid-2016 (not including 1.7 million asylum seekers who are not expected to have their applications for asylum approved).

Historically, a relatively small share of migrants to Europe are refugees from violence or persecution in their home countries.[2] This continued to be the case from mid-2010 to mid-2016 – roughly three-quarters of migrants to Europe in this period (5.4 million) were regular migrants (i.e., not refugees).

About one-quarter of recent immigrants to Europe are refugees

Estimated counts of Muslims and non-Muslims immigrating to Europe between mid-2010 and mid-2016



Note: Counts do not include those asylum seekers who are not expected to be granted legal refugee status to remain in Europe. Europe defined here as the 28 member nations of the European Union in 2016 plus Norway and Switzerland.
Source: Pew Research Center estimates. See Methodology for details.
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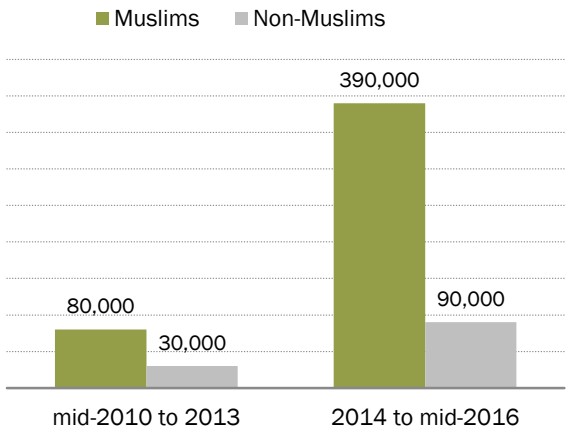
[2] Europe also experienced a large surge in refugees over the 1991 to 1995 period due to the collapse of Yugoslavia and the Bosnian War.

But the number of refugees has surged since 2014. During the three-and-a-half-year period from mid-2010 to the end of 2013, about 400,000 refugees (an average of 110,000 per year) arrived in Europe. Between the beginning of 2014 and mid-2016 – a stretch of only two and a half years – roughly three times as many refugees (1.2 million, or about 490,000 annually) came to Europe, as conflicts in Syria, Iraq and Afghanistan continued or intensified. (These figures do not include an additional 970,000 Muslim asylum seekers and 680,000 non-Muslim asylum seekers who arrived between mid-2010 and mid-2016 but are not projected to receive legal status in Europe.)

Europe has experienced surge of refugees since 2014

Annual averages of estimated refugees in each period



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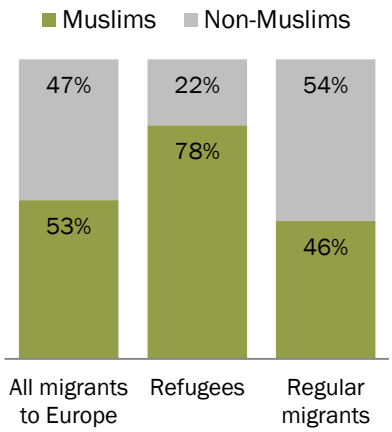
Of these roughly 1.6 million people who received refugee status in Europe between mid-2010 and mid-2016 (or are expected to have their applications approved in the future), more than three-quarters (78%, or 1.3 million) were estimated to be Muslims.[3] By comparison, a smaller percentage of regular migrants to Europe in this period (46%) were Muslims, although this still greatly exceeds the share of Europe's overall population that is Muslim and thus contributes to Europe's growing Muslim population. In fact, about two-thirds of all Muslims who arrived in Europe between mid-2010 and mid-2016 were regular migrants and not refugees.

Altogether, a slim majority of all migrants to Europe – both refugees and regular migrants – between mid-2010 and mid-2016 (an estimated 53%) were Muslim. In total number, roughly 3.7 million Muslims and 3.3 million non-Muslims arrived in Europe during this period.

Non-Muslim migrants to Europe overall between mid-2010 and mid-2016 were mostly made up of Christians (an estimated 1.9 million), people with no religious affiliation (410,000), Buddhists (390,000) and Hindus (350,000). Christians made up 30% of regular migrants overall (1.6 million regular Christian migrants; 55% of all non-Muslim regular migrants) and 16% of all refugees (250,000 Christian refugees; 71% of all non-Muslim refugees).

Majority of recent refugees are Muslim

Estimated shares of Muslims and non-Muslims immigrating to Europe, 2010-2016



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[3] This relatively high share of Muslims among refugees is a result of both a surge of migrants from predominantly Muslim countries as well as the fact that applications for asylum have been approved at higher rates for asylum seekers from Syria and Iraq compared with other origin countries.

Syria is top origin country not only for refugees but also for all Muslim migrants to Europe

Considering the total influx of refugees and regular migrants together, more migrants to Europe between mid-2010 and mid-2016 came from Syria than any other country. Of the 710,000 Syrian migrants to Europe during this period, more than nine-in-ten (94%, or 670,000) came seeking refuge from the Syrian civil war, violence perpetrated by the Islamic State or some other strife.

An estimated nine-in-ten Syrian migrants (91%) were Muslims. In this case and many others, migrants' religious composition is assumed to match the religious composition of their origin country. In some other cases, data are available for migrants from a particular country to a destination country; for example, there is a higher share of Christians among Egyptian migrants to Austria than there is among those living in Egypt. When available, this type of data is used to estimate the religious composition of new migrants. (For more details, see Methodology on page 38.)

After Syria, the largest sources of recent refugees to Europe are Afghanistan (180,000) and Iraq (150,000). Again, in both cases, nearly all of the migrants from these countries were refugees from conflict, and overwhelming majorities from both places were Muslims.

Several other countries, however, were the origin of more overall migrants to Europe. India, for example, was the second-biggest

Syria and India top list of countries of origin of migrants to Europe, mid-2010 to mid-2016

Top 10 origins of migrants overall

	Estimated count	% Muslim
Syria	710,000	91%
India	480,000	15
Morocco	370,000	100
Pakistan	280,000	96
Bangladesh	250,000	95
United States	240,000	1
China	240,000	2
Iran	220,000	97
Nigeria	190,000	23
Sri Lanka	190,000	10
Top 10 origins of refugees		
Syria	670,000	91%
Afghanistan	180,000	100
Iraq	150,000	92
Eritrea	120,000	37
Somalia	60,000	100
Iran	50,000	96
Pakistan	30,000	96
Nigeria	20,000	44
Russia	20,000	8
Sudan	20,000	91
Top 10 origins of regular migrants		
India	470,000	15%
Morocco	360,000	100
Pakistan	250,000	96
United States	240,000	1
Bangladesh	240,000	96
China	230,000	2
Sri Lanka	180,000	10
Libya	180,000	97
Iran	170,000	98
Nigeria	170,000	20

Note: Estimates do not include those asylum seekers not expected to be granted legal status to remain in Europe.
Source: Pew Research Center estimates. See Methodology for details. "Europe's Growing Muslim Population"

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source of migrants to Europe (480,000) between mid-2010 and mid-2016; very few of these migrants came as refugees, and only an estimated 15% were Muslims.

The top countries of origin of migrants in legal limbo are not necessarily the top countries of origin among legally accepted refugees. For example, relatively few Syrians are in legal limbo, while Albania, where fewer asylum seekers come from, is the origin of a large number of rejected applicants. Afghanistan, meanwhile, is both a major source of legally accepted refugees and also a major country of origin of those in legal limbo.

Since the primary criterion for asylum decisions is the safety of the origin country, particularly dangerous countries, such as Syria, have much higher acceptance rates than others. For more information on the countries of origin of those in legal limbo see Pew Research Center's 2017 report, "Still in Limbo: About a Million Asylum Seekers Await Word on Whether They Can Call Europe Home."

Syria also was by far the single biggest source of *Muslim* migrants to Europe overall in recent years. But Morocco, Pakistan, Bangladesh and Iran also sent considerable numbers of Muslim migrants to Europe between mid-2010 and mid-2016 – more than 1 million combined – and the vast majority of Muslims from these countries came to Europe as regular migrants and not as refugees.

Morocco, Pakistan, Bangladesh top list of countries of origin for regular Muslim migrants to Europe

Estimated counts of Muslims migrating from each country of origin, 2010-2016

Top 10 origins of Muslim migrants		Top 10 origins of Muslim refugees		Top 10 origins of regular Muslim migrants	
Syria	650,000	Syria	610,000	Morocco	360,000
Morocco	370,000	Afghanistan	180,000	Pakistan	240,000
Pakistan	270,000	Iraq	140,000	Bangladesh	230,000
Bangladesh	230,000	Somalia	60,000	Libya	170,000
Iran	220,000	Iran	50,000	Iran	170,000
Afghanistan	180,000	Eritrea	50,000	Jordan	150,000
Libya	180,000	Pakistan	30,000	Algeria	140,000
Jordan	150,000	Sudan	10,000	Senegal	70,000
Iraq	140,000	Mali	10,000	Somalia	70,000
Algeria	140,000	Nigeria	10,000	India	70,000

Note: Estimates do not include those asylum seekers who are not expected to be granted legal refugee status to remain in Europe.
Source: Pew Research Center estimates. See Methodology for details.
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Germany is top destination for Muslim refugees; UK is leading destination for regular Muslim migrants

Germany was the destination for an estimated 670,000 refugees between mid-2010 and mid-2016 – more than three times as many as the country with the next-largest number, Sweden (200,000). A similar number of regular migrants from outside Europe also arrived in Germany in recent years (680,000). But religiously, refugees and other migrants to Germany look very different; an estimated 86% of refugees accepted by Germany were Muslims, compared with just 40% of regular migrants to Germany.

Germany has the largest population and economy in Europe, is centrally located on the continent and has policies favorable toward asylum seekers (for more on EU policies toward refugees, see sidebar on page 26). The UK, however, actually was the destination for a larger number of migrants from outside Europe overall between mid-2010 and mid-2016 (1.6 million). The UK voted in a 2016 referendum to leave the EU, which may impact immigration patterns in the future, but it is still counted as part of Europe in this report.

Relatively few recent immigrants to the UK (60,000) were refugees, but more than 1.5 million regular migrants arrived there in recent years. Overall, an estimated 43% of all migrants to the UK between mid-2010 and mid-2016 were Muslims.

UK received largest number of total immigrants to Europe, 2010-2016

Top 10 destinations of migrants overall	Estimated count	% Muslim
United Kingdom	1,600,000	43%
Germany	1,350,000	63
France	790,000	67
Italy	720,000	56
Sweden	450,000	67
Netherlands	310,000	57
Switzerland	280,000	33
Austria	240,000	46
Belgium	230,000	57
Spain	210,000	39
Top 10 destinations of refugees		
Germany	670,000	86%
Sweden	200,000	77
Italy	130,000	72
Austria	110,000	72
France	80,000	60
Switzerland	70,000	75
Netherlands	70,000	54
United Kingdom	60,000	72
Belgium	50,000	81
Norway	40,000	73
Top 10 destinations of regular migrants		
United Kingdom	1,540,000	42%
France	710,000	68
Germany	680,000	40
Italy	590,000	53
Sweden	250,000	58
Netherlands	240,000	51
Switzerland	210,000	26
Spain	200,000	37
Belgium	170,000	50
Norway	150,000	40

Note: Estimates do not include those asylum seekers who are not expected to be granted legal status to remain in Europe.
Source: Pew Research Center estimates. See Methodology for details. "Europe's Growing Muslim Population"

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Combining Muslim refugees and Muslim regular migrants, Germany was the destination for more Muslim migrants overall than the UK (850,000 vs. 690,000).

France also received more than half a million Muslim migrants – predominantly regular migrants – between mid-2010 and mid-2016, while 400,000 Muslims arrived in Italy. The two countries accepted a combined total of 210,000 refugees (130,000 by Italy and 80,000 by France), most of whom were Muslims.

Sweden received even more refugees than the UK, Italy and France, all of which have much larger populations. A large majority of these 200,000 refugees (an estimated 77%) were Muslims; Sweden also received 250,000 regular migrants, most of whom were Muslims (58%). Overall, 300,000 Muslim migrants – 160,000 of whom were refugees – arrived in Sweden in recent years. Only Germany, the UK, France and Italy received more Muslim migrants to Europe overall since mid-2010. But because Sweden is home to fewer than 10 million people, these arrivals have a bigger impact on Sweden's overall religious composition than does Muslim migration to larger countries in Western Europe.

These estimates do not include migration from one EU country to another. Some countries, particularly Germany, received a large number of regular migrants from within the EU. In fact, with about 800,000 newcomers from other EU countries, Germany received more intra-EU migrants than regular migrants from outside the EU. Intra-EU migrants tend to have a similar religious composition to Europeans overall.

Germany is top European destination for Muslim refugees by a wide margin; UK is top destination for other Muslim migrants

Estimated counts of Muslims migrating to each destination country, 2010-2016

Top 10 destinations of Muslim migrants		Top 10 destinations of Muslim refugees		Top 10 destinations of regular Muslim migrants	
Germany	850,000	Germany	580,000	United Kingdom	650,000
United Kingdom	690,000	Sweden	160,000	France	480,000
France	530,000	Italy	100,000	Italy	310,000
Italy	400,000	Austria	80,000	Germany	270,000
Sweden	300,000	Netherlands	50,000	Sweden	140,000
Netherlands	170,000	France	50,000	Netherlands	120,000
Belgium	130,000	Belgium	40,000	Belgium	90,000
Austria	110,000	United Kingdom	40,000	Spain	70,000
Switzerland	90,000	Switzerland	40,000	Norway	60,000
Norway	90,000	Norway	30,000	Switzerland	60,000

Note: Estimates do not include those asylum seekers who are not expected to be granted legal status to remain in Europe.
Source: Pew Research Center estimates. See Methodology for details.
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The number of Muslim asylum seekers in legal limbo – i.e., those who already have had or are expected to have their applications for asylum rejected – varies substantially from country to country, largely because of differences in policies on asylum, variation in the number of applications received and differing origins of those migrants. Germany, for example, has a high number of Muslim migrants in legal limbo despite a relatively low rejection rate – mainly because it has received such a large number of applications for asylum. Germany received about 900,000 applications for asylum from Muslims between mid-2010 and mid-2016, and is projected to ultimately accept 580,000 and reject roughly 320,000 – or slightly more than one-third (excluding applications that were withdrawn).

This rejection *rate* is similar to Sweden's; Sweden ultimately is expected to reject an estimated 90,000 out of roughly 240,000 Muslim applications (again, excluding withdrawals). France, meanwhile, is projected to reject three-quarters of applications from Muslims, leaving an "in limbo" population of 140,000 (out of 190,000 Muslim applications). Italy is expected to reject about half of Muslim applicants (90,000 out of 190,000 applications), and the UK is projected to reject 60,000 out of 100,000.

Data for the 2010 to 2013 period are based on application decision rates. But due to the combination of still-unresolved applications and lack of comprehensive data on recent decisions when this analysis took place, rejection patterns for the 2014 to mid-2016 period are estimated based on 2010 to 2013 rates of rejection for each origin and destination country pair (for details, see Methodology). There is no religious preference inherent to the asylum regulations in Europe. However, if religious persecution is a reason for seeking asylum, that context (as opposed to religious affiliation in and of itself) can be considered in the decision process. Religion is estimated in this report based on available information about countries of origin and migration flow patterns by religion – application decisions are not reported by religious group.

Sidebar: Iraqi and Syrian refugees perceived as less of a threat in countries where more of them have sought asylum

Does public opinion toward refugees invariably turn negative as their numbers rise? Apparently not. In some European countries that have attracted large numbers of refugees from Iraq and Syria, public levels of concern about these refugees are relatively low. Meanwhile, in some countries where there are fewer refugees from Iraq and Syria, a much higher share of the public says they pose a "major threat," according to a 2017 Pew Research Center survey.

For instance, Germany has been the primary destination country for asylum seekers from the Middle East, receiving 457,000 applications from Iraqis and Syrians between mid-2010 and mid-2016. Yet the share of people in Germany who say "large numbers of refugees from countries such as Iraq and Syria" pose a "major threat" is among the lowest of all European countries surveyed (28%).

Similarly, in Sweden, just 22% of the public says these refugees constitute a "major threat." Iraqi and Syrian asylum seekers make up an even greater share of Sweden's population than Germany's; there are 139 asylum seekers from these countries for every 10,000 Swedes.

By contrast, majorities of the public in Greece (67%), Italy (65%) and Poland (60%) say large numbers of refugees from countries such as Iraq and Syria represent a "major threat," even though there are relatively few such asylum seekers in these countries.[4] Indeed, there are fewer than 10,000 people from Iraq and Syria seeking asylum in Italy and Poland combined, representing one or fewer per 10,000 residents in each country.

In countries with more asylum seekers from Iraq and Syria, perceptions of threat are generally lower

% who say large numbers of refugees from countries such as Iraq and Syria represent _____, alongside counts of asylum applications from Iraqis and Syrians between mid-2010 and mid-2016

	Major threat	Minor threat	Not a threat	Number of asylum seekers from Iraq and Syria	Asylum seekers per 10,000 residents
Greece	67%	19%	14%	22,000	20
Hungary	66	26	6	85,000	87
Italy	65	23	7	7,000	1
Poland	60	28	10	1,000	0
Spain	42	23	33	10,000	2
France	39	41	20	18,000	3
United Kingdom	36	36	24	17,000	3
Netherlands	31	44	25	41,000	24
Germany	28	49	22	457,000	56
Sweden	22	48	30	138,000	139

Note: In contrast with the rest of this report, *total asylum seekers* (rather than estimates of successful refugees) are presented above since respondents may think about reports of asylum seeker numbers when answering this question.
Source: Pew Research Center's spring 2017 Global Attitudes Survey.
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This pattern is not universal. Hungary received 85,000 applications for asylum from Iraqi and Syrian refugees between mid-2010 and mid-2016 – among the highest figures in Europe – and most Hungarians (66%) see this surge of refugees as a major threat. Hungary's government decided to close its border with Croatia in October

[4] Many asylum seekers from North Africa cross the Mediterranean to land in Italy. Italian respondents may have been considering this flow of potential refugees when answering this survey question.

2015, erecting a fence to keep migrants out. Tens of thousands of applications for asylum in Hungary have been withdrawn since 2015. (For more on government policies toward migration, see sidebar on page 26.)

Concerns about refugees from Iraq and Syria, most of whom are Muslims, are tied to negative views about Muslims in general. In all 10 EU countries that were part of a Pew Research Center survey in 2016, people who have an unfavorable view of Muslims are especially likely to see a threat associated with Iraqi and Syrian refugees. In the United Kingdom, for example, 80% of those who have an unfavorable opinion of Muslims say large numbers of refugees from countries such as Iraq and Syria represent a major threat. Among British adults who view Muslims favorably, just 40% see the refugees as a major threat.

Sidebar: EU restrictions on migration tightening after surge

Changing government policies in European countries can have a major impact on migration flows. In recent years, several European countries – and the European Union itself, acting on behalf of its member states – have adopted policies that have generally moved to tighten Europe's borders and to limit flows of migrants.

In 2016, the EU signed a deal with Turkey, a frequent stop for migrants coming from Syria. Under the terms of the deal, Greece, which shares a border with Turkey, can return to Turkey all new "irregular" or illegal migrants. In exchange, EU member states pledged to resettle more Syrian refugees living in Turkey and to increase financial aid for those remaining there. By 2017, the agreement had reduced by 97% the number of migrants coming from Turkey into Greece, according to the EU migration commissioner.

Another common path for large numbers of migrants to Europe is from sub-Saharan Africa to Italy, where they primarily arrive by sea from the Libyan coast. To try to stem the tide, Italy has worked with the Libyan coast guard to develop techniques to stop boats carrying the migrants, among other policies and tactics.

In addition, even Germany – the destination of more recent asylum seekers than any other European country -- has deported some migrants, including to Afghanistan, and moved toward tougher border controls. German Chancellor Angela Merkel, following a September 2017 election that saw the far-right Alternative for Germany (AfD) party gain a presence in parliament for the first time, agreed to a limit of 200,000 asylum seekers per year.

Sweden and Austria also have accepted high numbers of refugees, especially relative to their small populations. But in November 2015, leaders announced a tightening of Sweden's refugee policy, requiring identity checks to be imposed on all forms of transportation, and limiting family reunification with refugees. And in an October 2017 election, Austrian voters favored parties that had campaigned on taking a harder line on immigration.

Immigration – and not just by refugees – has been a major campaign issue in several countries, and it was one of the key factors in the Brexit debate over whether the UK, the destination of more regular migrants than any other European country in recent years, should remain in the European Union. In the aftermath of the 2016 referendum in which British voters opted to leave the EU, UK government officials have vowed to remove the country from the freedom-of-movement policy, which allows EU citizens to move to and work in EU member states without having to apply for visas, in March 2019.

How Europe's Muslim population is projected to change in future decades

Pew Research Center's three scenarios projecting the future size of the Muslim population in Europe reflect uncertainty about future migration flows due to political and social conditions outside of Europe, as well as shifting immigration policies in the region.

These projections start from an estimated baseline of 26 million Muslims in Europe as of 2016, which excludes asylum seekers who are not expected to gain legal status. Even with no future migration, Europe's Muslim population is projected to increase by 10 million by 2050 based on fertility and age patterns (see page 34). If past levels of regular migration continue in the future – but with no more asylum seekers — the Muslim population in Europe would increase to nearly 58 million by midcentury (the medium scenario). And if the heavy refugee flows seen in recent years were to continue in the future on top of regular migration (the high migration scenario), there would be more than 75 million Muslims in Europe as of 2050.

In all three scenarios, the non-Muslim population in Europe is projected to shrink in total number between now and 2050.

Effects of migration on European population

Projected population counts by 2050

	2010	2016	2050 zero migration	2050 medium migration	2050 high migration
Muslims	19,520,000	25,770,000	35,770,000	57,880,000	75,550,000
Non-Muslims	495,280,000	495,060,000	445,920,000	459,070,000	463,040,000
Total	514,810,000	520,830,000	481,690,000	516,950,000	538,600,000

Note: Europe is defined here as the 28 nations of the EU plus Norway and Switzerland. In zero migration scenario, no migration of any kind takes place to or from Europe. In medium migration scenario, regular migration continues and refugee flows cease. In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center estimates and projections. See Methodology for details.
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As of 2016, France and Germany have the highest numbers of Muslims in Europe. But in the medium migration scenario, the United Kingdom would surpass them, with a projected 13 million Muslims in 2050 (compared with a projected 12.6 million in France and 8.5 million in Germany). This is because the UK was the top destination country for regular Muslim migrants (as opposed to refugees) between mid-2010 and mid-2016, and the medium scenario assumes that only regular immigration will continue.

Alternatively, in the high migration scenario, Germany would have by far the highest number of Muslims in 2050 – 17.5 million. This projection reflects Germany's acceptance of a large number of Muslim refugees in recent years. The high scenario assumes that these refugee flows will continue in the coming decades, not only at the same volume but also with the same religious composition (i.e., that many refugees will continue to come from predominantly Muslim countries). Compared with the UK and France, Germany has received fewer regular Muslim migrants in recent years.

Other, smaller European countries also are expected to experience significant growth in their Muslim populations if regular migration or an influx of refugees continues (or both). For instance, in Sweden, the number of Muslims would climb threefold from fewer than a million (810,000) in 2016 to nearly 2.5 million in 2050 in the medium scenario, and fivefold to almost 4.5 million in the high scenario.

But some countries – even some large ones, like Poland – had very few Muslims in 2016 and are projected to continue to have very few Muslims in 2050 in all three scenarios. Poland's Muslim population was roughly 10,000 in 2016 and would only rise to 50,000 in the medium scenario and 60,000 in the high scenario.

Projected Muslim counts over time under different migration scenarios

	2010	2016	2050 zero migration scenario	2050 medium migration scenario	2050 high migration scenario
Europe overall	**19,520,000**	**25,770,000**	**35,770,000**	**57,880,000**	**75,550,000**
United Kingdom	2,970,000	4,130,000	6,560,000	13,060,000	13,480,000
France	4,720,000	5,720,000	8,600,000	12,630,000	13,210,000
Germany	3,300,000	4,950,000	5,990,000	8,480,000	17,490,000
Italy	2,150,000	2,870,000	4,350,000	7,050,000	8,250,000
Spain	980,000	1,180,000	1,880,000	2,660,000	2,810,000
Sweden	430,000	810,000	1,130,000	2,470,000	4,450,000
Netherlands	990,000	1,210,000	1,510,000	2,200,000	2,790,000
Belgium	650,000	870,000	1,250,000	2,050,000	2,580,000
Switzerland	390,000	510,000	660,000	1,140,000	1,520,000
Norway	180,000	300,000	390,000	980,000	1,320,000
Austria	450,000	600,000	750,000	960,000	2,120,000
Denmark	220,000	310,000	430,000	770,000	1,100,000
Finland	60,000	150,000	220,000	720,000	990,000
Greece	590,000	620,000	590,000	700,000	860,000
Bulgaria	820,000	790,000	700,000	500,000	650,000
Cyprus	280,000	300,000	300,000	390,000	430,000
Portugal	30,000	40,000	50,000	210,000	220,000
Ireland	50,000	70,000	80,000	190,000	200,000
Hungary	< 10,000	40,000	30,000	110,000	390,000
Romania	70,000	80,000	70,000	110,000	120,000
Slovenia	70,000	80,000	80,000	100,000	100,000
Czech Republic	< 10,000	20,000	20,000	100,000	110,000
Croatia	70,000	70,000	60,000	70,000	70,000
Luxembourg	10,000	20,000	20,000	60,000	90,000
Poland	< 10,000	10,000	10,000	50,000	60,000
Malta	< 10,000	10,000	10,000	40,000	80,000
Slovakia	< 10,000	< 10,000	< 10,000	30,000	40,000
Latvia	< 10,000	< 10,000	< 10,000	< 10,000	< 10,000
Lithuania	< 10,000	< 10,000	< 10,000	< 10,000	< 10,000
Estonia	< 10,000	< 10,000	< 10,000	< 10,000	10,000

Notes: In zero migration scenario, no migration of any kind takes place to or from Europe. In medium migration scenario, regular migration continues and refugee flows cease. In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center estimates and projections. See Methodology for details.
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These growing numbers of Muslims in Europe, combined with the projected shrinkage of the non-Muslim population, are expected to result in a rising *share* of Muslims in Europe's overall population in all scenarios.

Even if every EU country plus Norway and Switzerland immediately closed its borders to any further migration, the Muslim share of the population in these 30 countries would be expected to rise from 4.9% in 2016 to 7.4% in 2050 simply due to prevailing demographic trends. In the medium migration scenario, with projected future regular migration but no refugees, the Muslim share of Europe would rise to 11.2% by midcentury. And if high refugee flows were to continue in future decades, Europe would be 14% Muslim in 2050 – a considerable increase, although still a relative minority in a Christian-majority region.

Cyprus currently has the highest share of Muslims in the EU (25.4%), due largely to the historical presence of predominantly Muslim

The size of the European Muslim population in 2050 depends largely on the future of migration

Estimated and projected Muslim population shares

Country	2010	2016	2050 zero migration	2050 medium migration	2050 high migration
Cyprus	25.3%	25.4%	25.5%	26.6%	28.3%
Sweden	4.6	8.1	11.1	20.5	30.6
France	7.5	8.8	12.7	17.4	18.0
United Kingdom	4.7	6.3	9.7	16.7	17.2
Belgium	6.0	7.6	11.1	15.1	18.2
Norway	3.7	5.7	7.2	13.4	17.0
Netherlands	6.0	7.1	9.1	12.5	15.2
Italy	3.6	4.8	8.3	12.4	14.1
Denmark	4.0	5.4	7.6	11.9	16.0
Finland	1.2	2.7	4.2	11.4	15.0
Europe overall	**3.8**	**4.9**	**7.4**	**11.2**	**14.0**
Germany	4.1	6.1	8.7	10.8	19.7
Austria	5.4	6.9	9.3	10.6	19.9
Switzerland	4.9	6.1	8.2	10.3	12.9
Malta	0.2	2.6	3.2	9.3	16.2
Bulgaria	11.1	11.1	12.5	9.2	11.6
Greece	5.3	5.7	6.3	8.1	9.7
Spain	2.1	2.6	4.6	6.8	7.2
Luxembourg	2.3	3.2	3.4	6.7	9.9
Slovenia	3.6	3.8	4.3	5.0	5.2
Ireland	1.1	1.4	1.6	4.3	4.4
Portugal	0.3	0.4	0.5	2.5	2.5
Croatia	1.5	1.6	1.8	2.0	2.1
Hungary	0.1	0.4	0.4	1.3	4.5
Czech Republic	0.1	0.2	0.2	1.1	1.2
Estonia	0.2	0.2	0.2	0.8	1.0
Romania	0.3	0.4	0.4	0.8	0.9
Slovakia	0.0	0.1	0.1	0.6	0.7
Latvia	0.1	0.2	0.2	0.2	0.4
Poland	0.0	0.0	0.0	0.2	0.2
Lithuania	0.1	0.1	0.1	0.1	0.2

Notes: In zero migration scenario, no migration of any kind takes place to or from Europe. In medium migration scenario, regular migration continues and refugee flows cease. In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center estimates and projections. See Methodology for details.
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Turkish Cypriots in the northern part of the island. Migration is not projected to dramatically change the Muslim share of the population in Cyprus in future scenarios.

In both the zero and medium migration scenarios, Cyprus would maintain the largest Muslim share in Europe in 2050. But in the high migration scenario, Sweden – which was among the countries to accept a large number of refugees during the recent surge – is projected to surpass even Cyprus. In this scenario, roughly three-in-ten Swedes (30.6%) would be Muslim at midcentury.

Even in the medium scenario, without any future refugee flows, Sweden would be expected to have the second-largest Muslim share (20.5%) as of 2050. If migration were to stop altogether, a much smaller percentage of Swedes (11.1%) would be Muslim in 2050.

Migration also drives the projected increase in the Muslim shares of France, the UK and several other countries. Both France and the UK are expected to be roughly 17% Muslim by 2050 in the medium scenario, several percentage points higher than they would be if all future migration were to stop. Because both countries have accepted many more Muslim regular migrants than Muslim refugees, France and the UK do not vary as greatly between the medium scenario and the high scenario.

Germany, on the other hand, sees a dramatic difference in its projected Muslim share depending on future refugee flows. The share of Muslims in Germany (6.1% in 2016) would increase to 10.8% in 2050 under the medium scenario, in which regular migration continues at its recent pace and refugee flows stop entirely. But it would rise far more dramatically, to 19.7%, in the high scenario, if the recent volume of refugee flows continues as well. There is a similar pattern in Austria (6.9% Muslim in 2016, 10.6% in 2050 in the medium scenario and 19.9% in 2050 in the high scenario).

Another way to look at these shifts is by examining the *extent* of the projected change in the share of each country that is Muslim in different scenarios.

From now until midcentury, some countries in Europe could see their Muslim populations rise significantly in the medium and high scenarios. For example, the Muslim shares of both Sweden and the UK would rise by more than 10 percentage points in the medium scenario, while several other countries would experience a similar increase in the high scenario. The biggest increase for a country in any scenario would be Sweden in the high scenario – an increase of 22.4 percentage points, with the percentage of Muslims in the Swedish population rising to 30.6%.

Other countries would see only marginal increases under these scenarios. For example, Greece's Muslim population is expected to rise by just 2.4 percentage points in the medium scenario. And hardly any change is projected in any scenario in several Central and Eastern European countries,

With continued migration, some countries would see dramatic rise in population's share of Muslims

Percentage point change between 2016 and 2050 under three scenarios

Country	Low	Medium	High
Sweden	+2.9 pts.	+12.4 pts.	+22.4 pts.
United Kingdom	+3.4	+10.4	+10.8
Finland	+1.5	+8.8	+12.3
France	+3.9	+8.6	+9.2
Norway	+1.5	+7.7	+11.3
Italy	+3.5	+7.6	+9.3
Belgium	+3.4	+7.4	+10.6
Malta	+0.6	+6.7	+13.6
Denmark	+2.2	+6.5	+10.6
Europe overall	**+2.5**	**+6.2**	**+9.1**
Netherlands	+2.0	+5.4	+8.0
Germany	+2.6	+4.7	+13.6
Spain	+2.0	+4.2	+4.6
Switzerland	+2.1	+4.2	+6.9
Austria	+2.4	+3.6	+12.9
Luxembourg	+0.2	+3.5	+6.7
Ireland	+0.2	+2.9	+3.0
Greece	+0.6	+2.4	+4.0
Portugal	+0.1	+2.1	+2.1
Cyprus	+0.1	+1.2	+2.9
Slovenia	+0.5	+1.2	+1.4
Hungary	0.0	+0.9	+4.1
Czech Republic	0.0	+0.9	+1.0
Estonia	0.0	+0.6	+0.7
Slovakia	0.0	+0.5	+0.6
Romania	+0.1	+0.4	+0.5
Croatia	+0.2	+0.4	+0.5
Poland	0.0	+0.1	+0.2
Latvia	0.0	+0.1	+0.2
Lithuania	0.0	0.0	+0.1
Bulgaria	+1.3	-1.9	+0.5

Note: Changes of less than 3 percentage points in gray. Changes between 3 points and 10 points in light orange. Changes of 10 points or more shaded in darker orange. In zero migration scenario, no migration of any kind takes place to or from Europe. In medium migration scenario, regular migration continues and refugee flows cease. In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. Estimates do not include asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center projections. See Methodology for details.
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including Poland, Latvia and Lithuania.

In Europe overall, even if all Muslim migration into Europe were to immediately and permanently stop – a zero migration scenario – the overall Muslim population of Europe would be expected to rise by 2.5 percentage points, from the current level of 4.9% to 7.4% by 2050. This is because Muslims in Europe are considerably younger and have a higher fertility rate than other Europeans. Without any future migrants, these prevailing demographic trends would lead to projected rises of at least 3 percentage points in the Muslim shares of France, Belgium, Italy and the UK.

Muslims have an average of one more child per woman than other Europeans

Migration aside, fertility rates are among the other dynamics driving Europe's growing Muslim population. Europe's Muslims have more children than members of other religious groups (or people with no religion) in the region. (New Muslim migrants to Europe are assumed to have fertility rates that match those of Muslims in their destination countries; for more details, see Methodology.)

Not all children born to Muslim women will ultimately identify as Muslims, but children are generally more likely to adopt their parents' religious identity than any other.[5]

Taken as a whole, non-Muslim European women are projected to have a total fertility rate of 1.6 children, on average, during the 2015-2020 period, compared with 2.6 children per Muslim woman in the region. This difference of one child per woman is particularly significant given that fertility among European Muslims exceeds replacement level (i.e., the rate of births needed to sustain the size of a population) while non-Muslims are not having enough children to keep their population steady.

In Europe, Muslims projected to have more children than non-Muslims

Total fertility rates, 2015-2020

	Muslims	Non-Muslims	Difference
Europe average	**2.6**	**1.6**	**+1.0**
Finland	3.1	1.7	+1.4
United Kingdom	2.9	1.8	+1.0
France	2.9	1.9	+1.0
Sweden	2.8	1.8	+0.9
Belgium	2.6	1.7	+0.9
Denmark	2.5	1.7	+0.8
Netherlands	2.3	1.7	+0.5
Austria	2.2	1.5	+0.7
Norway	2.1	1.8	+0.3
Switzerland	2.1	1.5	+0.6
Germany	1.9	1.4	+0.5
Ireland	1.8	2.0	-0.2
Slovenia	1.7	1.6	+0.1
Bulgaria	1.6	1.6	+0.1
Romania	1.6	1.5	+0.1
Greece	1.5	1.3	+0.2

Note: The total fertility rate (TFR) is an estimate of the number of children an average woman is expected to have in her lifetime based upon age-specific fertility patterns observed in a given period. Europe is defined here as the 28 nations of the EU plus Norway and Switzerland. Countries lacking sufficient data are not shown. Differences between Muslims and non-Muslims are computed based on unrounded numbers.
Source: Pew Research Center calculations. See Methodology for details.. "Europe's Growing Muslim Population"

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The difference between Muslim women and others varies considerably from one European country to another. In some countries, the disparity is large. The current estimated fertility rate for Muslim

[5] In France, roughly 10% of those raised Muslim switch to identify with some other religion or with no religion as adults. Projections for Western European countries assume that rising cohorts of Muslims will experience a 10% defection rate, drawing on the data from France, the only Western European country with an adequate sample for measuring switching patterns of those raised Muslim. Patterns of switching to Islam are captured in country-specific surveys and are incorporated into projections.

women in Finland, for example, is 3.1 children per woman, compared with 1.7 for non-Muslim Finns.[6]

Among Western European countries with the largest Muslim populations, Germany's Muslim women have relatively low fertility, at just 1.9 children per woman (compared with 1.4 for non-Muslim Germans). Muslims in the UK and France, meanwhile, average 2.9 children – a full child more per woman than non-Muslims. This is one reason the German Muslim population – both in total number and as a share of the overall population – is not projected to keep pace with the British and French Muslim populations, except in the high scenario (which includes large future refugee flows).

Estimated total fertility rates (children born per woman) over time in Europe, for medium migration scenario

	Muslim	Non-Muslim	Difference
2015-2020	2.6	1.6	1.0
2020-2025	2.6	1.6	1.0
2025-2030	2.5	1.6	0.9
2030-2035	2.5	1.6	0.9
2035-2040	2.5	1.7	0.8
2040-2045	2.4	1.7	0.8
2045-2050	2.4	1.7	0.7

Note: Europe is defined here as the 28 nations of the EU plus Norway and Switzerland. In medium migration scenario, regular migration continues and refugee flows cease. Differences computed based on unrounded numbers.
Source: Pew Research Center calculations. See Methodology for details. "Europe's Growing Muslim Population"

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In some countries, including Bulgaria and Greece, there is little difference in fertility rates between Muslims and non-Muslims.

Over time, Muslim fertility rates are projected to decline, narrowing the gap with the non-Muslim population from a full child per woman today to 0.7 children between 2045 and 2050. This is because the fertility rates of second- and third-generation immigrants generally become similar to the overall rates in their adopted countries.

The low fertility rate in Europe among non-Muslims is largely responsible for the projected decline in the region's total population without future migration.

[6] The fertility difference may be even larger between Muslims and non-Muslims in Spain and Italy, but due to concerns about the reliability of data in these countries, these values are not displayed. In European countries with small Muslim populations, data are not sufficient to reliably estimate fertility differences.

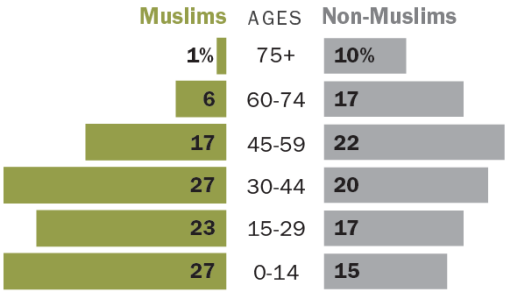
Young Muslim population in Europe contributes to growth

The age distribution of a religious group also is an important determinant of demographic growth.

European Muslims are concentrated in young age groups – the share of Muslims younger than 15 (27%) is nearly double the share of non-Muslims who are children (15%). And while one-in-ten non-Muslim Europeans are ages 75 and older, this is true of only 1% of Muslims in Europe.

Muslims in Europe are much younger than non-Muslims

Age distribution, 2016



Note: Europe is defined here as the 28 nations of the EU plus Norway and Switzerland. Figures may not add to 100% due to rounding.
Source: Pew Research Center estimates. See Methodology for details.
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As of 2016, there is a 13-year difference between the median age of Muslims in Europe (30.4 years of age) and non-Muslim Europeans (43.8). Because a larger share of Muslims relative to the general population are in their child-bearing years, their population would grow faster, even if Muslims and non-Muslims had the same fertility rates.

As of 2016, France and Germany have the greatest age differences in Europe between Muslims and non-Muslims. The median age of Muslims in France is just 27, compared with 43 for non-Muslims. Germany has an equally large gap (31 for Muslims, 47 for non-Muslims).

Muslims are younger than non-Muslims

Median age, 2016

	Muslims	Non-Muslims	Age difference
Europe average	**30**	**44**	**-13**
France	27	43	-16
Germany	31	47	-16
Belgium	29	43	-14
Italy	33	47	-14
United Kingdom	28	41	-13
Denmark	30	43	-13
Finland	30	43	-13
Switzerland	30	44	-13
Austria	30	45	-15
Malta	30	42	-13
Norway	29	40	-11
Hungary	29	42	-12
Sweden	31	42	-12
Netherlands	33	44	-11
Spain	33	44	-11
Portugal	34	44	-10
Czech Republic	32	42	-10
Ireland	30	37	-7
Slovakia	32	39	-7
Poland	33	40	-7
Bulgaria	39	44	-5
Estonia	37	42	-5
Romania	38	42	-4
Slovenia	39	44	-4
Greece	40	44	-5
Luxembourg	35	40	-5
Croatia	40	43	-3
Latvia	41	43	-3
Cyprus	36	37	0
Lithuania	43	43	0

Note: Europe is defined here as the 28 nations of the EU plus Norway and Switzerland. Differences computed based on unrounded numbers
Source: Pew Research Center calculations. See Methodology for details.
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Appendix A: Methodology

The estimates and projections in this report build upon and update data from the April 2015 Pew Research Center report, "The Future of World Religions: Population Growth Projections, 2010-2050." Soon after the release of that report, a large influx of migrants entered Europe seeking refugee status. This report includes estimates of how Europe's Muslim population changed from mid-2010 to mid-2016, with particular attention to change caused by migration. It also includes projections of how the size of Europe's Muslim population may change in the future under different migration scenarios.

This study takes advantage of more than 2,500 data sources gathered for previous projections, including censuses, demographic surveys, general population surveys and other studies. Additionally, this study draws on new data, including asylum-seeker data through mid-2016 from Eurostat (Europe's statistical agency), as well as new survey and other government data.

Baseline (2010) estimates of populations by religion

The earliest population figures in this report are for the year 2010. Several Pew Research Center reports estimated the size of religious populations, including Muslims, in Europe in the year 2010 ("The Future of the Global Muslim Population," released in 2011; "The Global Religious Landscape," released in 2012; and the aforementioned "The Future of World Religions" report, released in 2015). Each report builds on our prior reports, adjusting estimates based on new data. While previous religious demography reports classified 50 countries, including Russia, as part of Europe, this report focuses on a narrower set of 30 countries: the 28 member nations of the European Union (as of mid-2016), as well as Norway and Switzerland.[7] The reasons for the narrower geographic focus of this report are both substantive and pragmatic. These 30 countries have received the bulk of Europe's asylum seekers in recent years and they are the countries for which data on asylum-seeking patterns are available from Eurostat.

The gold standard for measuring religious identity in this report is a census or survey question that asks, "What is your religion, if any?" The aim in this report is to measure identity sociologically

[7] For the 50-country Europe region in "The Future of World Religions," the Muslim population in 2010 was estimated to be 43.5 million (when Cyprus – which is part of the European Union but is not included in Europe in that report – is added in, the total rises to 43.7 million). Of the remaining 20 countries excluded from this report, the most consequential difference is the absence of Russia, which had an estimated 14.3 million Muslims in 2010.
When Muslim estimates used in "The Future of World Religions" report are aggregated for the 30 countries in this report, the 2010 total is 21.2 million (and 22.2 million for the remaining 20 countries, including Russia). In this report, the 2010 estimate for the size of the Muslim population in the EU, Norway and Switzerland is 19.5 million. The country estimate that is most different between reports is Germany. "The Future of World Religions" had a higher estimate of Germany's Muslim population in 2010 (4.8 million) because it relied on estimates of Germany's overall population size that analysis of the 2011 census found to be exaggerated (see discussion of Germany in the next section). Based on analysis of new government data, this report estimates Germany's Muslim population in 2010 to have been 3.3 million.

rather than theologically. Individuals who self-identify as Muslim are classified as such, regardless of their level of adherence to what might be considered orthodox belief and practice.

Among the 30 countries covered in this report, about half of these nations directly measure religious identity in a traditional census or census substitute (such as a large-sample household survey). Census data are ideal for measuring the size and characteristics of minority populations. However, in the remaining countries it was necessary to rely on sources that lack the statistical power of a census. In some countries, general population surveys and demographic surveys provide sufficient detail on the size and demographic characteristics of Muslim populations. However, typical general population surveys of 1,000 to 3,000 respondents may under-sample Muslims, particularly in countries with substantial first-generation immigrant populations, who may not be fluent in the country's dominant languages and who may be difficult to capture in standard sampling frames. Estimates of the size of Muslim populations are based on an assessment of all available data, including census and survey data, population registers, immigration data and other reports and sources. Primary sources used for each country are listed in Appendix B.

Special considerations in France and Germany

The sensitivity of measuring religious identity varies across European countries. While many countries do collect data on Muslims and other religious groups in a census, in other countries, such as France, governments restrict the collection of religion data on the census and other government surveys. A 1978 French law imposes limitations on the collection of data pertaining to race, ethnicity and religious opinions unless the subject gives express consent. While religion has not been measured on a nationwide government census in France since 1872, it is nonetheless still possible to measure religious identity and practice in France.

Two French surveys are particularly important for this report. Our baseline estimate of the size of France's 2010 Muslim population is based primarily on data from the 2008 "Trajectories and Origins" survey of more than 20,000 respondents in metropolitan France (which includes oversamples of first- and second-generation immigrants) sponsored by the French Institute for Demographic Studies (INED) and the National Institute of Statistics and Economic Studies (INSEE). Our projection to 2016 was validated against a 2016 survey of 15,459 respondents sponsored by the Institut Montaigne and carried out by the French Institute of Public Opinion (Ifop).[8]

Since Germany's 1990 reunification, no German census was conducted at all until 2011, when the country was required to carry out a census as a member of the EU. Prior to 2011, population estimates had been based on reports of births, deaths and moves (in, out or within Germany), which people are required to make to their local governments. Individuals who left Germany without an expectation of returning were not motivated to deregister as residents, and were over-counted, artificially exaggerating the "healthy-migrant effect" – the puzzlingly high number of migrants living to be 110. While aggregations of municipal registries were adjusted to account for some failure to deregister, such adjustments were not sufficient, and the 2011 census revealed that Germany had overestimated its population by 1.5 million people. Most of these missing people were migrants who had left Germany without deregistering. The 2011 census was an improvement, but it did not gather accurate estimates of religious group sizes. Due to a problematic questionnaire design, religious affiliation was measured with a two-step question, which was partly optional, and the results were vague and systematically undercounted non-Christians. Our

[8] The report based on the Institut Montaigne survey does not estimate the total size of the Muslim population, including children, but data from the survey confirm that Muslim shares are much higher among the youngest respondents than among older French respondents. If the incidence of Muslim identity among those younger than 15 years old in France is similar to incidence among respondents ages 15 to 17 in the survey, then when that incidence rate and the incidence rate for other cohorts in the survey are multiplied by the size of each cohort in 2016, the estimate for the total population is an overall incidence rate slightly below 8%. This report's projection based on the Trajectories and Origins baseline is that the Muslim incidence rate reached 8.8% in 2016. Working with the same baseline survey data, French demographer Michèle Tribalat finds estimates of France's Muslim population based on the 2016 Ifop/Montaigne data to be conservative.

estimates of Germany's Muslim population in this report build upon new estimates from the German Federal Office for Migration and Refugees.[9]

The role of projections in this report

The 2016 estimates and 2050 projections in this report are based on projections from 2010 baseline data. The projections rely on input data about the characteristics of Muslims and non-Muslims, including age and sex composition, fertility rates, religious switching patterns, and migration patterns. The next section describes our projection methods. Subsequent sections provide detail on the input data used in the projections.

The projection approach: Explaining multistate cohort-component projections

The technical calculations for the projections in this report were made by Marcin Stonawski, the Religion-Education-Demography project leader at the International Institute for Applied Systems Analysis (IIASA), in consultation with Michaela Potančoková (a research scholar at IIASA) and Pew Research Center researchers, using an advanced variation of the standard demographic method of making population projections. The standard approach is called the cohort-component method, and it takes the age and sex structure of a population into account when projecting the population forward in time. This has the advantage of recognizing that an initial baseline population can be relatively "young," with a high proportion of people in younger age groups or relatively "old," with a high proportion of older people.

Cohorts are groups of people that had an experience in a particular time. A birth cohort, the type of cohort referenced in this context, comprises people born in a certain period. Birth cohorts can also be described as males or females who have reached a certain age in a particular year. For example, the cohorts of females ages 15 to 19 in the year 2000 and males ages 15 to 19 in the year 2000 shared the experience of being born between 1981 and 1985.

Components are the three ways in which populations grow or shrink: new entrants via births, exits via deaths and net changes from migration. Each cohort of the population is projected into the future by adding likely gains – births and people moving into the country (immigrants) – and subtracting likely losses – deaths and people moving out (emigrants) – year-by-year. The very youngest cohorts, those ages 0 to 4, are created by applying age-specific fertility rates to each female cohort in the childbearing years (ages 15 to 49).

[9] "The Future of World Religions" report had a higher estimates of Germany's Muslim population in 2010 (4.8 million) because it relied on estimates of Germany's overall population size that analysis of 2011 census found to be exaggerated (see discussion of Germany in the next section). Based on analysis of new government data, this report estimates Germany's Muslim population in 2010 to have been 3.3 million.

The cohort-component method has been in existence for more than a century. First suggested by English economist Edwin Cannan in 1895, then further improved by demographers in the 1930s and '40s, it has been widely adopted since World War II. It is used by the United Nations Population Division, the U.S. Census Bureau, other national statistical offices, and numerous academic and research institutions.

The advanced variant of this approach, multistate cohort-component projection, became viable starting in the 1970s thanks to the availability of mainframe computers and work by the American geographer Andrei Rogers, among others. The multistate approach permits simultaneous projection of multiple religious groups, taking into account variation by religion in age, sex, childbearing patterns and propensity and direction of migration. This approach also enables modeling of religious switching as a transition between religious "states."

Projection inputs for each country – including differential data by religion on fertility, age structure, migration and, where available, switching rates – were used for multistate cohort-component projections going out to the year 2050. Country-level 2010 population data, as well as fertility and mortality trajectories, are based on the 2015 revision of the United Nations' World Population Prospects.

All projection models assume that Muslims and non-Muslims within each country will see their fertility levels slowly converge toward identical fertility rates by 2110 – a century from the baseline year of the projections. The assumption that fertility differences gradually will diminish within countries is based on evidence that when people live in the same economic and social milieu, their fertility patterns tend to become increasingly similar over time. Studies have shown, for example, that the offspring of immigrants to the United States and Europe tend to adopt the fertility patterns of the general population in the countries where they live within a few generations. The adoption of a relatively conservative 100-year timeframe for within-country convergence reflects the fact that geographic clustering, differing education levels and other factors may perpetuate distinctive childbearing patterns among some religious groups.[10] At each step of the main projection scenario, fertility for the total population of a country follows the UN medium variant assumptions from the 2015 revision.

All projection models extend current religious switching rates in the 22 countries with available data. Those rates are used to calculate the flow of people in certain age and sex groups who move between Muslim and non-Muslim categories at each five-year interval of the projections. In

[10] In European countries with longstanding Muslim populations that have long co-resided with non-Muslims, Muslims still tend to have modestly more children than non-Muslims, even after controlling for socioeconomic differences. See Stonawski, Marcin and Michaela Potančoková and Vegard Skirbekk. 2016. "Fertility Patterns of Native and Migrant Muslims in Europe." Population, Space and Place.

countries for which switching data are available, researchers generated recent rates of switching. The main projection model assumes that emerging cohorts will switch from their childhood status at the same rate observed in recent survey data.

Based on projection assumptions from the United Nations Population Division, this study projects that life expectancy at birth will gradually increase in all countries. There is no high, medium or low assumption because each country, regardless of its current economic condition, is assumed to be moving toward better living standards and, therefore, longer life expectancy at birth. Following the 2015 revision of UN projection assumptions, gender-specific differences in mortality are introduced based on the UN assumptions of life expectancy by sex.

Disclaimers about projections

Some cautionary words are in order. Population projections are estimates built on current population data and assumptions about demographic trends. The future of the Muslim population in Europe will be influenced by economic and political circumstances in Europe that affect the feasibility and desirability of immigration, as well as circumstances outside Europe, including political upheavals and armed conflicts that could produce migration surges. The future of Muslim and non-Muslim populations also may be influenced by scientific discoveries, environmental challenges and other changes that could shift demographic trends in unforeseen ways.

Estimating migration is difficult. Projecting it is even harder. The mass movement of people can be the result of several different push and pull factors, including economics, politics and conflict. Predictions are hard to make and when unexpected migration-related events occur, as they have in and around Europe during the past few years, sudden change can immediately alter the number, origins and destinations of future migrants.

These migration uncertainties have been part of academic discussions for years. Most recently they were studied by Oxford University's Global Migration Futures project. This study brought together migration experts to map migration factors that could have the greatest impact on future migration flows into and out of European countries. They also categorized these factors by their level of uncertainty. Several of the factors involved changes in Europe's economy, the political integration (or potential disintegration) of the European Union and conflict in surrounding regions.

The projections in this report are not meant to forecast the future, but instead present estimates for the religious composition of Europe under three migration scenarios to convey a range of "what if" outcomes.

The medium and high projection scenarios in this report assume that in the future, the countries sending migrants to Europe will remain the same as they have been in recent years. Of course, this will not be exactly correct. What will be consequential for the size of the Muslim population in Europe will be whether countries sending migrants in the future continue to be countries with large Muslim populations. For example, if Turkey replaces Syria as a top country of origin in the future, this would continue to boost Muslim numbers, whereas an influx of migrants from Canada or China probably would not have the same effect on Muslim numbers. And while Africa's large Muslim populations tend to be geographically closer to Europe than its large Christian populations, a change in the religious mix of Africans entering Europe could also have a large impact.

Input data for population projections

The demographic projections in this report use data on age and sex composition, fertility, mortality, religious switching and migration. This section describes how these data were gathered and standardized for use in the projections.

Estimating age and sex structures

Religious affiliation varies by age. In this section, the phrase "age structure" is used as shorthand to refer to the religious composition of age-sex groups. In order to calculate the median ages of religious groups and carry out population projections, researchers assembled age structures for Muslims and non-Muslims in every country. Data on age structures were collected in 20 age categories (measured in five-year increments with a top value of 95 and above) for males and females (e.g., males ages 15 to 19), resulting in a total of 40 categories.

Researchers constructed initial age structures by analyzing survey datasets, census datasets and tables published by census agencies. While censuses usually enumerate religion for the entire population, including children, general population surveys do not usually include interviews with children. Since age structures require religious affiliation data for children, children were assigned religious affiliations when necessary based on the best methods available, including estimating the religious affiliation of children based on the fertility patterns and religious affiliation of women of childbearing age, as well as information about the religious affiliation of the youngest respondents measured in a survey.

Estimating fertility

In many countries, there are substantial differences in the number of children born to Muslim and non-Muslim women. Furthermore, groups often vary in the share of women in their population

who are of childbearing age, and women in some groups may, on average, begin having children at younger or older ages than do women in other groups. These differences in childbearing patterns, age structure and fertility timing combine to produce differences in the rates at which babies are born to Muslims and non-Muslims.

Fertility data were gathered from censuses and surveys, and fertility rates were estimated via direct and indirect measures. Some censuses and surveys directly measure recent births or the number of children a woman has ever borne by the time of the survey. In other cases, fertility data were gathered indirectly, for example, by using data on the age of a mother's children to estimate her past birth patterns. These various sources of fertility data were used to estimate age-specific and total fertility rates for Muslims and non-Muslims in each country.

Fertility rates were estimated for the 2010 to 2015 period and projected forward to subsequent time periods with differences between Muslims and non-Muslims slowly converging. In the absence of data on the fertility rates of new Muslim migrants, they are assumed to have the prevailing fertility rates of other Muslims in their destination countries.

The estimates of differential fertility for Muslims and non-Muslims in the 30 countries of this report are the same as those estimated for the 2015 "Future of World Religions" report.

Life expectancy

Each country's projected mortality patterns are based on UN mortality tables for the country. Little research has been conducted on cross-national differences in mortality and life expectancy across religious groups. In the absence of better data, the same mortality patterns within each country are assumed for Muslims and non-Muslims. Muslims in many European nations have less education than non-Muslims, which could be associated with lower life expectancy, but a large share of many European Muslim populations are first-generation migrants, and being a first-generation migrant is sometimes associated with health advantages and longer life expectancy relative to native-born residents of destination countries (for example, Hispanic migrants to the United States have advantages compared with those born in the U.S.).

Estimating religious switching

Studies of religious switching indicate that this phenomenon is often concentrated in young adult years, roughly between the ages of 15 and 29. Change in religious affiliation may occur as young adults move away from their parents and forge their own identity or partner with someone of a different affiliation status. While some religious switching may take place at other ages, switching is modeled as a life course phenomenon in which some young adults change their religious

affiliation status. There may be some time periods during which people of all ages are prone to religious switching, such as when political circumstances in a country encourage or discourage religious identity or lack of religious identity. Our models do not attempt to include such period effects.

Sources of switching data

The typical procedure for measuring religious switching is to compare the religion in which a person grew up with their current religion (when the person is an adult). The best sources of data on religious switching are nationally representative surveys that ask adults about their current religion and the religion in which they were raised. These surveys typically have sample sizes between 1,000 and 3,000 respondents. Unfortunately, while censuses and large-scale demographic surveys often measure current religious affiliation, they generally do not measure religious origins, so they cannot be used to directly measure religious switching. (Censuses in Northern Ireland and Scotland are exceptions.)

In 22 countries (Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom), adequate survey data are available on both the religious upbringing of survey respondents and on current adult religious identity.[11] Data on patterns of switching from non-Muslim religions to Islam come from the International Social Survey Program. In France, data on patterns of switching out of Islam among those raised Muslim come from the Trajectories and Origins survey, which found that approximately 10% of those raised Muslim later switched to no religious affiliation or to some other religion. Because other European countries lack sufficient data to measure patterns of switching out of Islam, the French pattern is borrowed for other Western European countries. Thus, in Western Europe, projections model that roughly 10% of rising cohorts of children raised in Islam will switch out of the faith as adults.

Since men and women often follow different switching patterns, researchers calculated rates of switching separately for men and women based on the experiences of adults ages 18 to 54 at the time of the survey. Researchers assume that the experience of young respondents is the best source of information about likely switching patterns for emerging generations, so the experiences of older respondents (those ages 55 and above) are excluded from the analysis. The analysis was initially restricted to the switching experience of 30- to 54-year-olds; while this restriction allowed the focus to be on respondents who have recently completed their young adult years, it left less-

[11] Switching data were not available for Bulgaria, Cyprus, Estonia, Greece, Lithuania, Luxembourg, Malta and Romania.

than-optimal sample sizes. Including the full range of adults ages 18 to 54 in the sample increased sample sizes and did not appear to compromise the reliability of the switching rates.

The estimates of religious switching for Muslims and non-Muslims in the 30 countries of this report are the same as those estimated for the 2015 "Future of World Religions" report.

Estimating and projecting the size and religious composition of regular migrants

To model the impact of migration on future religious change, the population projections in this report required an estimate of the religious composition of recent migrant flows between countries. That is, how many migrants moving from country X to country Y are Muslim? How many have some other religious identity? Data on the size and religious breakdown of migrant flows were pieced together in two steps. The first step was to estimate how many people move to and from every country in the world. Second, the religious composition of migrants moving between countries was estimated.

Generally speaking, there is much better information on migrant "stocks" (how many foreign-born people reside in each country, and where they were born) than there is on migrant "flows" (how many people move between countries each year). The limited flow data that are available may not capture all modes of travel or all kinds of international migrants, and it can be difficult to distinguish short-term travel from long-term migration. Since data on migration flows are incomplete, data on migrant stocks for 2010 and 2015, estimated by the United Nations, were used to estimate migration flows for both males and females.[12] Demographer Guy Abel developed an innovative technique to estimate migration flows between countries using this stock data.[13] Using empirical data and observed regularities in the age patterns of migration flows, researchers were able to disaggregate each estimated total flow into subtotals by five-year age groups. The bilateral flows estimated based on the UN migrant stock data include asylum-seeking and regular, non-asylum-seeking migration. Although the UN data include refugee stock estimates from the Office of the UN High Commissioner for Refugees, the latest UN migrant stock data (released in December 2015) was prepared too early to capture the large volume of asylum seeker flows that arrived late in the 2010 to 2015 interval. Since Eurostat provides updated measures of asylum seeker flows, Eurostat is the source of asylum seeker data in this report and UN data were manually adjusted to reduce flow estimates (such as the flow from Syria to Sweden) likely to have been largely composed of asylum seekers. Thus, adjusted data from Guy J. Abel, based on UN

[12] This approach is described in Abel, Guy J. Forthcoming. "Estimates of Global Bilateral Migration Flows by Gender between 1960 and 2015." International Migration Review.
[13] See Abel, Guy J. 2013. "Estimating global migration flow tables using place of birth data." Demographic Research. Also see Abel, Guy J. and Nikola Sander. 2014. "Quantifying Global International Migration Flows." Science.

stock estimates, became the source for estimating regular migration; refugee flows, adjusted based on rejection rates, were estimated separately based on Eurostat asylum seeker data.

Another step was to identify the religious breakdown of migrants. The religious composition of migrants is not always the same as the religious composition of the general population in their country of origin. In many cases, members of some religious groups are more likely than others to leave a country, and they are also more likely to choose certain destination countries. Religious minorities, in particular, may be disproportionately likely to migrate to a country in which their religion is in the majority. The religious breakdown for the movement of migrants is drawn from Pew Research Center's Global Religion and Migration Database – which has estimates of the religious breakdown of migrant populations based on global census and survey information.

Using all of this information, researchers calculated migration *rates* to and from countries by age, sex and religion. Using migration rates instead of population counts allows for a more dynamic model of future migration. As countries increase or decrease in size and their religious composition changes, the migration rates will produce corresponding changes in the size and religious composition of migrant flows.

Estimating asylum seekers

Estimates of asylum seekers and refugees are based on Pew Research Center's analysis of Eurostat data on applications for asylum. Eurostat is Europe's statistical agency, a central repository for high-quality population and other data. Eurostat collects data from 28 EU countries and four European Free Trade Association countries (Iceland, Liechtenstein, Norway and Switzerland) on the number of applications for asylum submitted, withdrawn, accepted and rejected, and it makes these counts available to the public. These publicly available counts of asylum seekers by application status are not linked together, however, so it is not possible for analysts to track individuals or cohorts of applicants through the process.

The estimates of the number of asylum seekers in this report are based on first-time applications for asylum, adjusted for withdrawals (read more about withdrawn applications below). First-time applicants are those who have never previously applied for protection within a country, as opposed to applicants who are appealing a previous decision.

Applications are made at the individual level, rather than at the household level. Thus, every person, regardless of age or family relationship, is required to submit an application for asylum. Applications are not the same as arrivals. It can take several months for newly arrived asylum

seekers to make formal applications for asylum and become included in asylum applicant statistics.

Adjusting for withdrawals

Importantly, applicants are not always applying for protection in Europe for the first time, and might file applications in more than one country. Countries in the EU, as well as Norway and Switzerland, have agreed to the Dublin Regulation, which states that asylum seekers are to apply for refugee status in the first European country they enter. The Dublin Regulation is intended to prevent multiple applications and reduce the number of asylum seekers moving from country to country, but it was partially suspended in 2015. Consequently, many asylum-seekers traveled through Greece, making their way north and west to Germany and other destinations using a route through several Balkan countries and through EU countries, such as Hungary and Austria. Some asylum seekers applied for refugee status in transit countries, sometimes unwillingly, before making it to their desired destination. Many asylum seekers who applied in Hungary and Bulgaria, for example, later had their applications withdrawn.

To estimate the number of asylum seekers, rates of withdrawn applications by nationality and country of application pair were calculated from Eurostat's withdrawn application data and subtracted from the total number of first-time (within country) applications for asylum. Applications are withdrawn either intentionally by applicants or automatically whenever an applicant fails to complete the next step of the application process. These withdrawn applications are not included in this report's counts of asylum seekers because it is likely that asylum seekers who withdrew their applications either left Europe or applied in another country. Removing withdrawn applications avoids double counting of asylum seekers.

Estimating refugee counts

Refugee counts are estimated based on Eurostat's quarterly decision data on approved first-time asylum applications.[14] Rates based on acceptances between origin country X and destination country Y were applied to every nationality and country of application pair. Applicants who have been accepted, or whose applications are pending and are likely to be accepted based on applicants' nationality and country of application are counted as refugees for Pew Research Center's estimates. Acceptance rates were based on *all* positive decisions. No distinctions are made based on the kind or length of stay or humanitarian protection status granted to the applicant.

[14] Appeal rates are more difficult to generate over a series of years. Application acceptance rates used in this study do not take into account asylum seekers who may later be granted permission to stay in Europe after an appeal. Consequently, acceptance rates used in this study are conservative.

Estimating the religious composition of asylum seekers

Though religious identity is frequently relevant and provided in asylum applications, applicant religious affiliation is not collected for its own sake and the publicly available data from Eurostat do not include information on applicant religion. This report's estimates of religious affiliation of asylum seekers and refugees are therefore based on religious demographic data from other sources.

In some cases, the religious composition of migrants are estimated based on the religious composition of their country of origin, and the models in this report assume that migrants are a random selection of people from a country with regard to religion. When available, data on the religious composition of prior migration flows by nationality and country of application pairs is utilized from Pew Research Center's Global Religion and Migration Database. In the latter case, models assume that recent migrants' religious composition is more similar to past migrants' from that country of origin than the country of origin's overall religious makeup.

Return migration for refugees

This report does not explicitly model the return migration of refugees after they have settled in Europe based on the assumption (and historical precedent) that even if conditions improve in the country they left, most will continue to remain.[15] This assumption is based on the experience of waves of Turks and North Africans who came to Europe during times of labor shortage in the 1950s and 1960s and continued to remain in Europe even when European economies had fewer jobs for them during the 1970s. As noted by migration scholar Philip Martin, "There is nothing more permanent than temporary workers." Even though the motivation among refugees for coming to Europe may differ than guest workers in earlier decades, refugee families are not expected to uproot themselves in large numbers to return to their home countries. However, if countries enforce the temporary legal status of some refugee decisions, then forcible repatriation, like voluntary returns, could curtail the estimates in this report. While the decision not to model return migration for refugees could have the effect of inflating future Muslim population projections to some degree, this bias may be counterbalanced by the conservative treatment of asylum seekers who are not expected to initially gain legal status to remain in Europe (discussed below).

[15] General migration out of European countries, based on emigration estimates derived from Guy Abel's analysis of United Nations migration stock data, is part of all projection scenarios except the no migration scenario. These emigration estimates assume that patterns from the 2010-2015 period will continue.

Estimating legal limbo populations

Finally, recent rejection rates recorded by Eurostat were used to estimate the number of people in Europe who have applied for asylum but have not been and are unlikely to be granted legal refugee status. This is the population of asylum seekers in legal limbo, for whom the future is uncertain. Many applicants who are initially rejected will appeal their decisions, and some may eventually be approved to live and work in Europe as protected refugees. Others will leave, voluntarily or through forced deportation. Still others will obtain another legal status, for example through student or worker visa programs. The population of Muslims estimated to be in legal limbo in 2016 is not counted in the estimates or projections in this report. Some will no doubt stay in Europe, legally or illegally. Not counting this population makes our projections conservative. This conservative bias may help balance the assumption that refugees granted stay in Europe will not return (see preceding section).

Using projections for 2016 estimates and beyond

Generally speaking, most of the 2016 Muslim estimates in this report are the result of projections from 2010 that account for Muslim and non-Muslim differences in age structure, fertility, religious switching and regular migration.[16] Additionally, the 2016 figures include estimates of Muslim refugees who came to Europe between mid-2010 and mid-2016. In some cases, 2015 or 2016 government data for Muslim populations were used rather than projections from 2010. For example, a report from the German Federal Office for Migration and Refugees on the year-end 2015 size of the Muslim population in Germany was the basis for our midyear 2016 estimate in Germany (our estimate also incorporates growth in the population from the ongoing flow of refugees in the first half of 2016).

Projection scenarios for 2016 to 2050

To highlight how different migration patterns may change the landscape of Europe's Muslim population, the only factor that varies in our 2016 to 2050 projection scenarios is migration. The zero migration scenario assumes there will be no migration to or from any of the 30 countries after midyear 2016. Recent history since mid-2016 suggests this scenario will not be a realistic model of migration outcomes. However, the benefit of this scenario is to highlight how factors other than migration would be expected to change Muslim population numbers in Europe. The medium scenario models change that would be expected if only regular migration (i.e., no asylum seeker flows) continued, following the estimated patterns of country origin and destination flow from the 2010 to 2015 period that were used to make 2010 to 2016 projections. The high migration scenario

[16] Projections of religious projections from Pew Research Center typically use five-year projection increments. In order to report on Muslim population estimates after the large influx of asylum seekers in 2015 and 2016, midyear 2016 estimates are based on refugee estimates, projections from 2010 to 2015 as well as roughly one-fifth of the change projected for the 2015 to 2020 period.

adds an ongoing flow of refugee levels seen between the beginning of 2014 and mid-2016 (i.e., the continuation of what some have described as a "refugee crisis") in addition to regular migrants. For example, in the high scenario, Germany is projected to receive 200,000 Muslim and 30,000 non-Muslim refugees annually because these are the annual average of the estimated numbers of refugees Germany received from January 2014 through June 2016.

Sex balancing in high migration scenario

Recent flows of asylum seekers have been dominated by young men (roughly 70% to 75% of asylum seekers have been male). Under certain conditions, refugees who obtain humanitarian protection status are entitled to family reunification. If current refugees are able to bring family members to Europe, this could increase the female share of future refugee flows as spouses, children and other relatives join existing refugees.

Information on the family composition (including marital status) of existing refugees is not available, so family reunification has to be modeled hypothetically rather than on the particular family characteristics of refugees. The approach used in these projections assumes many refugees will seek to bring family members and/or spouses who share their cultural background (i.e., from their home country) rather than building new family structures in the host society.

Gender balance ratio targets were created for each of the 30 countries based on 2011 population census data about the stock of the foreign-born population aggregated by Eurostat by nationality and country of application pairs. This assumes that over time, family reunification for refugees could permit the gender balance of refugees in a country to approach the gender balance of first-generation immigrants in the country. Typically, the 2011 stocks of first-generation immigrants in Europe were roughly gender balanced, with women generally making up 44% to 55% of this population, depending on the nationality and country of application.

For refugees projected to arrive until mid-2025, the flow of refugees in the 15-to-49 age categories is assumed to have a gender composition that will complement the stock of refugees who arrived since 2010 so that by 2025, the overall stock of refugees (since 2010) of reproductive age in each country will be roughly gender-balanced. After 2025, the high migration scenario assumes that further flows of refugees will be gender-balanced.

Appendix B: Data sources by country

Researchers considered many sources when preparing estimates of the size of Muslim and non-Muslim populations in each country and looking at the demographic characteristics that influence the size of each group. These characteristics include age and sex composition, fertility rates, patterns of migration and religious switching (how many people choose to begin or stop identifying as Muslim).

The list of general sources below provides bibliographic information for sources widely used across countries. At the end of this appendix is a detailed list, organized by country, of the primary sources used to determine each characteristic of religious groups in that country. (The many supplementary sources consulted for each country are not included.)

As described in the Methodology, data on the size of asylum flows come from Eurostat, and the size of regular migrant flows is estimated from Pew Research Center analysis of migration flow data prepared by Guy Abel (based on the 2015 revision of the UN's International Migrant stock data). The religion of asylum seekers and regular migrants is estimated based on a combination of Pew Research Center's 2012 Global Religion and Migration Database and information about the religious composition of migrant origin countries.

The sources for data on levels of switching to Islam are 2008 International Social Survey Programme surveys. In Western European countries, patterns of switching away from Islam to some other (or no) religion are based on the French pattern measured in the 2008 "Trajectories and Origins" survey of more than 20,000 respondents in metropolitan France (which includes oversamples of first- and second-generation immigrants) sponsored by the French Institute for Demographic Studies (INED) and the National Institute of Statistics and Economic Studies (INSEE). Most surveys in European countries include too few respondents raised as Muslims to reliably measure patterns of switching away from Islam.

Fertility estimates used in this report were originally prepared for the 2015 report "The Future of World Religions: Population Growth Projections, 2010-2050." Data on the baseline size of overall country populations, by age and sex, come from the 2015 revision of the UN's World Population Prospects.

More information about each type of data is provided in the Methodology.

General sources

Abel, Guy J. Forthcoming. "Estimates of Global Bilateral Migration Flows by Gender between 1960 and 2015." International Migration Review.

European Social Survey. Led by Centre for Comparative Social Surveys, City University. http://www.europeansocialsurvey.org/.

European Values Study. Administered by the European Values Study Foundation at Tilburg University. http://www.europeanvaluesstudy.eu/.

Eurostat. 2017. Asylum statistics. http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics.

Generations & Gender Programme: Survey Instruments. United Nations. http://www.unece.org/pau/ggp/welcome.html.

Global Migration Database. Pew Research Center. http://www.pewforum.org/2012/03/08/religious-migration-exec/.

International Migrant Stock: The 2015 Revision. United Nations Population Division. http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml

International Social Survey Program. ISSP Research Group, GESIS Data Archive, Cologne. http://www.gesis.org/en/issp/issp-home/.

World Population Prospects: The 2015 Revision. United Nations Population Division. https://esa.un.org/unpd/wpp/publications/.

	Religious composition	Age and sex	Fertility	Religion of migrants	Switching to Islam
Austria	Estimates based on 2001 Census.	Estimates based on 2001 Census.	Data on fertility differences between religious groups based on 2001 Census.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.
Belgium	Estimates based on 2001 Census.	Estimates based on 2001 Census.	Data on fertility differences between religious groups based on 2001 Generations and Gender Survey.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Bulgaria	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2001 Census.	Religion of incoming migrants is based on the religious composition of the origin country.	Data unavailable; no religious switching modeled.
Croatia	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.
Cyprus	Estimates based on weighted average of 2008 European Values Study in Cyprus and 2008 European Values Study in Northern Cyprus.	Estimates based on 2008 European Values Study.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of incoming migrants is based on the religious composition of the origin country, adjusted for selected origin countries.	Data unavailable; no religious switching modeled.
Czech Republic	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2001 Census.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Denmark	Estimates based on 2010 Central Population Register (CPR) data prepared by Statistics Denmark.	Estimates based on 2010 Central Population Register (CPR) data prepared by Statistics Denmark.	Data on fertility differences between religious groups based on 2010 Population Register.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Estonia	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Data unavailable; no religious switching modeled.

	Religious composition	Age and sex	Fertility	Religion of migrants	Switching to Islam
Finland	Estimates based on 2010 Population Information System data prepared by Statistics Finland.	Estimates based on 2010 Population Information System data prepared by Statistics Finland.	Data on fertility differences between religious groups based on 2010 Population Information System.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
France	Estimates based on 2008-2009 Trajectories and Origins Survey conducted by Institut National de la Statistique et des Études Économiques and the Institut National d'études Démographiques.	Estimates based on 2016 survey conducted by the French Institute of Public Opinion for the Institut Montaigne.	Data on fertility differences between religious groups based on 2005 Generations and Gender Survey.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Germany	Estimates based on 2015 report from the German Federal Office for Migration and Refugees.	Estimates based on 2005 Generations and Gender survey.	Data on fertility differences between religious groups based on 2005 and 2006 Generations and Gender Survey.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.
Greece	Estimates based on 2001 Census.	Estimates based on 2001 Census.	Data on fertility differences between religious groups based on 2001 Census.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Data unavailable; no religious switching modeled.
Hungary	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2004-2005 Generations and Gender Survey.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Ireland	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2006 Census.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Italy	Estimates based on World Religion Database.	Estimates based on migrant data.	Data on fertility differences between religious groups based on Italian National Institute of Statistics report, "La popolazione straniera residente in Italia as 1 gennaio 2007. Statistiche in Breve."	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.

	Religious composition	Age and sex	Fertility	Religion of migrants	Switching to Islam
Latvia	Estimates based on 2000 Census.	Estimates based on Latvia Central Statistical Bureau.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Lithuania	Estimates based on 2011 Census.	Estimates based on 2011 Census	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of incoming migrants is based on the religious composition of the origin country.	Data unavailable; no religious switching modeled.
Luxembourg	Estimates based on 2008 European Values Study, adjusted for missing data.	Estimates based on 2008 European Values Study.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Migration in and out of this country was not included in projections.	Data unavailable; no religious switching modeled.
Malta	Estimates based on 2008 European Values Study.	Estimates based on 2008 European Values Study.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Migration in and out of this country was not included in projections.	Data unavailable; no religious switching modeled.
Netherlands	Estimates based on 2003 Generations and Gender Survey and migrant register.	Estimates based on 2003 Generations and Gender Survey and migrant register.	Data on fertility differences between religious groups based on 2003 Generations and Gender Survey.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Norway	Estimates based on 2007 register of migrants.	Estimates based on 2007 register of migrants.	Data on fertility differences between religious groups based on 2007-2008 Generations and Gender Survey.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Poland	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.

	Religious composition	Age and sex	Fertility	Religion of migrants	Switching to Islam
Portugal	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups unavailable; same fertility rate used for Muslims and non-Muslims.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.
Romania	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2002 Census.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Data unavailable; no religious switching modeled.
Slovakia	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2001 Census.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Slovenia	Estimates based on 2002 Census.	Estimates based on 2002 Census.	Data on fertility differences between religious groups based on 2002 Census.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Spain	Estimates based on 2011 Census and 2010 Municipal Register (Padrón).	Estimates based on 2011 Census and 2010 Municipal Register (Padrón).	Data on fertility differences between religious groups based on 2007 Fertility Survey and 2005-2008 Municipality Register.	Religion of incoming migrants is based on the religious composition of the origin country.	Rates based on 2008 International Social Survey Programme survey.
Sweden	Estimates based on 2008 Migrant's Register.	Estimates based on 2008 Migrant's Register.	Data on fertility differences between religious groups based on 2008 Migrant's Register.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.
Switzerland	Estimates based on 2011 structural survey (sample of approximately 200,000 people).	Estimates based on 2011 structural survey.	Data on fertility differences between religious groups based on 2000 Census.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.
United Kingdom	Estimates based on 2011 Census.	Estimates based on 2011 Census.	Data on fertility differences between religious groups based on 2001 Census.	Religion of some incoming migrants is based on Pew Research Center's 2012 Global Religion and Migration Database.	Rates based on 2008 International Social Survey Programme survey.