

Immigration and Social Security

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Key Points

- In the U.S., life expectancies are projected to continue to increase and fertility rates are projected to remain below 2.1 births per woman, ultimately leading to a reduced worker-to-beneficiary ratio under the Social Security program.
- An increase in immigration would have the effect of stabilizing the size of a country's working population in an environment where birth rates are declining.
- Click on this [link](#) for a discussion of the impact of immigration on the Social Security program, based on the 2020 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds (Trustees Report).



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Introduction

This issue brief discusses the impact of immigration into the United States, and potential changes to immigration, on the finances of the Social Security program.

Please note the information in this issue brief does not reflect any assumptions or projections regarding the impact of the COVID-19 pandemic on the Social Security program.

Background

The Social Security program is mainly funded on a pay-as-you-go basis. This means that current benefits in pay status are funded mainly through payroll taxes that are paid by current workers and their employers. Since an increase in the payroll tax rate in 1984 until the recession of December 2007 through June 2009, annual income to Social Security has always exceeded expenses, resulting in the build-up of sizable trust funds.¹ Since the 2007–2009 recession, income and expenses have been closely matched, with small annual surpluses in most years. In 2019, income of the trust funds has exceeded expenses by around 0.2 percent.

Since the mid-1970s through 2019, the life expectancies of both men and women have increased and are projected to increase further. In the same period of time, the number of workers paying into the Social Security program per beneficiary collecting benefits has declined, and is projected to decrease further. Please see a summary below of these two factors in Tables 1 and 2.

¹ Old-Age, Survivors Insurance Trust Fund and Disability Insurance Trust Fund

Table 1

In the Year	Life Expectancy*	
	65 Year-Old Man	65 Year-Old Woman
1975	13.7	18.0
2019	18.1	20.6
Projected 2035	19.1	21.6

*Historical and Projected Period Life Expectancies are provided in Table V.A4 of the 2020 OASDI Trustees Report.

Table 2

In the Year	Worker per Beneficiary*
1974–2008	3.2-3.4
2019	2.8
Projected 2035	2.3

*Historical and Projected Number of Covered Workers per OASDI Beneficiary are provided in Figure II.D3 of the 2020 OASDI Trustees Report.

Each year, the Office of the Chief Actuary at the Social Security Administration (OCACT) performs a projection of the finances of the Social Security system as overseen by the Social Security Board of Trustees. The report issued is called the *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (Trustees Report). According to the 2020 Social Security Trustees Report, because the life expectancy of retirees is improving and the number of workers per beneficiary is declining, income to the trust funds is projected to fall short of expenses each year beginning in 2021, requiring that the trust funds be drawn down to continue paying scheduled benefits. According to the long-range projection in the Trustees Report, using the intermediate assumptions, the trust funds will be depleted in 2035. In the years immediately following, income will be sufficient to pay only 79% of scheduled benefits. As with all assumptions outlined in the Trustees Report, the intermediate assumption reflects the trustees' best estimate of future experience. Because the future is uncertain, the Trustees Report also includes the results of projections under low-cost and high-cost immigration assumptions. The low-cost and high-cost scenarios are provided to demonstrate a range of possible future results. The Trustees Report does not take into account the effects of the COVID-19 pandemic.

Members of the Social Security Committee include Ron Gebhardtsbauer, MAAA, FSA—*Chairperson*; Amy Kemp, MAAA, ASA, EA—*Vice Chairperson*; Janet Barr, MAAA, ASA; Gordon Enderle, MAAA, FSA; Margot Kaplan, MAAA, ASA, FCA; Eric Klieber, MAAA, FSA; Alexander Landsman, MAAA, FSA, EA; Leslie Lohmann, MAAA, FSA, FCA, FCIA, EA; Gerard Mingione, MAAA, FSA, FCA, EA, CERA; and Brian Murphy, MAAA, FSA, FCA, EA.

Fertility Rate

In their projections, the trustees make an assumption regarding the number of births per year, or birth rate, for women at each age from 14 to 49. From this they derive the fertility rate—the average number of births per woman over her lifetime assuming survival to age 49. The fertility rate in the United States has fluctuated over the years, reaching a high of 3.68 births per woman in 1957. However, the fertility rate has been below 1.90 births for 2011 through 2019, reaching an estimated 1.71 births in 2019. A study by the Pew Research Center indicated that women in the U.S. are delaying motherhood until later ages.² Another study by the Pew Research Center indicated there has been an increase in the number of childless, one-child, and two-child families and a decrease in the number of three-child and four-child families.³ A fertility rate less than 2.1 births per woman will tend to decrease the size of the U.S. population in the future, because deaths will begin to outnumber births, assuming for the moment no net increase in immigration. The Trustees Report, using the intermediate assumptions, projects an ultimate fertility rate of 1.95 births per woman. This is a major factor in the decline in the number of workers per Social Security beneficiary described in the preceding paragraph.

Immigration

An increase in immigration would have the effect of stabilizing the size of a country's working population in an environment where birth rates are declining. Because immigrants tend to be younger workers, they pay taxes immediately into the Social Security program, while they receive benefits many years into the future—or, sometimes, not at all. Further, immigrant women tend to have higher birth rates than U.S.-born women, increasing the overall U.S. fertility rate, which extends the positive tax-paying effect into future generations.

For purposes of this discussion, immigrants are described as either lawful permanent residents (LPRs) or other-than-LPRs. LPRs include permanent residents, who have been given authorization to live and work in the U.S., and those granted refugee status up to an annual refugee ceiling. Other-than-LPRs are foreign workers, students with temporary visas, and undocumented immigrants. The number of refugees, who represent a portion of the total immigrants entering the U.S., varies each year depending on worldwide events and the U.S. policy regarding the maximum refugees allowed to enter the country. A study by the Pew Research Center states that, “From fiscal years 1990 to 1995, an average of about 116,000 refugees arrived in the U.S. each year.⁴ In fiscal year 2020, the number of refugees entering the U.S. is limited to 18,000. In recent years, approximately 1 million

² [“They’re Waiting Longer, but U.S. Women Today More Likely to Have Children Than a Decade Ago”](#); Pew Research Center; Jan. 18, 2018.

³ [“Family Size Among Mothers”](#); Pew Research Center; May 7, 2015.

⁴ [“Key Facts About Refugees to the U.S.”](#); Pew Research Center; October 7, 2019.

immigrants obtain LPR status in the U.S. each year. Below is Table 3, a summary of the total LPRs that have entered the U.S. from fiscal year 2014 to 2018, as published by the Department of Homeland Security:⁵

Table 3

Fiscal Year	Immigrants Obtaining LPR Status
2014	1,016,518
2015	1,051,031
2016	1,183,505
2017	1,127,167
2018	1,096,611

In accordance with the law, all employers must withhold Social Security taxes from a worker’s paycheck. However, if an employer is paying a worker informally without withholding Social Security taxes, the compensation earned under that arrangement is not taxed and not contributing to the Social Security program. However, all immigrants in LPR or other-than-LPR status being paid in compliance with payroll withholding and reporting rules (albeit sometimes using expired visas or false Social Security Numbers) are contributing to the Social Security program. Even if they contribute to the system, an immigrant working in other-than-LPR status and remaining in that status will not be eligible to collect benefits under the Social Security program.

The Trustees Report includes historical counts of immigrants by category and assumptions regarding counts of future total net immigration for low-cost, intermediate, and high-cost scenarios. The trustees make five independent assumptions regarding future immigration: numbers of entrances and exits by LPRs, numbers of entrances and exits by other-than-LPRs, and number of changes in status from other-than-LPR to LPR. The first four determine the total net number of immigrants each year. The last does not affect the number of immigrants, but does affect the balance between LPR and other-than-LPR status among immigrants in the country. The assumptions take into account the current immigration law but not future potential law changes. (See the Academy’s issue brief *Assumptions Used to Evaluate Social Security’s Financial Condition*.⁶)

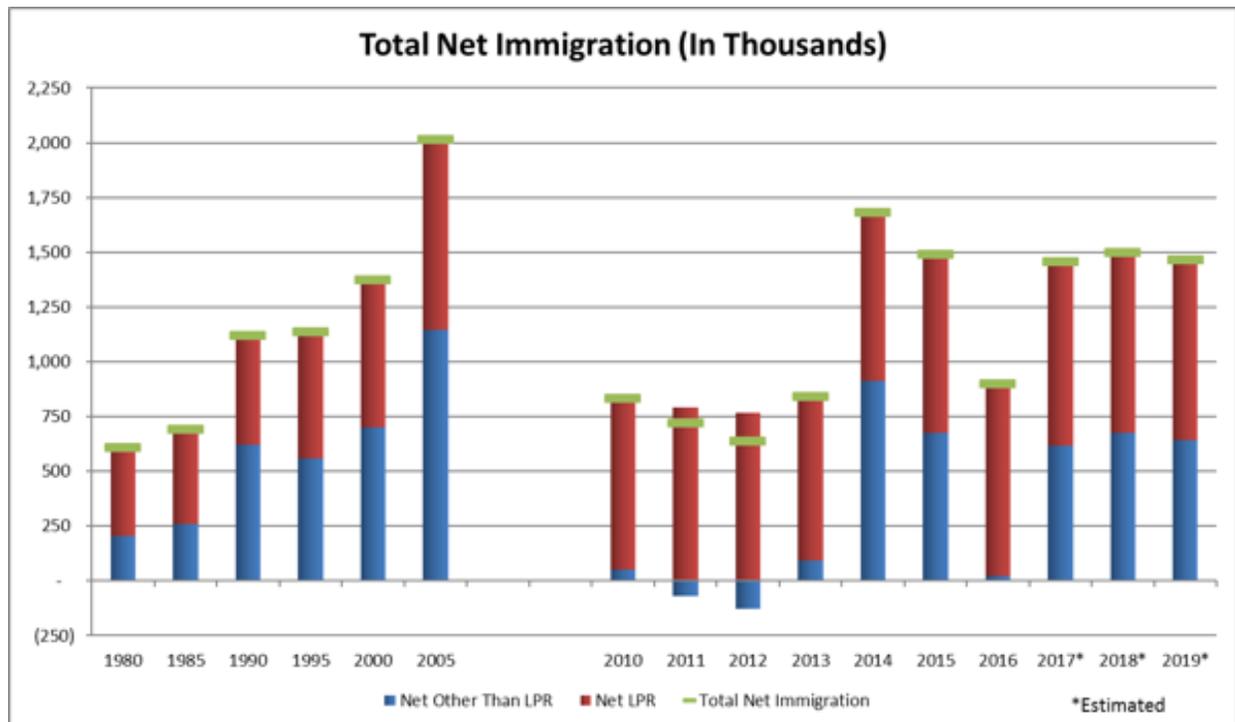
⁵ Table 1 of the 2018 Yearbook of Immigration Statistics—<https://www.dhs.gov/immigration-statistics/yearbook/2018>

⁶ <https://www.actuary.org/category/site-section/public-policy/pension/pension-social-security>

Historical Perspective on Immigration

Table V.A2. from the 2020 Trustees Report⁷ shows historical numbers of net LPR and other-than-LPR immigrants entering (or exiting) the program. Chart 1 below summarizes this data at five-year intervals from 1980 to 2010 and each year thereafter through 2019. In 2019, the net LPR immigrants was 825,000 and the net other-than-LPR immigrants was 642,000.

Chart 1



Another way of looking at immigration from an historical perspective is to calculate annual rates of immigration by dividing counts of immigrants in a year by the Social Security population in that year. This provides context to the historical counts of immigrants and highlights changes over time. Since 1980, the historical rates of immigrants per 1,000 persons have averaged 3.7 persons.⁸ The year 2005 showed the highest rate of net immigrants of 6.7 per 1,000 persons, and the year 2008, during the depth of that recessionary period, showed the lowest rate of net immigrants of 0.3. In 2019, there were 4.4 immigrants per 1,000 persons. As public policy regarding immigration has varied, the number of immigrants per 1,000 persons has varied. Variations by year occur depending on U.S. immigration policy and worldwide economic and political influences.

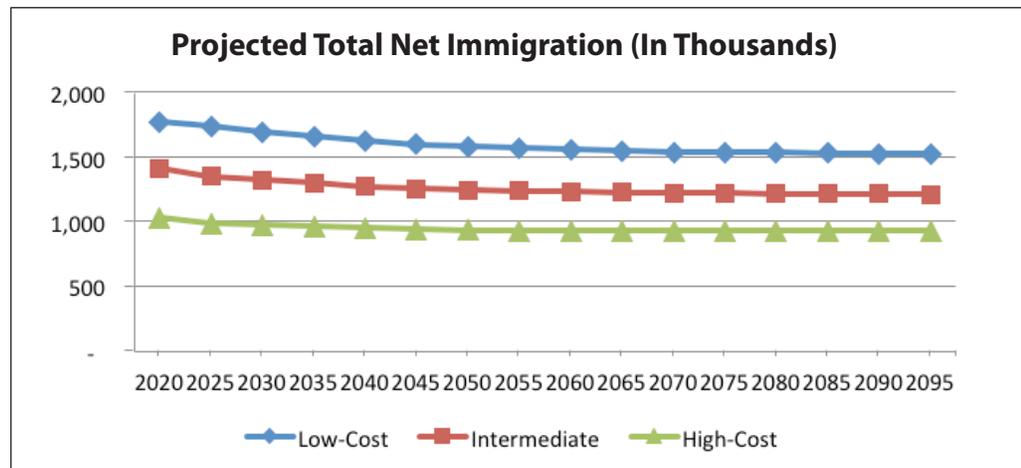
⁷ https://www.ssa.gov/oact/TR/2020/V_A_demo.html#301601

⁸ Historical and Projected Total Net Immigration values are provided in Table V.A2 of the 2020 OASDI Trustees Report. Historical and Projected Social Security Area Population on July 1 values are provided in Table V.A3 (https://www.ssa.gov/oact/TR/2020/V_A_demo.html#271410) of the 2020 OASDI Trustees Report. Ratios were calculated as Total Net Immigration in the numerator and Social Security Area Population on July 1 in the denominator.

Immigration Assumptions

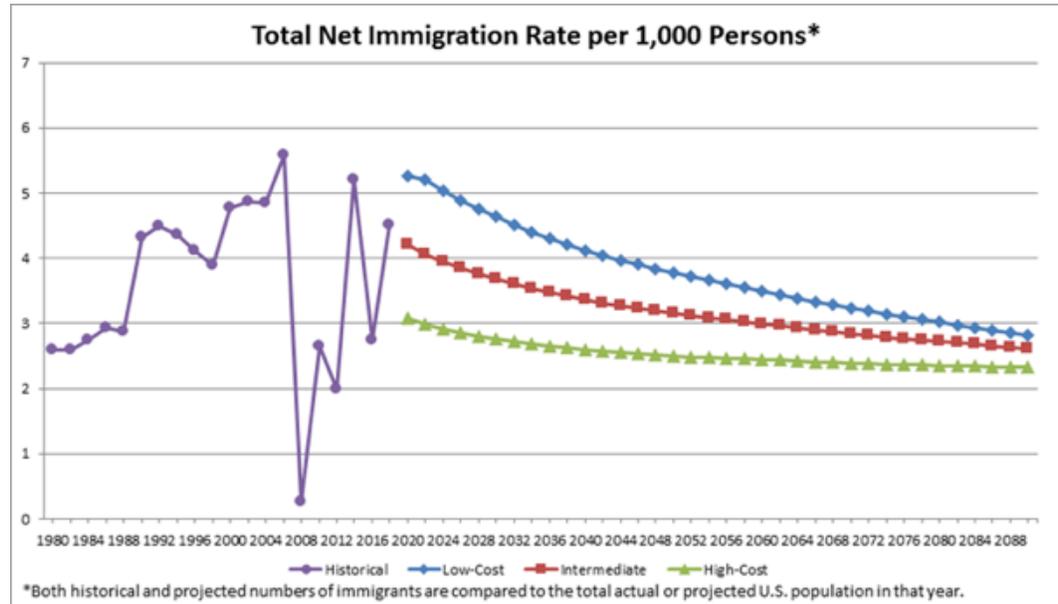
In the Trustees Report, the assumed rates of immigration and emigration will remain constant over the 75-year projection period with one exception: The assumed rate of emigration of the other-than-LPR population increases gradually, resulting in a gradual decline in net total immigration. The assumed average annual number of total net immigrants entering the Social Security program during the 75-year projection period is about 1.26 million for the intermediate assumption, 1.60 million for the low-cost assumption, and 950,000 for the high-cost assumption. Because the payroll taxes projected to be paid into the program from the immigrant population exceed the benefits they will receive over the next 75 years, a higher rate of net immigration reduces the cost of the system as a percentage of taxable wages. Thus, the number of immigrants is higher under the low-cost assumption, and lower under the high-cost assumption. Table V.A2. from the Trustees Report also shows the trustees' projections for the number of net LPR and net other-than-LPR immigrants. Chart 2 below presents the projected net immigration levels from Table V.A2 of the Trustees Report.

Chart 2



In Chart 3 below, the total annual number of net immigrants from Table V.A2 of the Trustees Report is compared to annual U.S. population estimates from Table V.A3 of the Trustees Report and shown as the ratio of net immigrants per 1,000 persons.

Chart 3



Note that, while the absolute numbers of net immigrants under each of the three assumptions decline slowly until reaching an ultimate constant level, the immigration rates—expressed as the number of net immigrants per 1,000 members of the covered population—decline more steeply, and continue declining through the period covered by the graph. This is the result of projected increases in the covered population.

Another effect is that, while the differences between the numbers of immigrants under the three assumptions remain constant over time, the immigration rates converge. Thus, the net immigration rates per 1,000 in 2020 are 4.2 for the intermediate assumption, 5.3 for the low-cost assumption and 3.1 for the high-cost assumption, but decline by 2095 to 2.6 for the intermediate assumption, 2.8 for the low-cost assumption and 2.3 for the high-cost assumption. Assumed immigration rates have declined in the recent past, and the immigration rates under the low-cost, intermediate and high-cost scenarios do not vary greatly. Expressing projected immigration as a constant percentage of the projected population (instead of a fixed number of immigrants, as circumscribed by law) would show an increased impact due to immigration.

Chart 3 graphs the assumed immigration rates. It illustrates smooth variations year by year. However, rates have historically varied widely in some years in comparison, depending on U.S. immigration policy and worldwide economic and political influences. Any changes in the U.S. immigration policy could result in increases or decreases in the actual amount of total net immigration, compared to the projected amounts outlined above.

The 2020 Trustees Report states the following:

“Demographers express a wide range of views about the future course of immigration for the United States. Some believe that net immigration will increase substantially in the future. Others believe that potential immigrants may be increasingly attracted to other countries, that the number of potential immigrants may be lower due to lower birth rates in many countries, or that changes in the law or enforcement of the law will reduce immigration.”

Potential Impact of Changes in Immigration Rates

Setting aside the perspectives in the policy debate regarding immigration policy, it is important to note that an increase in immigration leads to a decrease in the deficit of the Social Security program. With the United States fertility rate at a 75-year low, more working immigrants paying into the system would have the effect of slowing the downward progression toward trust fund reserve depletion and the 2.3 worker-to-beneficiary ratio currently projected in 2035.

Information from Table VI.D3⁹ from the 2020 Trustees Report, excerpted below, shows the impact of two alternate immigration assumptions on the income and cost rates of the Social Security program. Under the intermediate assumptions, with average total net immigration of 1.261 million people, the 75-year actuarial deficit of costs over income is 3.21% of taxable payroll. Under a sensitivity test where average total net immigration is decreased to the high-cost assumption of 946,000 people, the 75-year deficit of costs over income increases to 3.47% of taxable payroll. If average total net immigration is increased to the low-cost assumption of 1.598 million, the 75-year deficit of costs over income decreases to 2.96% of taxable payroll.

⁹ https://www.ssa.gov/oact/tr/2020/VI_D_LRsens.html#100036

Table 4**Examples of Sensitivity of Immigration Assumption on the 75-Year Deficit of Costs Over Income**

Assumption	Net Average Annual Immigration	Difference from Intermediate	75-Year Deficit As Percent of Taxable Wages	Difference from Intermediate
Intermediate	1,261,000	-	3.21%	-
High-Cost	946,000	-315,000	3.47%	+0.26%
Low-Cost	1,598,000	+337,000	2.96%	-0.25%

As shown in Table 4 above, reducing the number of net annual immigrants into the United States by 25.0% from the current intermediate assumption (315/1,261) increases the 75-year deficit by 0.26 percentage points. In the unlikely event that it were to happen, eliminating immigration entirely would have four times the impact and thus increase the 75-year actuarial deficit by approximately 1.0% of taxable wages.

Increasing the number of net annual immigrants into the United States by 26.7% over the current intermediate assumption (337/1,261) reduces the 75-year deficit by 0.25 percentage points. The year 1907 was a peak year in U.S. immigration history, with over 1.2 million immigrants entering the U.S.; in that year, the immigration rate was approximately 14.8 immigrants per 1,000 persons, 3.5 times the current rate of 4.2 per 1,000 persons. If the immigration rate were to return to this historic level, the impact on the actuarial deficit can be approximated using information from Table 4 as a reduction of $2.5/.267 \times .25\% = 2.34\%$ of taxable wages, or about 73% of the 75-year deficit.

In Summary

Because Social Security’s 75-year actuarial deficit is projected to be 3.21% under the 2020 intermediate projections of the Trustees Report, and the low-cost and high-cost assumption variations impact the actuarial deficit in the range between -0.25% and 0.26%, a change in immigration policy by itself would not bring the 75-year deficit into balance. However, it is also important to understand that immigration has a positive impact on the finances of the program.

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