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## The Changing Demographic Profile of the United States

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#### Abstract

This report considers population change and the underlying factors that contribute to population growth in the United States. These include increasing survival due to declining mortality rates (especially for the three most prevalent causes of death), fertility levels that are hovering around the generational "replacement" level, and trends in net international migration wherein more migrants move into the United States than Americans who leave.




# The Changing Demographic Profile of the United States 

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## Summary

The United States, the third most populous country globally, accounts for about $4.6 \%$ of the world's population. Within the next few years, the U.S. population-currently estimated at 299 million persons-is expected to reach twice its 1950 level of 152 million. More than just being double in size, the population has become qualitatively different from what it was in 1950. As noted by the Population Reference Bureau, "The U.S. is getting bigger, older, and more diverse." The objective of this report is to highlight some of the demographic changes that have already occurred since 1950 and to illustrate how these and future trends will reshape the nation in the decades to come (through 2050).

The United States Is Getting Bigger. This report considers population change and the underlying factors that contribute to population growth in the United States. These include increasing survival due to declining mortality rates (especially for the three most prevalent causes of death), fertility levels that are hovering around the generational "replacement" level, and trends in net international migration wherein more migrants move into the United States than Americans who leave.

The United States Is Getting Older. Aside from the total size, one of the most important demographic characteristics of a population for public policy is its age and sex structure. This report illustrates how the United States has been in the midst of a profound demographic change: the rapid aging of its population, as reflected by an increasing proportion of persons aged 65 and older, and an increasing median age in the population.

The United States Is Becoming More Racially and Ethnically Diverse, reflecting the major influence that immigration has had on both the size and the age structure of the U.S. population. This section considers the changing profile of the five major racial groups in the United States. In addition, trends in the changing ethnic composition of the Hispanic or Latino Origin population are discussed.

Although this report will not specifically discuss policy options to address the changing demographic profile, it is important to recognize that the inexorable demographic momentum will have important implications for the economic and social forces that will shape future societal well-being. There is ample reason to believe that the United States will be able to cope with the current and projected demographic changes if policymakers accelerate efforts to address and adapt to the changing population profile as it relates to a number of essential domains, such as work, retirement, and pensions, private wealth and income security, and the health and well-being of the aging population. These topics are discussed briefly in the final section of this report. This report will be updated as needed.

## Contents

Population Size and Growth—The United States Is Getting Bigger ..... 1
Fertility ..... 4
Mortality ..... 6
Net Immigration ..... 9
The Changing Age Profile-The United States Is Getting Older ..... 12
Race and Ethnicity—The United States Is Becoming More Diverse ..... 15
Race ..... 15
Hispanic Origin ..... 18
Some Policy Considerations ..... 20
Work, Retirement, and Pensions ..... 20
Private Wealth and Income Security ..... 21
The Federal Budget and Inter-generational Equity ..... 22
The Health of an Aging Population. ..... 23
Immigration Policy ..... 23
America's Changing Color Lines ..... 24

## Figures

Figure 1. U.S. Population, by Sex, 1950-2050, in Millions ..... 2
Figure 2. Population Growth, Birth, Death, and Net Immigration Rates: United States, 1950-2050. ..... 3
Figure 3. Crude and Age-adjusted Death Rates: United States, 1950-2003 ..... 7
Figure 4. Age-Sex Structure of the United States in Selected Years ..... 13
Figure 5. Hispanics and Non-Hispanics as Percentage of U.S. Population: 2000-2050 ..... 20
Tables
Table 1. Trend in Birth Rates Between 2002 and 2003, by Age of Mother. ..... 5
Table 2. U.S. Immigration and Emigration, by Decade: 1931-1990 ..... 10
Table 3. U.S. Population, by Age Group: 1950-2050 ..... 12
Table 4. U.S. Population, by Race: 2000 ..... 17
Table 5. Projected U.S. Population, by Race: 2000 to 2050. ..... 17
Table 6. The Hispanic and Non-Hispanic Population in the United States, by Race: 2000 ..... 19

## Appendixes

Appendix. U.S. Population Growth Rates, Birth Rates, Death Rates, and Net Immigration Rates: 1950-2050. ..... 26

## Contacts

Author Contact Information 26

TThe United States, the third-largest population globally, accounts for about $4.6 \%$ of the world's population. The U.S. population-currently estimated at 298.6 million persons ${ }^{1}$ is projected to reach twice its 1950 level of 152 million in year 2008. ${ }^{2}$ More than just being double in size, the U.S. population has become qualitatively different from what it was in 1950. As noted by the Population Reference Bureau, "The U.S. is getting bigger, older, and more diverse. ${ }^{3}$ The objective of this report is to highlight some of the demographic changes that have already occurred since 1950 and to illustrate how these and future trends will reshape the nation in the decades to come. ${ }^{4}$

While this report will not discuss policy options, it is important to recognize that the inexorable demographic momentum will produce an increasingly older population in the United States There is ample reason to believe that the United States will be able to cope with the current and projected changes if policymakers address and adapt to the changing demographic profile as it relates to a number of essential domains such as work, retirement, and pensions, private wealth and income security, transfer systems, and the health and well-being of the aging population. ${ }^{5}$ These topics are discussed briefly in the final section of this report.

## Population Size and Growth - The United States Is Getting Bigger

The U.S. population has experienced remarkable growth over the past half-century. From a base of about 152 million Americans in 1950, an additional 131 million persons were added to the population between 1950 and 2000 (the year of the most recent census), with the number of additional women slightly outnumbering additional men (see Figure 1). This increase (of about $85 \%$ ) in the size of the U.S. population was remarkable compared with other industrialized countries. Germany and Italy, for instance, grew by only $20 \%$ and $22 \%$ respectively during the same period. ${ }^{6}$ And, a number of countries, most notably in Eastern Europe, have recently experienced absolute reductions in the size of their populations.

[^0]Figure I. U.S. Population, by Sex, 1950-2050, in Millions


Sources: Congressional Research Service (CRS) calculations based on: (I) for 1950-1990 estimates, F. Hobbs \& N. Stoops, Demographic Trends in the 20th Century, Census Bureau: CENSR-4, issued November 2002, and (2) for 2000-2050, U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin. Census Bureau, at http://www.census.gov/ ipc/www/usinterimproj/.

Despite the growth of the U.S. population over this period, the United States' share of the world's population has been declining as less developed, higher fertility countries have grown more rapidly. Bangladesh and Nigeria, for instance, now rank \#8 and \#9 in total population size, surpassing more developed countries-such as Germany, France, the United Kingdom, and Italy-that are no longer among the world's 10 most populous countries. ${ }^{7}$

The Census Bureau projects that the U.S. population will continue to grow, to 420 million persons by year 2050, albeit at a slower pace than the growth recorded over the past half-century. Note, however, that population projections, which rely upon assumptions about the future courses of mortality, fertility, and immigration are uncertain. More pessimistic growth projections are offered by the United Nations and the Social Security Administration, which estimate that the U.S. population will be 395 million or 390 million respectively in the same year. ${ }^{8}$

[^1]Figure 2. Population Growth, Birth, Death, and Net Immigration Rates: United States, 1950-2050


Source: Congressional Research Service (CRS) compilation based on historical and projected figures from the U.S. Bureau of the Census and the National Center for Health Statistics (NCHS).

Notes: (I) Crude birth rate (CBR): the number of live births per I,000 total population. Estimates for 1950-58 were adjusted by NCHS to correct for under-registration of births. (2) Crude death rate (CDR): the number of deaths per I,000 total population. (3) Net immigration rate: number of immigrants less number of emigrants per I,000 total population.

Average annual growth rates ${ }^{9}$ for each 10-year intercensal period between 1950 and 2000 were positive, but have generally been declining over time (see Figure 2 and Table 7). Expressed as a percentage of the population at the beginning of the period, the average population growth rate in the 1950 s, for example, was $1.7 \%$ per annum while it was only $0.9 \%$ per year during the 1980 s. The Census Bureau assumes that the growth rate will remain positive through year 2050 but will fall from its current level of about $0.9 \%$ per annum to $0.7 \%$.

Trends in the size and growth of the U.S. population reflect the interactions of three underlying determinants:

- The role of human reproduction and the fertility behavior of American couples;

[^2]- Trends in disease risk and subsequent mortality, and,
- The net effect of international immigration to and from the United States.

Figure 2 and Appendix Table $\mathbf{A}$ (at end of this report), in addition to highlighting the estimated and projected trends in population growth for the period 1950-2050, also highlight trends and projections for these three underlying components of population change. Characteristics of U.S. fertility, mortality, and immigration are discussed in the following sections.

## Fertility ${ }^{10}$

Average fertility in the United States reached a post-World War II maximum during the peak of the "baby boom" in the late 1950s. The highest observed number of annual births ( 4.3 million) and birth rates ( 25.3 births per 1,000 population) since 1950 were recorded in 1957. Steep declines were observed in the 1960s and early 1970s, a broad trend that was also observed in Europe, Canada, Japan, Australia, and New Zealand. U.S. birth rates since the early 1970s have remained remarkably constant, ${ }^{11}$ mostly fluctuating in the mid-teens, and reached an all-time low of 13.9 live births per 1,000 population in 2002. A slight increase to 14.1 live births per 1,000 population was observed in 2003, the most recent year for which final data are available ${ }^{12}$.

## Characteristics of American Fertility

Highlights of American fertility behavior in 2003 include the following: ${ }^{13}$

- There were approximately 4.1 million live births, an increase of $2 \%$ from 2002.
- The crude birth rate (CBR) increased $1 \%$ between 2002 and 2003, to 14.1 live births per 1,000 total population. The CBR in year 2002, at 13.9/1,000 population, had been the lowest rate ever recorded for the United States.
- The general fertility rate (GFR), which relates births to the number of women in their childbearing ages, was 66.1 live births per 1,000 women aged 15-44 years, also an increase from year 2002.
- Fertility rates, as measured by the GFR, increased for non-Hispanic white and Hispanic women by $2 \%$ and $3 \%$, respectively, but decreased slightly for nonHispanic black women. Fertility also increased for Asian and Pacific Islander women but was essentially unchanged for American Indian women.

[^3]- Fertility is slighting under the "replacement level" in 2003, for the $32^{\text {nd }}$ consecutive year. ${ }^{14}$ In 2003, there were, on average, 2.042 births per U.S. woman, with total fertility rates below the replacement level for most groups of women. However, rates for American women of Mexican origin (2.958) and "other" Hispanics (2.733) were above replacement. Many European and Asian countries or regions have levels of fertility that are considerably lower than in the United States. For instance, Macao SAR (0.84), Hong Kong (0.94), Ukraine (1.12), Czech Republic (1.17), and Slovakia (1.20) are all well below replacement. ${ }^{15}$
- The mean age of all first-time mothers in the United States was 25.2 years in 2003, slightly higher than in 2002. This all-time high for American women attests to the continuing tendency of women to postpone childbearing. Since 1970, the mean age at first birth has risen 3.8 years (from 21.4 years). Mean age at first birth varies considerably by race and Hispanic origin. Women of Asian and Pacific Islander descent had the highest age at first birth ( 28.3 years), whereas American Indian women had the lowest ( 21.8 years).
- Childbearing by unmarried women rose steeply in 2003. The number of births to unmarried women climbed $4 \%$ to $1,415,995$, the highest number recorded in the more than six decades for which national data are available. The proportion of all births to unmarried women increased to $34.6 \%$; this measure has risen steadily since the late 1990s.
- U.S. fertility trends differ by the age of the mother (Table 1). In general, birth rates for "younger" women declined while those of older women increased.

Table I.Trend in Birth Rates Between 2002 and 2003, by Age of Mother

| Age of <br> Mother | Rate per I,000 <br> Women in Age <br> Category in 2003 | Trend Between 2002 and 2003 |
| :--- | :---: | :--- |
| $10-14$ years | 0.6 | Declined. A one-third decline since 2000. <br> Declined. Fell 3\% from previous year, a record low for the United States <br> 15-19 years |
| $20-24$ years | 11.6 | Rate has plummeted by one-third since peak in 1991 (6I.8) |
| $25-29$ years | 102.6 | Declined, the lowest rate on record for age group in the United States |
| $30-34$ years | 95.1 | Increased by 2\%. |
| $35-39$ years | 43.8 | Increased. Highest rate recorded since the mid-1960s. <br> Increased. Highest rate recorded since the mid-1960s. |
| $40-44$ years | 8.7 | Increased. Highest rate recorded since 1969; rate for age group is up 58\% <br> since 1990. |
| $45-49$ years | 0.5 | Unchanged. |

Source: NSVR, Births: Final Data for 2003, vol. 54, no. 2, SepT. 8, 2005.

[^4]Beyond the current year estimates presented above, the Census Bureau uses demographic projection techniques to predict future trends in American fertility. They project that birth rates will remain low through 2050, in the narrow range of 13.9-14.3 births per 1,000 persons annually. Note, however, that future trends in fertility are notoriously difficult to predict and specialists continually question the underlying assumptions of the models. Some experts are concerned that stability in U.S. fertility may not continue, particularly in light of the declines that have occurred in other developed countries. ${ }^{16}$ Others argue that very low fertility is not inevitable and that fertility may return to higher levels. For instance, Morgan, ${ }^{17}$ in his address as president to the membership of the Population Association of America, argued that there are both persistent rationales for having children and institutional adjustments ${ }^{18}$ can make the widespread intentions for having two children attainable, even in increasingly individualistic and egalitarian societies.

## Mortality

As is evident from Figures 2 and 3, crude death rates (CDR) in the United States have been remarkably constant since 1950, fluctuating within the narrow range of 8.5 to 9.7 deaths per 1,000 persons. ${ }^{19}$ The record low of 8.4 was attained in the most recent year for which final data are available, 2003. ${ }^{20}$

In general, crude death rates are referred to as crude because they are influenced by two underlying characteristics of a population, making it difficult to interpret trends in the CDR without disentangling trends in these two underlying components:

- The population's age structure. An older population generally has higher crude death rates because a higher proportion of persons are in the older age groups where death rates are higher.
- Mortality risk, or the likelihood of death at a particular age. The risk of mortality reflects the health and disease profile of the underlying population, public health and sanitation, the availability of and access to health care, the education of the population, and other factors.

Age-adjusted death rates are better indicators (than crude rates) to measure mortality risk across time or across populations. ${ }^{21}$ If age-adjusted rates are considered for the United States over time, ${ }^{22}$

[^5]a striking pattern of the mortality risk emerges (see Figure 3): age-adjusted death rates have exhibited a dramatic decline since 1950 (rather than being remarkably constant, as suggested by the crude death rates). Use of the age-adjusted rates has allowed a much more refined evaluation of trends in American mortality over time. Specifically, they show that, despite the fact that the U.S. population has been aging over the past half-century, the risk of mortality has actually been falling.

Figure 3. Crude and Age-adjusted Death Rates: United States, 1950-2003


Source: CRS computations using data from the vital statistics system, NCHS.
Notes: CDRs are on an annual basis per I,000 population; age-adjusted rates per I,000 U.S. standard population (year 2000).

## Characteristics of American Mortality

Highlights of trends in American mortality in 2003 include the following: ${ }^{23}$

- More than 2.4 million resident deaths were registered in the United States in 2003, about 4,900 more than in 2002.
- The crude death rate was about 8.4 deaths per 1,000 total population, a record low, and about $0.6 \%$ lower than the 2002 rate.

[^6]- Life expectancy at birth ${ }^{24}$ was 77.5 years, a record high that surpassed the previous highest value, which was recorded in 2002. Record high life expectancy was attained by the total population, as well as by each of the black and white populations. Both males and females in each of the two major race groups attained record high levels. U.S. life expectancy continues to fall short of that attained by a number of other countries, including Japan (81.9 years), Iceland (80.6), and Switzerland (80.4). ${ }^{25}$
- The 10 leading causes of death were (1) heart disease, (2) malignant neoplasms (cancer), ${ }^{26}(3)$ cerebrovascular diseases (stroke), (4) chronic lower respiratory diseases, (5) accidents (unintentional injuries), (6) diabetes mellitus, (7) influenza and pneumonia, (8) Alzheimer's disease, (9) nephritis (kidney disease), and (10) septicemia. Age-adjusted death rates continued to decrease for the three leading causes. The age-adjusted death rate for influenza and pneumonia ( $7^{\text {th }}$ leading cause) also decreased (by 2.7\%) despite an influenza outbreak in 2003. Increasing trends for Alzheimer's disease continued.
- Differences in mortality between men and women continued to narrow. In 2003, the age-adjusted death rate for men was $41 \%$ greater than that for women (down from $42 \%$ greater in 2002). Life expectancy at birth for females was 80.1 years, while it was 74.8 years for men (both increases from the previous year). The sex gap in life expectancy, 5.3 years, has been falling from its late 1970s peak of 7.8 years.
- Differences in mortality between the black and white populations persisted even though there was a trend toward convergence. The age-adjusted death rate was 1.3 times greater, the infant mortality rate 2.4 times greater, and maternal mortality rate 3.5 times greater for the black population than for the white population. Life expectancy for the white population exceeded that for the black population by 5.3 years.
- The infant mortality rate was 6.85 infant deaths per 1,000 live births, a small reduction from 2002. Note that the rate had increased in 2002, the first increase in over four decades.

As with the data for fertility, demographers use demographic projection techniques to predict the future trends in American mortality. The Census Bureau projects that (crude) death rates will remain low through 2050 in the narrow range of 8.6 to 9.9 deaths per 1,000 persons in the population. Its figures gradually increase, reflecting the Census Bureau's assumption that the aging of the population will not be fully offset by continued reductions in the risk of dying.

[^7]As with other demographic variables, however, future mortality and survival are difficult to predict and specialists disagree on not only the level but also the direction of future trends. Three recent articles were published that suggest that current models may be too pessimistic in their assumptions about mortality and survival probabilities, i.e., Americans may live longer than currently projected. ${ }^{27}$ Two of these studies showed that there has been a tendency for international life expectancy to rise linearly by more than two years per decade over the past 40 years ${ }^{28}$ or the last 160 years, ${ }^{29}$ suggesting that future mortality decline may be more rapid than current models suggest. Also, a useful analysis of the contribution of smoking behavior to mortality trends ${ }^{30}$ suggests that slow female gains in the United States may be temporary, and that the pace of mortality gains may pick up fairly soon. On the other hand, another expert recently argued that the trend toward longer lives will probably level off in coming years as a result of the rising tide of obesity and the re-emergence of deadly infectious diseases. ${ }^{31}$

## Net Immigration

Immigration has been an important component of population growth in the United States. The net immigration rate (Figure 2) has been and is projected to be positive (with in-migration exceeding out-migration) for the full century (1950 to 2050). It fluctuated in the low range of 1.5 to 2.4 net migrants per 1,000 resident population between 1950 and 1979. An increasing trend has been noted since 1980, and the annual rates in the 1990s were generally all in the range of 3.0 to 3.9 . The U.S. Bureau of the Census projects that net migration will continue to be an important component of population growth in the United States through 2050 albeit at a slightly reduced rate than currently observed.

What have been the relative roles of gross immigration and gross emigration to recent trends? In general, the balance of gross immigration (of persons moving permanently to the United States) has exceeded gross emigration (of persons leaving) over the past century. A notable exception was observed during the Great Depression, when the number of out-migrants exceeded new immigrants (see Table 2). Reflecting fluctuations in economic conditions (in the United States and abroad) and U.S. immigration policies, the volume of immigrant ${ }^{32}$ flow to the United States has fluctuated over time. Starting in 1915, immigration to the United States was curtailed because of World War I, the introduction of numerical limits (or "quotas"), the economic depression of the 1930s, and World War II. ${ }^{33}$ Starting in the 1950s, the volume of immigration flows to the United

[^8]States has been steadily increasing. The average annual inflow was about 252,000 in the 1950s, about 332,000 in the 1960s, 449,000 in the 1970s, and jumped to 734,000 in the 1980 s. More than 9 million foreigners were admitted as legal immigrants to the United States between 1991 and 2000 , an average of 900,000 a year. In the most recent years, the number of legal immigrants surpassed 1 million persons in both 2001 and 2002, but fell to 706,000 persons in 2003 and 946,000 persons in 2004. ${ }^{34}$

Table 2. U.S. Immigration and Emigration, by Decade: 1931-1990

| Period | Immigrants to <br> the United States <br> (thousands) | Emigrants from <br> the United States <br> (thousands) | Net <br> immigration <br> (thousands) | Ratio: <br> emigration/ <br> immigration |
| :--- | ---: | ---: | ---: | ---: |
| $2001-2004$ | 3,780 | 1,202 | 2,578 | 0.31 |
| $1991-2000$ | 9,095 | 2,338 | 6,757 | 0.26 |
| $1981-1990$ | 7,338 | 1,600 | 5,738 | 0.22 |
| $1971-1980$ | 4,493 | 1,176 | 3,317 | 0.26 |
| $1961-1970$ | 3,322 | 900 | 2,422 | 0.27 |
| $1951-1960$ | 2,515 | 425 | 2,090 | 0.17 |
| $1941-1950$ | 1,035 | 281 | 754 | 0.27 |
| $1931-1940$ | 528 | 649 | -121 | 1.23 |

Sources: For immigration, all years: U.S. Department of Homeland Security, Yearbook of Immigration Statistics, 2004, GPO, Washington, DC, January 2006. For emigration, years 193I-1990: U.S. Immigration and Naturalization Service, Statistical Yearbook of the Immigration and Naturalization Service, 2000, GPO, Washington, DC, 2002. For 1991-2000: U.S. Census Bureau, Net International Migration and its Sub-Components for the Vintage 2000 Post-censal National Estimates: 1990 to 2000, Internet release date Feb. 8, 2002. For 2001-2004, Population Reference Bureau, Estimates and Projections of Emigration from the United States, available at http://www.prb.org/Content/NavigationMenu/PRB/Journalists/FAQ/Questions/U_S_Emigration.htm. For net immigration and ratio: CRS computations based on sources cited.

There are few detailed and timely estimates of emigration of persons who leave the United States to permanently take up residence elsewhere (whether native-born or foreign-born Americans). Partly because of inherent methodological difficulties, the collection of emigration statistics was discontinued in 1957 and no direct measure has been available since then. ${ }^{35}$ Using indirect demographic techniques, the Census Bureau estimated that the number of emigrants leaving the United States has been increasing over the past decades-reaching about 234,000 persons annually during the 1990s (compared to 910,000 annual immigrants during the same time period). The Population Reference Bureau assumes roughly 300,000 annual emigrants for years 2000$2005 .{ }^{36}$

[^9]
## Characteristics of Net Immigration

Highlights of American immigration in FY2004 include the following: ${ }^{37}$

- Current U.S. policy on permanent immigration is based on four principles: the reunification of families, the admission of immigrants with special skills, the protection of refugees, and the diversity of admissions by country of origin. ${ }^{38}$
- The number of persons granted lawful permanent residence in the United States increased by more than 200,000 persons between 2003 and 2004, from 706,000 to 946,000 .
- The leading regions of origin of legal immigrants were North America and Asia. These regions accounted for $36 \%$ and $35 \%$, respectively, of all legal immigrants in 2004.
- The leading source countries (of birth) for legal immigrants in 2004 were Mexico ( 175,000 persons or $18.5 \%$ ), followed by India ( $7.4 \%$ ), the Philippines ( $6.1 \%$ ), China (5.4\%), Vietnam (3.3\%), and Dominican Republic (3.2\%).
- The primary destination states in 2004, as in every year since 1971, were California, New York, Texas, Florida, New Jersey, and Illinois. Sixty-five percent of all (legal) persons immigrating to the United States in 2004 lived in these six states.
- Data on immigrant's intended metropolitan area are not available for FY2004. However, 10 metropolitan areas were the intended residence of $41 \%$ of all legal immigrants in 2003. The leading destinations were New York, NY; Los AngelesLong Beach, CA; Chicago, IL; and the Washington, DC-MD-VA metro area.
- The Census Bureau estimates that approximately 300,000 persons emigrated annually in the period 2000-2004, an increase from the late 1990s.
- Unauthorized foreigners, also referred to as illegal aliens, deportable aliens, or undocumented workers, are persons in the United States in violation of U.S. immigration laws. It is estimated that there are more than 11 million unauthorized foreigners currently living in the United States, and the resident unauthorized alien population is estimated to increase by 500,000 people per year. ${ }^{39}$ United States Border Patrol apprehensions increased steadily through the late 1990s, reaching a peak of 1.68 million in 2000. From 2000 to 2003, apprehension levels declined steadily, reaching a low of 931,557 in 2003. ${ }^{40}$ Each apprehension, even of the same person, is counted separately. ${ }^{41}$

[^10]
## The Changing Age Profile-The United States Is Getting Older

Aside from its total size, one of the most important demographic characteristics of a population for public policy is its age and sex structure. In general, a "young" population structure is seen in countries experiencing high fertility and rapid population growth, and the relevant policy considerations are whether there are sufficient schools and, later, enough jobs and housing to accommodate them. On the other hand, critical policy challenges in countries with "old" population structures are to develop retirement and medical systems to serve the older population, often with simultaneous reductions in the number of working-age persons to support them.

The population of the United States had been relatively "young" in the first half of the $20^{\text {th }}$ century, a consequence of a history of three demographic trends acting in concert-relatively high fertility, declining infant and childhood mortality, and high rates of net immigration to the United States by young workers and families. Since 1950, the United States has been in the midst of a profound demographic change: rapid population aging, ${ }^{42}$ a phenomenon that is replacing the earlier "young" age-sex structure with that of an older population.

Table 3. U.S. Population, by Age Group: 1950-2050

| Age/year 1950 | 1975 | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 2 5}$ | $\mathbf{2 0 5 0}$ |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Number (in thousands, rounded) |  |  |  |  |  |
| Total | 152,271 | 215,972 | 282,339 | 349,666 | 420,081 |
| $0-19$ | 51,672 | 75,646 | 80,560 | 92,038 | 109,158 |
| $20-64$ | 88,202 | 117,630 | 166,718 | 194,105 | 224,217 |
| $65-65+$ | 12,397 | 22,696 | 35,061 | 63,524 | 86,706 |
| Percent in Age Group (rounded) |  |  |  |  |  |
| $0-19$ | 33.9 | 35.0 | 28.5 | 26.3 | 26.0 |
| $20-64$ | 57.9 | 54.5 | 59.0 | 55.5 | 53.4 |
| $65-65+$ | 8.1 | 10.5 | 12.4 | 18.2 | 20.6 |

Source: CRS computations based on data in the U.S. Bureau of the Census, International Database, at http://www.census.gov/ipb.

Figure 4 graphically displays three population pyramids, which show the proportion of persons in each five-year age and sex group in the U.S. population, at three points in time-in census years 1950 and 2000, and projected to year 2050.

[^11]Figure 4.Age-Sex Structure of the United States in Selected Years


Source: CRS extractions from U.S. Census Bureau, International Data Base (IDB), http://www.census.gov/ipc/ www/idbnew.html.

In 1950, the U.S. population, which numbered 152 million persons, was relatively young and its population pyramid resembled a Christmas tree. The widest portion, representing the most populous age group, was at the base-where 16.4 million new births and children under age 5 accounted for $10.8 \%$ of the total U.S. population. Bars representing persons at older ages
gradually narrow as deaths occur. The median age was 30.2 years ${ }^{43}$ and births outnumbered deaths by a margin of 2.5 to $1.0 .{ }^{44}$ Three characteristics of the 1950 pyramid are especially worth noting:

- The only significant departure from a pyramidal shape is notches representing persons aged 10-24 years. These persons were born primarily during the economic depression of the 1930's when birth rates were comparatively low.
- Early "baby boom" births are evident in the youngest age group. ${ }^{45}$
- The number of persons aged 65 and older in the population was still relatively low- 12.4 million persons, representing $8.1 \%$ of the U.S. population. The population pyramid in year 2000, the most recent year in which the U.S. population was enumerated by the decennial census, is typical of a population experiencing slow growth. Reflecting lower fertility, fewer people entered the lowest bars of the pyramid, and as life expectancy has increased, a greater percentage of persons have survived until old age. As a result, the population has been aging. By 2000, the median age of the population had risen to 35.3 years while infants and children under the age of five accounted for only $6.8 \%$ of the population. Important characteristics of the U.S. population in year 2000 include:
- The U.S. population grew by roughly $85 \%$ between 1950 and 2000-from 152 million to 282 million persons. The pyramid, which is significantly larger in all age groups, reflects this fact.
- The bulge of the baby-boom generation, those born between 1946-1964, can be seen in the pyramid for ages $35-54$ years in 2000. After 1964, birth rates moved downward until the late 1970s. As the last members of the baby boom approached their childbearing years during the 1980s, the number of births rose again, peaking in 1990. These children, the youngest generation, are represented by the slightly widening base of the pyramid. Even though the number of births per woman is near an all time low, the population continues to grow in part because of the children and grandchildren of the huge baby-boom generation. ${ }^{46}$
- The number of persons aged 65 and older had been steadily increasing and reached 35.1 million persons, representing $12.4 \%$ of the U.S. population.
- The fact that female survival chances exceed those of men, especially at the older ages, becomes noticeably more evident in the 2000 pyramid. About $4.3 \%$ of the total female population was aged 80 and above in 2000 compared to only $2.2 \%$ of men.

[^12]By year 2050, projections of the U.S. population suggest that the population "pyramid" will no longer resemble a Christmas tree; rather, it will be increasingly rectangular.

- In this population of 420.1 million persons, the most striking feature is the projected number of people who will be aged 65 and older- 86.7 million, just over one in every five persons in the total U.S. population. To put these figures into perspective, the "oldest" state in the year 2000 census was Florida with $17.6 \%$ of the state's population in the age category 65 years and older. ${ }^{47}$
- By year 2050, the percent elderly in the national population will surpass the figures observed in the "oldest" states today. The oldest-old, those aged 80 and above and including the youngest of the baby boomers, will be the most populous age group- 33.7 million persons or $8.0 \%$ of the entire U.S. population. The oldest-old women of the same age will account for $9.6 \%$ of all women.
- The "baby boom" generation will have accelerated population aging, but aging will continue to be one of the most important defining characteristics of the population, even after the youngest of the "baby boom" population has passed away. This reflects projections of continuing low fertility coupled with improving survival in the United States. ${ }^{48}$


## Race and Ethnicity—The United States Is Becoming More Diverse

The U.S. population is becoming more racially and ethnically diverse. This reflects two forces. First, immigration has been a major influence on both the size and the age structure of the U.S. population. Although most immigrants tend to be in their young adult ages, when people are most likely and willing to assume the risks of moving to a new country, U.S. immigration policy has also favored the entry of parents and other family members of these young immigrants. ${ }^{49}$ Second, major racial and ethnic groups are aging at different rates, depending upon fertility, mortality, and immigration within these groups.

Federal standards for collecting and presenting data on race and Hispanic origin were established by the Office of Management and Budget (OMB) in 1997. ${ }^{50}$ Race and Hispanic origin are considered to be two separate and distinct concepts and are considered separately in this report.

## Race

The OMB standards require federal agencies to use a minimum of five race categories in their data collection and presentation efforts. The new standards were required to be used by the

[^13]Census Bureau for the 2000 decennial census and by other federal programs "as soon as possible, but not later than January 1, 2003."51

- White refers to people having origins in any of the original peoples of Europe, the Middle East, or North Africa.
- Black or African American refers to people having origins in any of the Black racial groups of Africa.
- American Indian and Alaska Native refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
- Asian refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- Native Hawaiian and Other Pacific Islander refers to people having origins in the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

For respondents unable to identify with any of these five race categories, the OMB approved including a sixth category-"some other race."

Going beyond the minimum standards set by OMB, the census 2000 question on race included 15 separate response categories and three areas where respondents could write in a more specific group. ${ }^{52}$ Individuals were instructed to mark "one or more races to indicate what this person considers himself/herself to be. ${ }^{, 53}$ The response categories and write-in answers were combined by the Census Bureau to create the five minimum OMB race categories, as seen in Table 4. Based on data from the 50 states and the District of Columbia, the overwhelming majority of the U.S. population-almost $99 \%$-reported only one race. The most prevalent group, accounting for about $81 \%$ of the U.S. population, was those who reported that they are white alone, followed by those who are Black or African American alone (with almost $13 \%$ of respondents). The smallest race group was the Native Hawaiian and other Pacific Islander alone population, with 463,000 members, representing less than $0.2 \%$ of the U.S. population.

[^14]Table 4. U.S. Population, by Race: 2000

| Race | Number <br> (in thousands) | Percentage of <br> total population |  |
| :--- | :--- | ---: | ---: |
| Total Population | White | 281,422 | 100.00 |
| One race | 277,524 | 98.62 |  |
|  | Black or African American | 228,104 | 81.05 |
|  | Asian | 35,704 | 12.69 |
|  | American Indian and Alaska Native | 10,589 | 3.76 |
|  | Native Hawaiian and other Pacific Islander | 2,664 | 0.95 |
| Two races | 463 | 0.16 |  |
| Three races | 3,578 | 1.27 |  |
| Four or more races | 289 | 0.10 |  |

Sources: CRS compilation based on: (I) U.S. Census Bureau, Census 2000 Summary File I, Matrices P7 \& P9, Race Alone or in Combination: 2000, based on Census Summary File I (SF I), I00\% data. http://factfinder.census.gov/, (2) Census Bureau, Modified Race Data Summary File, Technical Documentation, Issued Sept., 2002, at http://www.census.gov/popest/archives/files/MRSF-OI-USI .html.

Notes: These figures update/modify those presented in E.M. Crieco and R.C. Cassidy, Overview of Race and Hispanic Origin, U.S. Census Bureau: Census 2000 Brief, C2KBR/0I-I, issued March 200I.

Referring to Table 5, while about $81 \%$ of the population was white in 2000, that figure is projected to fall to $72 \%$ by year $2050 .{ }^{54}$ Increases will be most dramatic for Asians and for persons in the "other races" category (which includes American Indians and Alaska Natives, Native Hawaiians and other Pacific Islanders, and individuals who identify with two or more races). Between 2000 and 2050, the number of Asians is expected to increase by 22.7 million, an increase of $213 \%$, while the number in the "all other races" (which includes persons who identify with two or more races) category will increase by 15.3 million, or $217 \%$.

Table 5. Projected U.S. Population, by Race: 2000 to 2050

| Population | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total | $\begin{array}{r} 282,125 \\ (100.0) \end{array}$ | $\begin{array}{r} 308,936 \\ (100.0) \end{array}$ | $\begin{array}{r} 335,805 \\ (100.0) \end{array}$ | $\begin{array}{r} 363,584 \\ (100.0) \end{array}$ | $\begin{array}{r} 391,946 \\ (100.0) \end{array}$ | $\begin{array}{r} 419,854 \\ (100.0) \end{array}$ |
| White alone | $\begin{array}{r} 228,548 \\ (81.0) \end{array}$ | $\begin{array}{r} 244,995 \\ (79.3) \end{array}$ | $\begin{array}{r} 260,629 \\ (77.6) \end{array}$ | $\begin{array}{r} 275,731 \\ (75.8) \end{array}$ | $\begin{array}{r} 289,690 \\ (73.9) \end{array}$ | $\begin{array}{r} 302,626 \\ (72.1) \end{array}$ |
| Black alone | $\begin{array}{r} 35,818 \\ (12.7) \end{array}$ | $\begin{gathered} 40,454 \\ (13.1) \end{gathered}$ | $\begin{array}{r} 45,365 \\ (13.5) \end{array}$ | $\begin{gathered} 50,442 \\ (13.9) \end{gathered}$ | $\begin{gathered} 55,876 \\ (14.3) \end{gathered}$ | $\begin{gathered} 61,361 \\ (14.6) \end{gathered}$ |

[^15]| Population | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Asian alone | 10,684 | 14,24I | 17,988 | 22,580 | 27,992 | 33,430 |
|  | (3.8) | (4.6) | (5.4) | (6.2) | (7.1) | (8.0) |
|  | 7,075 | 9,246 | 11,822 | 14,831 | 18,388 | 22,437 |
| All other races ${ }^{\text {a }}$ | (2.5) | (3.0) | (3.5) | (4.1) | (4.7) | (5.3) |

Source: U.S. Census Bureau, "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," Internet release data: Mar. I8, 2004, at http://www.census.gov/ipc/www/usinterimproj/.

Notes: In thousands, except as indicated. As of July I. Resident population.
a. "All other races" includes American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone, and Two or More Races.

## Hispanic Origin

OMB defines Hispanic or Latino as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. Federal agencies are required to use a minimum of two ethnicities: "Hispanic or Latino" and "Not Hispanic or Latino" in data collection and presentation. The new standard was used by the Bureau of the Census in the 2000 decennial census; other federal programs were expected to adopt the standards no later than January 1, 2003.

In census 2000, respondents of all races were asked if they were Spanish, Hispanic, or Latino, and were given the opportunity to differentiate between: (a) Mexican, Mexican American, Chicano; (b) Puerto Rican; (c) Cuban; and (d) other Spanish/Hispanic/Latino. ${ }^{55}$ Based on this definition, almost 36 million persons, or about $12.6 \%$ of the U.S. population, identified themselves as Hispanic. The remaining 246 million people, or $87.4 \%$, were not Hispanic. ${ }^{56}$

As mentioned earlier, OMB and the U.S. Bureau of the Census consider race and Hispanic origin to be distinct concepts. The results from census 2000, however, suggest that such a distinction is not made by persons of Hispanic origin themselves. The most commonly reported race for Hispanics was white alone-almost 17 million persons or almost $48 \%$ of the Hispanic population. But, a staggering 14.9 million Hispanics-or $42.2 \%$-reported that they belonged to "some other race," indicating that they did not identify with any of the 14 other categories offered on the census questionnaire. ${ }^{57}$

Table 6 presents modified estimates of the Hispanic and non-Hispanic populations of the United States. The modification reconciles the census 2000 race categories with those race categories that appear in the data from administrative records, which are used to produce population estimates and projections. ${ }^{58}$ These are also consistent with the recommended set of five categories by OMB.

[^16]Table 6.The Hispanic and Non-Hispanic Population in the United States, by Race: 2000

| Race | Hispanic or Latino |  |  | Not Hispanic or Latino |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number (in 000s) | Percent of Hispanics | $\begin{gathered} \text { Percent } \\ \text { of } \\ \text { Total } \end{gathered}$ | Number <br> (in 000s) | Percent of nonHispanics | Percent of Total |
| Total | 35,306 | 100.00 | 12.55 | 246,116 | 100.00 | 87.45 |
| One race | 34,814 | 98.61 | 12.37 | 242,710 | 98.62 | 86.24 |
| White | 32,529 | 92.13 | 11.56 | 195,576 | 79.46 | 69.50 |
| Black | 1,391 | 3.94 | 0.49 | 34,313 | 13.94 | 12.19 |
| Asian | 232 | 0.66 | 0.08 | 10,357 | 4.21 | 3.68 |
| American Indian | 566 | 1.60 | 0.20 | 2,097 | 0.85 | 0.75 |
| Hawaiian | 95 | 0.27 | 0.03 | 367 | 0.15 | 0.13 |
| Two races | 434 | 1.23 | 0.15 | 3,144 | 1.28 | 1.12 |
| Three or more races | 57 | 0.16 | 0.02 | 262 | 0.11 | 0.09 |

Source: U.S. Bureau of the Census, Modified Race Data Summary File.
The population of Hispanic or Latino origin is projected to steadily increase as a percentage of the total U.S. population through 2050, rising from $12.6 \%$ in 2000 to $24.4 \%$ in 2050 (see Figure 5).

Figure 5. Hispanics and Non-Hispanics as Percentage of U.S. Population: 2000-2050


Source: CRS extractions from: U.S. Census Bureau, 2004, U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin, at http://www.census.gov/ipc/www/usinterimproj/, internet release date: Mar. I8, 2004.

## Some Policy Considerations

The changing demographic profile will impact upon a wide range of social and economic issues in the United States. The following section presents a short discussion of some major policy considerations that are related to these changes. Neither the list nor the discussions are comprehensive.

## Work, Retirement, and Pensions

The increasing financial pressure faced by public pension systems, such as Social Security, is often attributed to demographic trends that have led to aging populations. However, beyond the simple mathematics of the worsening age dependency ratio, ${ }^{59}$ decreasing labor force participation rates have contributed to financial imbalances within pension programs, further increasing the number of retired persons relative to those in the workforce.

The declining labor force participation of older men is one of the most dramatic economic trends of the past four decades in the United States. Between 1963 and 2003, labor force participation

[^17]rates declined from $90 \%$ to $75 \%$ among men aged 55-61. Over this period, labor force participation rates dropped from $76 \%$ to $50 \%$ for men aged 62-64 and from $21 \%$ to $12 \%$ for men aged 70 and over. ${ }^{60}$ For all of these groups, most of the declines occurred prior to $1980 .{ }^{61}$

An individual's decision of whether to stay in the workforce or to retire is based on the complex interaction of a number of factors including, but not limited to:

- Eligibility for Social Security benefits,
- Availability of and benefits under an employer-financed pension plan,
- Work incentives to stay in the labor force (such as continued benefit accrual after attaining the early retirement age, options for phased retirement or to work reduced hours, etc.),
- The physical and cognitive health of the worker and potentially other family members (spouse, an aging parent, an adult child with a disability),
- Availability (and eligibility for) disability and unemployment insurance programs, and,
- The worker's relative preference for "leisure" compared to employment.

Policy levers are, however, available to influence labor force participation and retirement decision-making. For instance, the federal government influences employers' decisions about whether to offer benefits like pensions and health insurance through direct legislation, such as ERISA and the Age Discrimination Act; through social insurance programs, such as Social Security and Medicare; and through the financial incentives created for both employers and employees by the Internal Revenue Code. ${ }^{62}$

## Private Wealth and Income Security ${ }^{63}$

Income security during retirement, coupled with an increase in the number of post-retirement years during which individuals can enjoy family and leisure, is one of the primary social achievements of the $20^{\text {th }}$ century. At the same time, this accomplishment has introduced some fundamental public policy challenges associated with population aging. From an individual's perspective, the two most basic challenges are to ensure that they have sufficient income security during their retirement years and that they have protection against the increasing risk of experiencing periods of poor health and/or disability.

For policy-makers, there are fundamental questions with respect to what the federal role should be in helping individuals meet these objectives. A major domestic political challenge of the $21^{\text {st }}$ century will be how to adapt our old-age income security and health insurance systems to ensure financial solvency while ensuring that there is an adequate safety net to protect the most vulnerable in the population. One option that is likely to be considered involves relying on

[^18]individual private savings and wealth accumulation to offset any reductions that may take place in the level of public-tier support. The underlying question is how realistic it is to assume that individuals will save sufficiently over their lifetime to contribute significantly to their own income needs during retirement. Another central question regarding income security for older persons is whether individuals and families will assume greater responsibility for their own retirement if current government programs are scaled back because of budgetary pressures.

## The Federal Budget and Inter-generational Equity

Several decades of population aging have occurred in the United States wherein the proportion of young persons has declined while the number of older persons has expanded dramatically. The changing age structure has raised philosophical questions around the theme of inter-generational equity. Many analysts might expect such demographic changes to have favorable consequences for children and troubling ones for older persons. Fewer children should mean less competition for resources in the home as well as greater availability of social services earmarked for children, especially public schooling. The sharp rise in the number of elderly should put enormous pressure on resources directed towards the older ages, such as medical care facilities, nursing homes, and social security funds. ${ }^{64}$ However, Preston, in his 1984 presidential address to the membership of the Population Association of America documented that exactly the opposite had occurred: conditions for children had, in fact, deteriorated and improved dramatically for older Americans.

Now, two decades later, the issue continues to be one of considerable debate. A recent study ${ }^{65}$ argued that, without an overhaul of entitlement programs (which largely favor older persons) or tax-revenue reform, the ever-expanding Social Security, Medicare, and Medicaid budgets will tighten the squeeze on other domestic spending (including programs for children, welfare, education, the environment, community development, housing, energy, and justice-programs that reach the majority of all Americans.) But, others argue that there are potentially catastrophic outcomes associated with the redistribution of federal resources among age categories. For instance, the safety nets for the most vulnerable may be interrupted. Costs might be transferred to the states, with limited capacity to absorb the additional expenditures. Individuals may be unable to assume the additional responsibilities asked of them.

There is no generally accepted rule in welfare economics for how an age group's interests ought to be represented in public decision-making. As noted by Preston, ${ }^{66}$ however, we are continually faced with two questions. First, do we care about our collective future-the commonwealth-or only about our individual futures? And, if we have collective concerns, we face an even more difficult decision about what mix of private and public responsibilities will best serve the needs of the generations.

[^19]
## The Health of an Aging Population

Health is a critical policy variable. Although population aging may or may not result in increasing proportions of older persons in poor health, the numbers experiencing that condition are almost certain to rise. Thus, as the U.S. population ages, the social and economic demands on individuals, families, communities, and the government will grow, with a substantial impact on the formal and informal health and social care systems and on the financing of medical services in general.

In conjunction with the growing numbers of older persons, the United States faces secular change in health status, as reflected in rates and outcomes of various conditions and disabilities. Trends in cognitive impairment and dementia have enormous policy implications, but whether changes in disease and disability rates will alter the rates of long-term institutionalization is unclear.

While recognizing the necessity to address the changing health needs of the older population, critical questions remain regarding the best mechanisms for health system organization, delivery of and access to services, administration, and financing. Socioeconomic differentials also need to be addressed.

## Immigration Policy

Immigration has historically been a major contributor to population growth in the United States, and immigration reform has recently been an active topic for both the President and for Congress. When President George W. Bush announced his principles for immigration reform in January 2004, he included an increase in permanent immigration as a key component. President Bush has stated that immigration reform is a top priority of his second term and has prompted a lively debate on the issue. Bills to revise permanent admissions are being introduced, but only one has had any legislative action so far in the $109^{\text {th }}$ Congress. A provision in P.L. 109-13 (H.R. 1268, the emergency FY2005 supplemental appropriation) makes available up to 50,000 employment-based visas for foreign nationals coming to work as medical professionals. ${ }^{67}$

Security concerns are figuring prominently in the development of and debate on immigration legislation in the $109^{\text {th }}$ Congress. ${ }^{68}$ In May 2005, the REAL ID Act became law as Division B of P.L. 109-13. It contains a number of immigration and identification document-related provisions intended to improve homeland security. Among these are provisions to change the Immigration and Nationality Act (INA) with respect to asylum and other forms of relief from removal, to expand the terrorism-related grounds for alien inadmissability and deportation, and to set standards for state-issued drivers' licenses and personal identification cards.

The security-related issue of immigration enforcement remains on Congress's agenda. Other immigration bills receiving action thus far in the $109^{\text {th }}$ are measures on alien victims of domestic violence, trafficking in persons, and refugees. ${ }^{69}$

[^20]The $108^{\text {th }}$ Congress had also considered legislation on a wide range of immigration issues. Chief among these were the immigration-related recommendations of the National Commission on Terrorist Attacks Upon the United States (also known as the 9/11 Commission), expedited naturalization through military service, and foreign temporary workers and business personnel. ${ }^{70}$

## America's Changing Color Lines

The U.S. population is becoming more racially and ethnically diverse. Once a mainly biracial society with a large white majority and relatively small black minority-and an impenetrable color line dividing these groups-the United States is now a society composed of multiple racial and ethnic groups. Along with increased immigration are rises in the rates of racial/ethnic intermarriage, which in turn have led to a sizeable and growing multiracial population. ${ }^{71}$ These trends are projected to continue for the next decades.

This diversity presents policy challenges in a number of areas. For instance:

- Assimilation. Many Asian Americans speak their native languages at home and maintain their distinct ethnic cultures and values, signaling that they either face difficulties fully assimilating into the American mainstream or purposefully resist full assimilation. ${ }^{72}$ The continued flows of Latino immigrants ensure that the Spanish language and diverse Latino cultures will endure in the United States. ${ }^{73}$ The degree to which there are language barriers or lack of assimilation of immigrants has important implications for both entry into and achievement in the educational system and the labor force.
- Income Disparities. There are persistent differences in family incomes among racial/ethnic groups in the United States. For instance, in 2000, the median income level for a black family-at about $\$ 31,000$-was about $\$ 17,000$ lower than that of a white family (about $\$ 52,000$ ). ${ }^{74}$ One consequence of this disparity is that low-income/low-wealth persons face hurdles when attempting to become homeowners ${ }^{75}$ Mortgage underwriting criteria present two potential borrowing constraints for low-income buyers: (1) the wealth constraint results from the buyers' need to amass down-payment capital and funds to cover other up-front costs necessary to initiate the transaction, and (2) the income constraint results from maximum allowable total debt-to-income and/or housing debt-to-income ratios employed in mortgage underwriting. ${ }^{76}$

[^21]- Poverty. ${ }^{77}$ Impressive improvements were made in reducing poverty rates between 1990 and 2000. The poverty rate declined from $28.1 \%$ to $21.2 \%$ among Hispanics, and from $12.2 \%$ to $10.8 \%$ among Asians and Pacific Islanders. The declines have been especially steep among African Americans, with rates dropping from $31.9 \%$ to $22.1 \%$. Still, America's racial minorities continue to have disproportionately high poverty rates. In $2000,47 \%$ of the poor were nonHispanic white, and poverty rates among blacks and Hispanics were roughly twice the national average. ${ }^{78}$ Poverty and welfare receipt are inextricably linked. Government programs may help low-income persons meet their basic daily needs (through cash assistance programs such as TANF ${ }^{79}$ or food stamps). But there is continuing fear that welfare creates economic dependency and perpetuates the cycle of poverty.

[^22]
# Appendix. U.S. Population Growth Rates, Birth Rates, Death Rates, and Net Immigration Rates: 1950-2050 

(per 1,000 population)

| Year | Growth Rate | Birth Rate | Death Rate | Net <br> Immigration <br> Rate |
| :---: | :---: | :---: | :---: | :---: |
| 1950 | 16.5 | 24.1 | 9.6 | 2.0 |
| 1960 | 16.0 | 23.7 | 9.5 | 1.8 |
| 1970 | 11.0 | 18.4 | 9.5 | 2.1 |
| 1980 | 10.8 | 15.9 | 8.8 | 3.7 |
| 1990 | 10.3 | 16.7 | 8.6 | 2.2 |
| 2000 | 8.9 | 14.4 | 8.5 | 3.2 |
| 2010 | 8.1 | 14.3 | 8.6 | 2.4 |
| 2020 | 7.8 | 14.2 | 8.7 | 2.3 |
| 2030 | 7.6 | 13.9 | 9.3 | 3.0 |
| 2040 | 6.9 | 14.0 | 9.8 | 2.7 |
| 2050 | 6.7 | 14.0 | 9.8 | 2.5 |

Sources: Estimates (Years 1950-2000): Birth Rates: For years 1950, 1960, 1970: Vital Statistics of the United States, 1999, vol. I, Natality, Table I-I, at website http://www.cdc.gov/nchs/datawh/stataib/unpubd/natality/ nata99.htm. For years I980, I990, 2000: National Vital Statistics Report: Births: Final Data for 2002, 52(10): Table I.

Death Rates: National Vital Statistics Report (NVSR): Deaths: Final Data for 2002, 53(5): Table I.
Net Immigration Rates: For year I950: U.S. Census Bureau. Statistical Abstract of the United States: 1980. Table 4. For years 1960, 1970, and I980: Statistical Abstract of the United States: 1990. Table I4, for year 1990, Statistical Abstract of the United States: 200I, Table 4, at http://www.census.gov/statab/www/. Note that Statistical Abstracts for selected years (back to 1878) are available at this site.

Growth Rates: CRS computations based on data on birth, death, and net immigration rates above. Projections (Years 20I0-2050): U.S. Census Bureau, Components of Change for the Total Resident Population, Middle Series, 1999-2 100, at http://www.census.gov/population/www.projections.

Notes: Data on 1980 births are based on $100 \%$ of births in selected states and on a $50 \%$ sample in all other states.

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[^0]:    ${ }^{1}$ U.S. Census Bureau, POPclock, at http://www.census.gov/main/www/popclock.html, accessed Apr. 28, 2006. This corresponds to the net gain of one person every 11 seconds (calculated as one birth every 8 seconds; one death every 13 seconds; and one international (net) migrant every 31 seconds).
    ${ }^{2}$ Congressional Research Service (CRS) calculations using data extracted from U.S. Census Bureau, International Data Base (IDB), at http://www.census.gov/ipc/www/idbnew.html.
    ${ }^{3}$ P. Scommegna, U.S. growing bigger, older, and more diverse. Population Reference Bureau, Apr. 2004, at http://www.prb.org/.
    ${ }^{4}$ Through year 2050 is considered in this report.
    ${ }^{5}$ National Research Council, 2001, Preparing for an Aging World: The Case for Cross-National Research, Panel on a Research Agenda and New Data for an Aging World, Committee on Population and Committee on National Statistics, Division of Behavioral and Social Sciences and Education, Wash., DC: National Academy Press. (Hereafter cited as National Research Council, Preparing for an Aging World, 2001).
    ${ }^{6}$ CRS calculations based on data in United Nations, World Population Prospects: the 2004 Revision, Highlights, United Nations: New York, 2005: ST/ESA/P/WP.193, available at http://www.un.org/esa/pop. (Hereafter cited as United Nations, World Population Prospects: the 2004 Revision).

[^1]:    ${ }^{7}$ Ibid. See also U.S. Census Bureau, International Population Reports WP/02, Global Population Profile: 2002, U.S. Govt. Printing Office, Wash., D.C., 2004.
    ${ }^{8}$ It is beyond the scope of this report to reconcile these differences. All projections are medium-variant, or what the agencies consider to be the most likely scenario. See (1) United Nations, World Population Prospects: The 2004 Revision; and (2) 2006 Annual Report of the Board of Trustees of the Federal Old-Age and Survivor's Insurance and Disability Insurance Funds. Washington DC: May 1, 2006, http://www.ssa.gov/OACT/TR/TF06/tr06.pdf.

[^2]:    ${ }^{9}$ Population growth rate: the number of persons added to (or subtracted from) a population in a year due to natural increase (births minus deaths) and net immigration per 1,000 persons in the population. Alternatively, the measure can be expressed as a percentage of the population at the beginning of the time period.

[^3]:    ${ }^{10}$ The Crude Birth Rate (CBR) is the primary measure of fertility used in this section because of its value in indicating directly the contribution of fertility to the population growth rate. However, because the age and sex composition of a population has a strong influence on the level of the CBR, additional measures to understand the underlying fertility trends are also used.
    ${ }^{11}$ Gregory Spencer, Preface, The Direction of Fertility in the United States. Conference proceedings for a conference hosted by the Council of Professional Associations on Federal Statistics, Alexandria, VA, Oct. 2-3, 2001.
    ${ }^{12}$ National Vital Statistics Reports (NVSR), Births: Final Data for 2003, DHHS/CDC/ NCHS, vol. 54, no. 2, Sept. 8, 2005 (hereafter cited as NVSR, Births: Final Data for 2003). Note that preliminary data for 2004 have been released and are available in NVSR, Births: Preliminary Data for 2004, vol. 54, no. 8, Dec. 29, 2005. Preliminary data for 2004 suggest that the birth rate fell to 14.0 in 2004.
    ${ }^{13}$ NVSR, Births: Final Data for 2003.

[^4]:    ${ }^{14}$ The replacement level of fertility measures the level of fertility and mortality in a population at which women will replace themselves in a generation. It corresponds to a total fertility rate, or completed family size, of about 2.10 births per woman.
    ${ }^{15}$ United Nations, World Population Prospects: The 2004 Revision.

[^5]:    ${ }^{16}$ J. Long, 2001, Introductory Remarks, The Direction of Fertility in the United States. Conference proceedings for a conference hosted by the Council of Professional Associations on Federal Statistics, Alexandria, VA, Oct. 2-3, 2001.
    ${ }^{17}$ S. P. Morgan, Is Low Fertility a Twenty-First Century Demographic Crisis? Demography vol. 40, no. 4, 2003, pp. 589-603.
    ${ }^{18}$ For instance, Rindfuss stressed the importance of affordable, quality child care in weakening the incompatibility of work and childbearing and child-rearing. Bianchi stressed gender and technological changes that affected the division of household labor. See (1) R.R. Rindfuss, "The Young Adult Years: Diversity, Structural Change, and Fertility," Demography, vol. 28, pp. 493-512, 1991. (2) S.M. Bianchi, "Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?" Demography, vol. 37, pp. 401-14, 2000.
    ${ }^{19}$ The crude death rate (CDR) is the primary measure of mortality used in this section to show the contribution of mortality to the population growth rate.
    ${ }^{20}$ See National Vital Statistics Reports (NVSR), Deaths: Final Data for 2003, DHHS/CDC/NCHS, vol. 54, no. 13, Apr. 19, 2006. (Hereafter cited as NVSR, Deaths: Final Data for 2003). Note that preliminary data on deaths in 2004 suggests that the CDR has fallen further to 8.2 deaths per 1,000 population. See A.M. Minino, M. Heron, B.L. Smith, Deaths: Preliminary Data for 2004, at http://www.cdc.gov/NCHS/products.
    ${ }^{21}$ Note that age-adjusted rates have little meaning in themselves; they are constructs that show what the level of (continued...)

[^6]:    (...continued)
    mortality would be if no changes occurred in the age composition of the population from year to year.
    ${ }^{22}$ The age-adjusted rates are based on the year 2000 standard population. By definition, crude and age-adjusted death rates converge in this year.
    ${ }^{23}$ See National Vital Statistics Reports, Deaths: Final Data for 2003, DHHS/CDC/NCHS, vol. 54, no. 13, Apr. 19, 2006.

[^7]:    ${ }^{24}$ Life expectancy at birth represents the average number of years that a group of infants would live if they were to experience the current observed age-specific death rates throughout their lives. See CRS Report RL32792, Life Expectancy in the United States, by Laura B. Shrestha.
    ${ }^{25}$ CRS compilation from data in United Nations, World Population Prospects: the 2004 Revision.
    ${ }^{26}$ Annual cancer deaths declined for the first time in more than 70 years in 2003. Experts attribute the achievement to declines in smoking and better tumor detection and treatment. While annual drops of about $1 \%$ in the cancer death rate (number of deaths from cancer per 100,000 people) have been observed over the past decade, the actual number of cancer deaths still rose each year because the growth in total population outpaced the falling death rates. See Associated Press, "Cancer Deaths Fall for First Time in 20 Years," Mar. 21, 2006.

[^8]:    ${ }^{27}$ R. Lee, Report for the Roundtable Discussion of the Mortality Assumption for the Social Security Trustees, note dated Sept. 11, 2002.
    ${ }^{28}$ K. White, Longevity advances in high income countries, 1955-96. Population and Development Review, vol. 28, no. 1, Mar. 2002, pp. 59-76.
    ${ }^{29}$ J. Oeppen and J. Vaupel, Broken limits to life expectancy, Science, vol. 296, May 10, 2002, pp. 1029-1030.
    ${ }^{30}$ F. Pampel, Cigarette Use and the Narrowing Sex Differential in Mortality. Population and Development Review, vol. 28, no.1, March 2002, pp. 77-104.
    ${ }^{31}$ R. S. Boyd, Life is Too Short, and it Might be Getting Shorter, Free Press, Washington Staff, Nov. 4, 2004, referring to comments made by J. Olshanky.
    ${ }^{32}$ These figures refer to legal immigrants, or citizens of other countries who have been granted visas that allow them to live and work permanently in the United States. It includes (1) relatives of U.S. residents; (2) foreigners who were admitted for economic or employment reasons; (3) refugees and asylees; and (4) persons in the "diversity" category, which was created to introduce more variety into the stream of immigrants. It does not include nonimmigrants (visitors, short-term workers, or students) or illegal immigrants.
    ${ }^{33}$ The period 1915-1965 has been referred to as one of "immigrant pause." See P. Martin and E. Midgley, Immigration: Shaping and Reshaping America, Population Bulletin, vol. 58, no. 2, June 2003.

[^9]:    ${ }^{34}$ US Dept. of Homeland Security, Yearbook of Immigration Statistics, 2004. GPO, Washington, DC, January 2006.
    ${ }^{35}$ U.S. Immigration and Naturalization Service, Statistical Yearbook of the Immigration and Naturalization Service, 2000, Government Printing Office, Washington, DC, 2002.
    ${ }^{36}$ Population Reference Bureau, Estimates and Projections of Emigration from the United States, available at http://www.prb.org/Content/NavigationMenu/PRB/Journalists/FAQ/Questions/U_S__Emigration.htm.

[^10]:    ${ }^{37}$ U.S. Department of Homeland Security, 2004.
    ${ }^{38}$ CRS Report RL32235, U.S. Immigration Policy on Permanent Admissions, by Ruth Ellen Wasem.
    ${ }^{39}$ Jeffrey S. Passel, Unauthorized Migrants: Numbers and Characteristics, Pew Hispanic Center, June 14, 2005, at http://www.pewhispanic.org. See also CRS Report RL33351, Immigration Enforcement Within the United States, coordinated by Alison Siskin.
    ${ }^{40}$ CRS Report RL33351, Immigration Enforcement Within the United States, ibid.
    ${ }^{41}$ P. Martin and E. Midgley, Immigration: Shaping and Reshaping America, Population Reference Bureau: Population Bulletin, vol. 58, no. 2, June 2003.

[^11]:    ${ }^{42}$ Aging (of a population) is a process in which the proportions of adults and elderly increase, while the proportions of younger persons decrease, resulting in a rise in the median age of the population.

[^12]:    ${ }^{43}$ Extraction from U.S. Bureau of the Census, International Data Base, available online at http://www.census.gov/ cgibin/ipc/idbagg/.
    ${ }^{44}$ D.G. Fowles, Pyramid Power-Analysis of Demographic Revolution, Aging, winter, 1991.
    ${ }^{45}$ In the post-war years, Americans were marrying and starting families at younger ages and in greater percentages than they had during the Great Depression. The surge in births in the 19-year period between 1946 and 1964 resulted from a decline in childlessness combined with larger family sizes (more women had three or more children). See C.L. Himes, Elderly Americans, Population Bulletin, Washington, DC: Population Reference Bureau, December 2001.
    ${ }^{46}$ Population Reference Bureau, Human Population: Fundamentals of Growth: Three Patterns of Population Change, at http://www.prb.org.

[^13]:    ${ }^{47}$ The "youngest" state was Alaska with 36,000 persons aged 65 and older in a population of 627,000 , or $5.7 \%$. Source: C.L. Himes, Elderly Americans, Population Bulletin, Wash. DC: Population Reference Bureau, Dec. 2001. (Hereafter cited as C.L. Himes, Elderly Americans, 2001).
    ${ }^{48}$ See CRS Report RL32981, Age Dependency Ratios and Social Security Solvency, by Laura B. Shrestha.
    ${ }^{49}$ C.L. Himes, Elderly Americans, 2001. See also CRS Report RL32235, U.S. Immigration Policy on Permanent Admissions, by Ruth Ellen Wasem.
    ${ }^{50}$ OMB, "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," Federal Register Notice, Oct. 30, 1997, at http://www.whitehouse.gov/omb/fedreg/1997standards.html. These revised guidelines replace and supercede Statistical Policy Directive, no. 15.

[^14]:    ${ }^{51}$ OMB, ibid.
    ${ }^{52}$ Q: what is this person's race? (1) White; (2) Black or African Am., or Negro; (3) American Indian or Alaska Native—print name of enrolled or principal tribe; (4) Asian Indian; (5) Chinese; (6) Filipino; (7) Japanese; (8) Korean; (9) Vietnamese; (10) Other Asian—print race; (11) Native Hawaiian; (12) Guamanian or Chamorro; (13) Samoan; (14) Other Pacific Islander-print race; and (15) Some other race—print race.
    ${ }^{53}$ Identification of both race and Hispanic origin are based on self-identification in the U.S. census.

[^15]:    ${ }^{54}$ Comparisons with earlier censuses are not provided as the Census Bureau cautions that "the Census 2000 data on race are not directly comparable with data from the 1990 census or earlier censuses. Caution must be used when interpreting changes in the racial composition of the U.S. population over time." E.M. Crieco and R.C. Cassidy, Overview of Race and Hispanic Origin, U.S. Census Bureau: Census 2000 Brief, C2KBR/01-1, issued March 2001.

[^16]:    ${ }^{55}$ E.M. Crieco and R.C. Cassidy, ibid.
    ${ }^{56}$ U.S. Census Bureau, "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," at http://www.census.gov/ ipc/www/usinterimproj/, internet release date: Mar 18, 2004.
    ${ }^{57}$ For comparison, only $0.2 \%$ of non-Hispanics chose the "some other race" category.
    ${ }^{58}$ U.S. Bureau of the Census, "Modified Race Data Summary File.

[^17]:    ${ }^{59}$ The ratio of the number of "dependent" persons in a population (children and older persons) to the number of persons of "working age." See CRS Report RL32981, Age Dependency Ratios and Social Security Solvency, by Laura B. Shrestha.

[^18]:    ${ }^{60}$ Federal Forum on Aging-related Statistics, 2004, Older Americans 2004: Key Indicators of Well-Being. Indicator \#11, based on data from the Bureau of Labor Statistics, Current Population Survey.
    ${ }^{61}$ For a more in-depth discussion, see CRS Report RL30629, Older Workers: Employment and Retirement Trends, by Patrick Purcell.
    ${ }^{62}$ Ibid.
    ${ }^{63}$ National Research Council, Preparing for an Aging World, 2001.

[^19]:    ${ }^{64}$ S. H. Preston, Children and the Elderly: Divergent Paths for America's Dependents. Demography, vol. 21, no. 4, 1984. (Hereafter cited as Preston, Children and the Elderly, 1984).
    ${ }^{65}$ C. E. Steuerle, The Incredible Shrinking Budget for Working Families and Children, The Urban Institute: National Budget Issues, no. 1, December 2003.
    ${ }^{66}$ CRS analysis based on S. H. Preston, Children and the Elderly, 1984.

[^20]:    ${ }^{67}$ CRS Report RL32235, U.S. Immigration Policy on Permanent Admissions, by Ruth Ellen Wasem.
    ${ }^{68}$ See CRS Report RL33125, Immigration Legislation and Issues in the $109^{\text {th }}$ Congress, coordinated by Andorra Bruno.
    ${ }^{69}$ Ibid.

[^21]:    ${ }^{70}$ CRS Report RL32169, Immigration Legislation and Issues in the $108^{\text {th }}$ Congress, by Andorra Bruno et al.
    ${ }^{71}$ J. Lee and F.D. Bean. America's Changing Color Lines: Immigration, Race/Ethnicity, and Multiracial Identification, Annual Review of Sociology, vol. 30 pp. 221-242, August 2004.
    ${ }^{72}$ Y. Xie and K.A. Goyette, A Demographic Portrait of Asian Americans, Russell Sage Foundation and the Population Reference Bureau, 2004.
    ${ }^{73}$ R. Saenz, Latinos and the Changing Face of America, Russell Sage Foundation and the Population Reference Bureau, 2004.
    ${ }^{74}$ M.A. Stoll, African Americans and the Color Line, Russell Sage Foundation and the Population Reference Bureau, 2004.
    ${ }^{75}$ M. Duda and E.S. Belsky, The Anatomy of the Low-Income Homeownership Boom in the 1990s, Harvard University: Joint Cnt for Housing Studies, Low-Income Homeownership Working Paper Series, LIHO.01-1, July 2001.
    ${ }^{76}$ P. Linneman and colleagues, Do Borrowing Constraints Change U.S. Homeownership Rates? Journal of Housing Economics, vol. 6, pp. 318-33.

[^22]:    ${ }^{77}$ D. T. Lichter and M.L. Crowley, Poverty in America: Beyond Welfare Reform, Population Bulletin, vol. 57, no. 2, June, 2002.
    ${ }^{78}$ See CRS Report 95-1024, Trends in Poverty in the United States, by Thomas Gabe.
    ${ }^{79}$ TANF: Temporary Assistance for Needy Families. See (1) CRS Report 98-369 EPW, Welfare Reform: TANF Trends and Data, by Vee Burke, and, (2) CRS Report RL32210, TANF Reauthorization: Side-by-Side Comparison of Current Law and Two Versions of H.R. 4 (108th Congress), by Vee Burke and Gene Falk.

