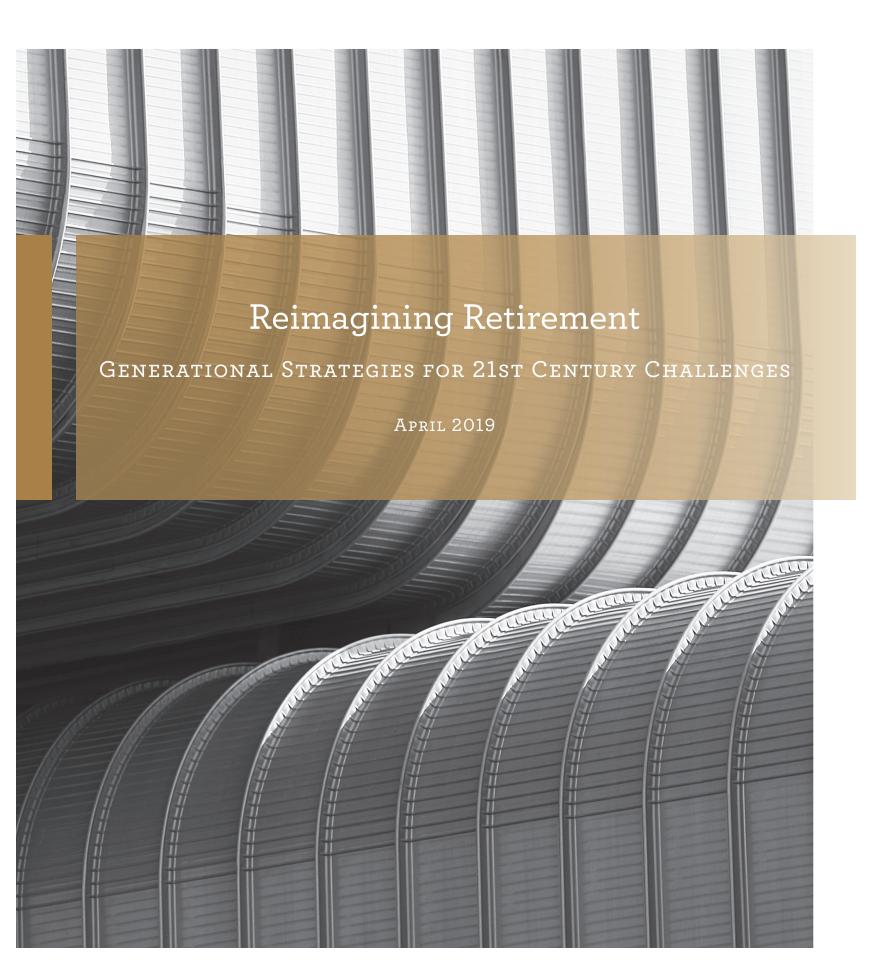
WELLS FARGO

INVESTMENT INSTITUTE





"The future is no more uncertain than the present."

-Walt Whitman

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Retirement—imagine your future

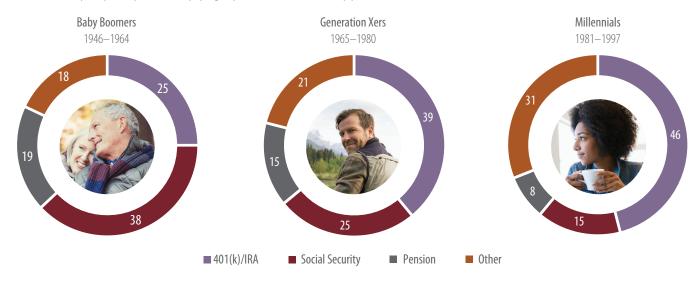
How will you spend the last third of your life? Will you continue to work in your current job? Start a business? Volunteer your time? Spend more time with family and friends? Travel the world? Many retirees are living longer, healthier, and more active lives, but there are challenges to living the life you imagine. No matter your age, reaching your retirement goals means planning for them now. It is important to compare the costs associated with the lifestyle you imagine to the income you expect from all sources during retirement.

In this report, we explore how each generational cohort in the workforce today-Baby Boomers, Generation Xers, and Millennials-is approaching retirement and how today's trends are redefining retirement in the 21st century.

How each generation expects to fund its retirement

Millennials and Generation Xers expect 401(k)s and IRAs to be the primary source of funds for their monthly expenses in retirement, compared with Baby Boomers who say Social Security will be/is their main source of funds.

What will be/is your primary source for paying expenses in retirement? (by percent)



Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

Key questions we answer in this report

How are Baby Boomers approaching retirement differently than past generations?

How prepared do Generation Xers feel they are for retirement? What sets Millennials apart in how they invest for retirement?

What steps should investors take to prepare for retirement and longer life spans?

Plan for a longer retirement

Largest increases in costs 1998–2018

Hospital services

Up 225%

College tuition

Up 185%

Childcare

Up 162%

Medical services

Up 106%

The burden of above-average increases has fallen heavily on retirees, parents, and college graduates.

Source: Bureau of Labor Statistics, Consumer Price Index, as of December 31, 2018.

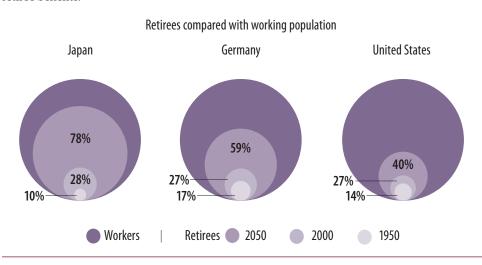
Living comfortably in retirement

The good news is that 60% of workers surveyed by Wells Fargo are confident they will be able to cover their expenses in retirement. However, approximately 40% will either need to work longer to meet retirement expenses or lower their cost of living.¹ Saving for retirement is further complicated by increases in the cost of living (see the sidebar). Many expenses that people face as they age, such as out-of-pocket health care costs, are rising at a faster pace than the retirement income that they earn. At the same time, the savings capacity of college graduates and parents also has become constrained due to rising costs for tuition and childcare.

Developed economies have relatively generous benefits for retirees, but aging populations in these countries (see chart below) are challenging the systems designed to support them. Among major developed countries, the U.S. spends relatively less (7.1%) on retirees (as a percentage of gross domestic product [GDP]) than Japan (10.2%) and other European countries such as Germany (10.1%).²

The ratio of retirees to workers continues to grow

The old-age dependency ratio measures individuals aged 65 and older for every 100 persons of working age (ages 20 to 64) on average across all OECD (Organisation for Economic Co-operation and Development) countries. The old-age dependency ratio has doubled since 1950 and is expected to continue growing. The U.S., which shifts retirement-funding responsibility toward individuals, lags other developed economies in spending on retiree benefits.



Source: United Nations, World Population Prospects, December 2017. Data for 2050 is a forecast.

¹2018 Wells Fargo Retirement Study, October 15, 2018.

² OECD Social Expenditures Database, OECD Main Economic Indicators Database, December 2017.

Risks posed by longer life spans and higher costs

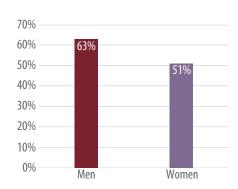
As average life spans of investors increase, the task of saving for retirement becomes even more challenging. In 1900, the average life expectancy in the U.S. was 46 for a man and 48 for a woman. Over time, with improvements in public health and advances in medicine, the average life span has grown to 77 for men and 81 for women. Today, the average age of retirement in the U.S. is between 63 and 64,1 although workers need to wait until age 66 (gradually increasing to 67) to start receiving Social Security if they want the full amount of their benefit.² That means planning for at least 15 to 20 years of retirement expenses.

Women are particularly challenged when it comes to preparing for retirement. With lower personal income, women spend a higher proportion of their monthly income on expenses relative to men (63% versus 58% of monthly income spent, respectively). This leaves less available to save for retirement, contributing to a savings shortfall in regard to retirement goals.3

Women are likely to live longer but are more likely to fall short of retirement goals

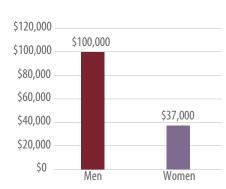
Women in the workforce indicate higher levels of stress about their finances and fewer rate their financial lives as thriving compared with their male counterparts. For women, many of whom have faced pay discrepancies in the workplace, developing a planning mindset (see page 12) may be even more important.





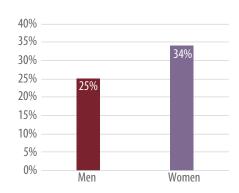
A higher percentage of men prioritize saving for retirement, while women are more likely to make building emergency savings and paying off debt a priority.

Amount saved for retirement



With lower levels of reported personal income than men, women also report lower retirement savings.

Not sure of monthly expenses in retirement



Uncertainty about future expenses is another sign that women may face more challenges in preparing for retirement.

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

¹ National Center for Health Statistics, 2016, July 26, 2018.

² U.S. Census Bureau, December 2018.

³ 2018 Wells Fargo Retirement Study, October 15, 2018.

Baby Boomers redefine retirement

Born 1946-1964¹

Cohort size

73 million²

Household income \$77.6003

Household debt \$225.8224

Savings for retirement \$250,0005

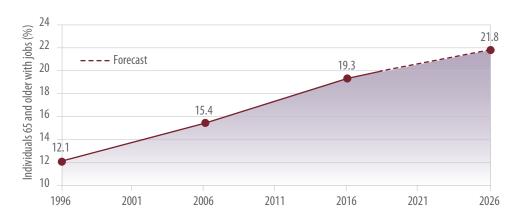
- ¹ Generational birth year range used by The Harris Poll.
- ² U.S. Census Bureau, 2017 Population Estimate, June 2018.
- ³ Pew Research Center, December 11, 2018. Median adjusted household income, in 2017 dollars scaled to reflect a three-person household
- ⁴ Experian, State of Credit: 2017, October 24, 2018, Includes mortgages, credit and retail cards, auto loans, and student loans
- ⁵ 2018 Wells Fargo Retirement Study, October 15, 2018. Median combined household and personal amount saved for retirement.

Just as they reinvented other life stages such as starting a family or building a career, Baby Boomers are now redefining retirement. The oldest part of this cohort already has passed the full retirement age for Social Security benefits, while younger Baby Boomers have approximately another decade in the workforce. They differ from earlier generations in that they are increasingly reaching retirement age in good health, with a considerable number of active years ahead of them. Some retirees may devote time to philanthropic causes or community service, while others may engage in social activities or travel. Working during retirement is also an option that more Baby Boomers are choosing compared with prior generations.

Baby Boomers are making retirement work for them

For some Baby Boomers, a job may supplement Social Security income. For others, working part time offers the opportunity to stay active and intellectually engaged, and postpone dipping into their retirement assets. Still others are following entrepreneurial pursuits with more of a financial cushion to take on risk.

The percentage of seniors (65 and older) in the U.S. workforce should continue to rise



Where seniors are more likely to find jobs



Source: U.S. Bureau of Labor Statistics, civilian labor participation rate by age, 65 and older, October 24, 2017; employed persons by detailed occupation and age, 65 and older, December 31, 2018.

Preparing for retirement

Make money last



Have a plan for taking Social Security. Full retirement age is generally 66 (for those born 1943—1959) or 67 (for those born 1960 or later). Reduced benefits can begin at age 62; currently, benefits increase 8% per year for those who delay their retirement from full retirement until age 70.

Consider delaying retirement account distributions. Delaying distributions can help savings last longer. For most accounts, the owner must begin taking required minimum distributions at age 70½. (Roth IRAs are an exception.)

Insurance products may hedge against longevity risk. Both immediate and deferred annuities can offer tax-deferred growth and guaranteed income, although such guarantees are subject to the claims-paying ability of the insurance company. Consult your investment professional and tax advisor for implications.*

Manage expenses



Consider moving to a lower-cost state or country. Retirees can benefit by residing in locations with a lower income tax rate or cost of living. The number of retirees relocating abroad grew by 17% between 2010 and 2015.¹

Control health care costs. Managing health care costs is an integral part of retirement planning. Obtaining health insurance coverage through work can address these costs. In a recent survey, nearly half of companies offered full- and part-time employees the same health insurance coverage, along with other benefits.²

Reduce tax obligations. Recent tax law changes may have affected your tax obligations. Check with your legal or tax professional before taking any action that may involve tax consequences.*

Generate income



Consider the flexibility of part-time and self-employment. Today, most entrepreneurs in the U.S. are over 50—and individuals in their 50s and 60s launch new businesses at nearly twice the rate as those in their 20s.³

Revisit your asset allocation. Historically, older investors have tended to emphasize fixed income for income and reduced volatility. However, due to low interest rates and working longer, Baby Boomers may want to maintain a higher allocation to equities during their retirement, depending on their risk tolerance.

Consider your house as an income-generation asset. Online services can make it easier to earn income from renting out an extra room, especially for those who reside in tourist spots.

Associated Press, "More Americans are retiring outside the U.S.," December 2016.

of Baby Boomers are concerned about outliving their savings.

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

of Baby Boomers are concerned about how to reduce expenses in retirement.

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

of Baby Boomers in an employersponsored retirement plan are invested in a diversified portfolio.

Source: Wells Fargo Institutional Investment and Trust, 2018 Driving Plan Health, October 2018.

²Bloomberg, "A hot labor market brings full-time perks to some part-time employees," December 2018.

³ Bureau of Labor Statistics, Current Population Survey, 2016.

^{*}Tax laws or regulations are subject to change at any time and can have a substantial impact on your individual situation. Wells Fargo and its affiliates are not legal or tax advisors.

Generation X balances multiple priorities

Born 1965-1980¹

Cohort size 66 million²

Household income \$85,800³

Household debt \$271,980⁴

Savings for retirement \$100,000⁵

- ¹ Generational birth year range used by The Harris Poll.
- ² U.S. Census Bureau, 2017 Population Estimate, June 2018.
- ³ Pew Research Center, December 11, 2018. Median adjusted household income, in 2017 dollars scaled to reflect a threeperson household.
- 4 Experian, State of Credit: 2017, October 24, 2018. Includes mortgages, credit and retail cards, auto loans, and student loans.
- 5 2018 Wells Fargo Retirement Study, October 15, 2018. Median combined household and personal amount saved for retirement.

This generation is sandwiched between two larger cohorts, the older Baby Boomers and younger Millennials. As a generation known for its self-reliance, Generation X is also the first cohort to have access to 401(k) plans for most of their working years, as the availability of pensions continues to decline.

A key challenge for Generation X is that many find themselves forced to make trade-offs between the needs of their parents, their children, and their own retirement. As a result, members of this generation may have shortchanged their own retirement savings plan.

Generation Xers are less confident about retirement but still have time to grow their savings

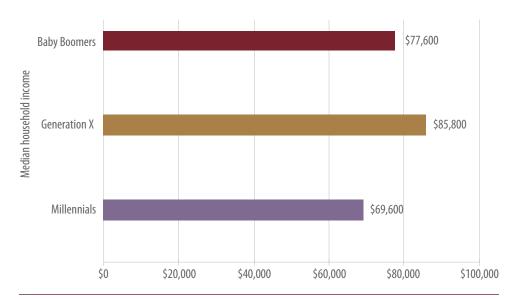
Retirement survey participants expressing confidence in having enough money to maintain lifestyle throughout retirement

72% 59%

All workers

Generation X

Generation Xers—who are in or are approaching their 50s—are generally in their peak earnings years.



Sources: Wells Fargo/Gallup Investor and Retirement Optimism Index, November 2018; Pew Research Center, December 11, 2018, median adjusted household income, in 2017 dollars scaled to reflect a three-person household.

Preparing for retirement

Support children and aging parents

Design a budget and stick with it. Reduce fixed expenses prior to retirement. Paying off mortgage and student debt ahead of retirement can help manage monthly expenses.

Balance expenses with saving for retirement. Keep in mind that it is possible to take out loans to pay for a child's education, but it is not possible to take out loans for retirement.

Look at insurance needs. Consider life insurance or disability insurance, especially if you have minor children. Employers often offer assistance in purchasing policies. Talk with your investment professional.

Increase savings



Pay yourself first and save aggressively. Avoid borrowing from retirement accounts to meet expenses. Downsize or reduce unnecessary expenses and save the monthly surplus. Save annual bonuses.

Take advantage of company retirement plan matches. Take advantage of company matches in 401(k) and 403(b) plans. Work toward contributing the maximum allowed.

Take advantage of catch-up contributions. After age 50, individuals are allowed to make additional contributions to tax-deferred accounts such as IRAs

and 401(k)s.

Have the appropriate asset allocation



Invest for growth. In our opinion, allocations should favor equities for growth but still be diversified to smooth out downturns. Within the equity allocation, consider diversifying across domestic and international markets.

Rebalance regularly. Investors should regularly rebalance to target allocations to make sure they fit their changing needs and circumstances.

Hold enough cash for meeting expenses. Six to eighteen months of living expenses is generally considered sufficient for many investors.

of Gen Xers' monthly income goes toward meeting household expenses.

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

of Gen Xers agree that they are saving enough for retirement.

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

of Gen Xers have a detailed financial plan.

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

Millennials use time to their advantage

Born 1981-1997¹

Cohort Size 76 million²

Household income \$69.6003

Household debt \$227.0274

Savings for retirement \$15,0005

- ¹ Generational birth year range used by The Harris Poll.
- ² U.S. Census Bureau, 2017 Population Estimate, June 2018.
- ³ Pew Research Center, December 11, 2018. Median adjusted household income, in 2017 dollars scaled to reflect a three-person household
- ⁴ Experian, State of Credit: 2017, October 24, 2018, Includes mortgages, credit and retail cards, auto loans, and student loans.
- ⁵ 2018 Wells Fargo Retirement Study, October 15, 2018. Median combined household and personal amount saved for retirement.

With the decline in the pension plans offered by employers, Millennials will bear the responsibility of saving for retirement with less assistance than previous generations have enjoyed.

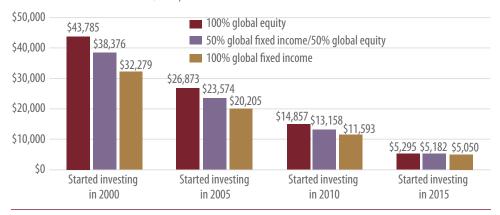
The good news is Millennials appear to be rising to the challenge. According to the 2018 Wells Fargo Retirement Study, Millennials began saving for retirement at age 24, on average a full decade earlier than Baby Boomers. A Wells Fargo Wealth and Investment Management (WIM) Analytics study also showed that 30% of Millennials contribute 10% or more of pay-counting both their deferrals and employer matches plus contributions—to their employersponsored plans.1

However, experiencing the deepest recession since the Great Depression early in their lives left many Millennials wary of riskier investments. A 2017 Wells Fargo Asset Management survey revealed that 20% of Millennials say they will never invest in the stock market. In addition, the WIM Analytics study showed that nearly 30% are taking a more conservative approach that can hurt their retirement savings' long-term growth prospects, in our view.

¹Wells Fargo Wealth and Investment Management Analytics survey, June 2017.

The importance of starting early and having the appropriate asset allocation

Even a five-year delay can make a significant difference in your investment account. This assumes an investment of \$100/month.



Sources: Morningstar Direct and Wells Fargo Investment Institute, December 31, 2018.

Chart shows value of \$100 invested per month starting in January of the year indicated in a hypothetical portfolio of 100% global equity, 50% global fixed income/50% global equity, or 100% global fixed income ending on December 31, 2018. Global equity is represented by the MSCI All Country World Index. Global fixed income is represented by the Bloomberg Barclays Multiverse Index.

Chart data is hypothetical and provided for illustrative and informational purposes only. Performance results do not represent an actual portfolio in existence now or during the time periods indicated and should not be considered representative of the current or future performance of any investment product. You should choose your own investments based on your particular objectives, risk tolerance, tax status, and circumstances. Please see important information on index performance at the end of this report and for definition of the indices and the risks associated with the representative asset classes. An index is unmanaged and not available for direct investment. Hypothetical and past performance is no guarantee of future results.

Preparing for retirement

Save for retirement



Take advantage of auto-enrollment options for 401(k)s and employer matching benefits. Invest at least up to the full employer match.

Keep your retirement savings when changing jobs. When leaving an employer, you can roll over your retirement account assets into an IRA, or you may be able to leave them where they are or move them into your new employer's plan depending on the balance in the account or whether you plan on switching jobs again.

Consider a Roth 401(k) if your employer offers it. This could be an especially good option if you expect your tax bracket in retirement to be higher than your current bracket.

Gain investment experience



Start saving as early as possible. Even a modest amount is better than nothing. Assuming your investments earn a hypothetical 6% return yearly, over time the power of compounding could have a significant effect on your savings.

Balance repayment of student loans with retirement savings. If you delay saving for retirement until you repay student loans, you will miss out on the benefits of compounding.

Manage fear of riskier assets



Avoid investing too conservatively. In our opinion, reluctance to take on the appropriate types of risk could result in not meeting retirement goals.

Invest strategically. While it may be tempting to follow the latest investment craze, we believe in keeping holdings diversified among growth assets—such as global equities and real estate—and more conservative assets—such as fixed income.

Remember to maintain global diversification. We believe maintaining broad international exposure can improve the odds of catching growth wherever it might be found.

73%

of companies offer automatic enrollment in retirement plans to at least some of their workers.

Source: Willis Towers Watson 2017 Defined Contribution Plan Survey, November 2017.

60%

of Millennials cite basic financial skills as intimidating.

Source: 2017 Wells Fargo Millennial Survey, September 20, 2017.

32%

of Millennials do not believe the stock market is a good place to grow their retirement savings.

Source: Wells Fargo/Gallup Investor and Retirement Optimism Index, November 2018.

Approach retirement with a planning mindset

Build a planning mindset

- Use online budget and retirement calculators.
- Visit investment websites such as wellsfargo.com/ investment-institute.
- · Take an investment class.
- Meet with your investment professional and ask questions.

One of the best ways to prepare for retirement is to develop a planning mindset. The 2018 Wells Fargo Retirement Study used statistical modeling to identify the factors most associated with financial well-being outside of demographic factors such as age, household income, asset levels, and education.¹

A planning mindset is the tendency to use near- and longer-term investment planning and goal setting. Our research measured the planning mindset based on four key statements:

- ✓ I am able to work diligently toward a long-term goal.
- ✓ I prefer saving for retirement now, to ensure I have a better life in retirement.
- ✓ It makes me feel better to have my finances planned out in the next one to two years.
- ✓ In the past six months, I have set and achieved a goal or set of goals to support my financial life.

Modeling confirmed that a planning mindset increases the probability of financial well-being, even when controlling for demographic differences.

¹2018 Wells Fargo Retirement Study, October 15, 2018.

The value of a planning mindset

Employees with a planning mindset typically take charge of their retirement goals. They are more inclined to be proactive and make good decisions.

Workers with a planning mindset versus those without it

2x

more likely to say they are **thriving**

42%

less likely to have high levels of **financial stress** 3x

more household retirement savings

Source: 2018 Wells Fargo Retirement Study, October 15, 2018.

A total return approach to investing for income

During retirement, some investors rely solely on the income generated by a portfolio of assets, often from an account designated for retirement. Chasing yield for income purposes can be a risky strategy. Instead, we believe that investors should consider managing a retirement portfolio using a totalreturn approach, funding retirement costs with both the potential price appreciation (growth) of assets and the interest or dividends received (income) from those assets.

Dividends play a considerable role in contributing to total return

Annualized return for hypothetical 60% stock/40% bond portfolio, 1976-2018

5.2%

Price appreciation only

Total return (includes reinvestment of dividends and interest income)

Source: Morningstar Direct and Wells Fargo Investment Institute, as of December 31, 2018. Stocks represented by S&P 500 Index; bonds represented by Bloomberg Barclays U.S. Aggregate Bond Index.

This chart is hypothetical and for illustrative purposes only. It is not intended to represent an actual investment. The hypothetical 9.9% compounded annual rate of return is not an indication of the past or future performance of any investment. Index returns do not represent investment performance or the results of actual trading. Index returns reflect general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses, or taxes applicable to an actual investment. An index is unmanaged and not available for direct investment. Hypothetical and past performance are no guarantee of future results.

Some investors have more than one source of income, each with a unique tax treatment. A suitable approach for generating a steady income stream varies by investor and involves a variety of factors.

Investment considerations

- Income sources
- · Portfolio withdrawals and sustainability
- · Social Security claiming strategies
- Diversification
- · Portfolio rebalancing

Cost considerations

- Lifestyle expenses
- · Inflation
- Taxes

Medical expenses and long-term care insurance

If you are nearing or already in retirement and are concerned about generating income to support your lifestyle, we encourage you to talk with your investment professional about how health care costs could affect your income.



Authors and investor considerations

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Investment Strategy Analyst

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Investment Strategy Analyst

Ms. Willis assists in research and development of asset allocation recommendations and analysis of the economy and financial markets. Prior to her current role, she served as a research analyst for strategy around developed and emerging countries, commodities, and currencies. She began her career at Wells Fargo in 2012.

Important Information on Index Performance

There are numerous inherent limitations in hypothetical performance data. Indices do not represent the actual or hypothetical performance of any specific investment or asset allocation. Nor do they represent actual trading of investable assets or securities and cannot completely account for the impact financial risk has on actual trading. In addition, any actual portfolio or account will invest in different securities than those of an index. Index returns represent general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses or taxes applicable to an actual investment. Reliance on two asset classes alone has other limitations and can mean investors have not considered the potential opportunities available in a more diversified portfolio. Such performance should not be relied upon, or interpreted as, a measure of performance an investor might achieve. An index is unmanaged and not available for direct investment.

Index Definitions

Bloomberg Barclays Multiverse Index provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High-Yield Index and captures investment grade and high yield securities in all eligible currencies. Bloomberg Barclays Global Aggregate Index represents the global investment-grade fixed-income markets. The Bloomberg Barclays Global High Yield Index is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the U.S. High Yield, the Pan-European High Yield, and Emerging Markets Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive.

Bloomberg Barclays U.S. Government/Credit Bond Index is a broad-based flagship benchmark that measures the non-securitized component of the U.S. Aggregate Index. It includes investment grade, U.S. dollar-denominated, fixed-rate Treasuries, government-related and corporate securities.

Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index tracks agency mortgage pass-through securities guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon, and vintage.

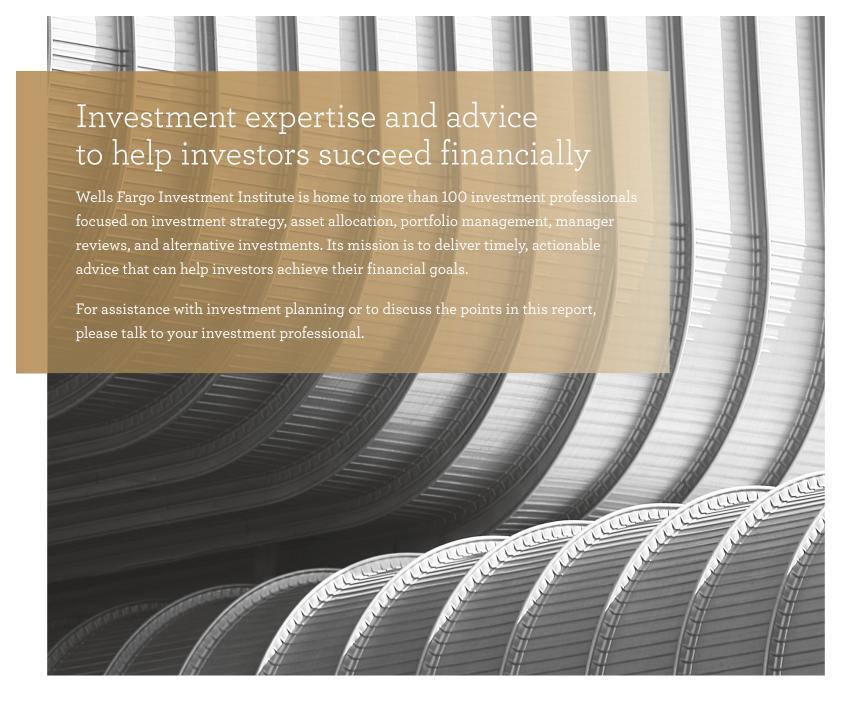
MSCI All Country World Index captures large and mid cap representation across 23 Developed Markets and 24 Emerging Markets countries. The index covers approximately 85% of the global investable equity opportunity set. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed, or produced by MSCI.

S&P 500 Index is a market capitalization weighted index generally considered representative of the U.S. stock market.

Risk Considerations

All investing involve risks, including the possible loss of principal. There can be no assurance that any investment strategy will be successful. Investments fluctuate with changes in market and economic conditions and in different environments due to numerous factors some of which may be unpredictable. Each asset class has its own risk and return characteristics. The level of risk associated with a particular investment or asset class generally correlates with the level of return the investment or asset class might achieve. Asset allocation and diversification are investment methods used to help manage risks. They do not guarantee investment returns or eliminate risk of loss.

The risks associated with the representative index asset classes discussed in this report include: Stock markets, especially foreign markets, are volatile. A stock's value may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. International investing has additional risks including those associated with currency fluctuation, political and economic instability, and different accounting standards. This may result in greater share price volatility. These risks are heightened in emerging markets. Investing in the **bond market** is subject to market, interest rate, credit/default, liquidity, inflation, and other risks. The value of most bonds and bond strategies are impacted by changes in interest rates.



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