



RETIREMENT INSIGHTS

Guide to RetirementSM

2019 Edition

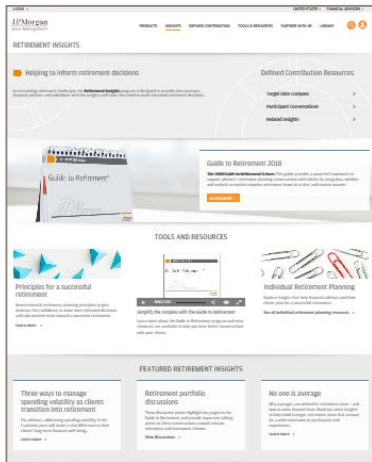
J.P. Morgan



J.P.Morgan
Asset Management

2019 Key Themes

- Important & timely late cycle retirement discussions
- Lower inflation outlook improves outcomes
- Medicare is complicated and changing, but relatively stable...for now
- New defined contribution section and expanded income ranges

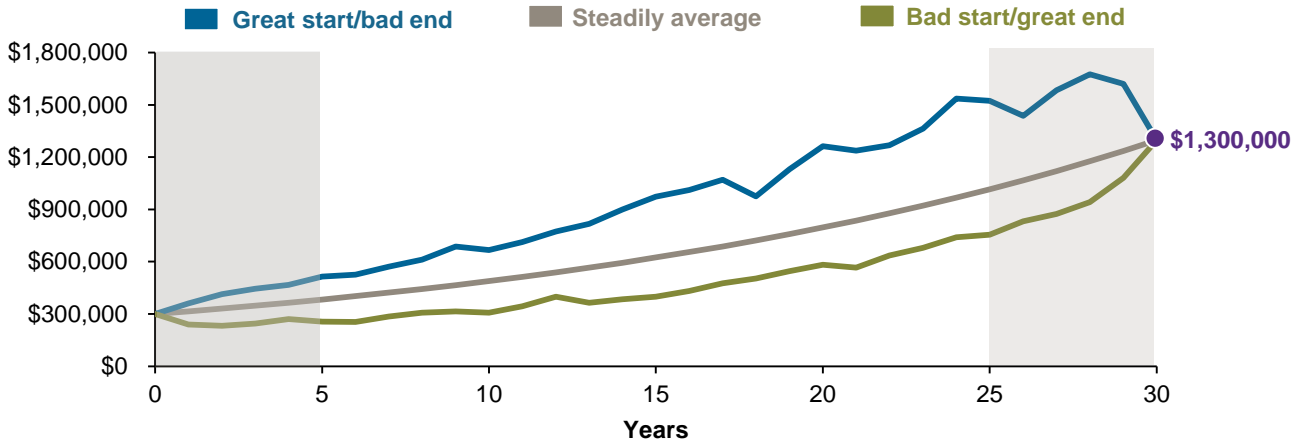


Retirement Insights:

<https://am.jpmorgan.com/us/en/asset-management/gim/adv/insights/retirement-insights>

Value of three portfolios with the same average return

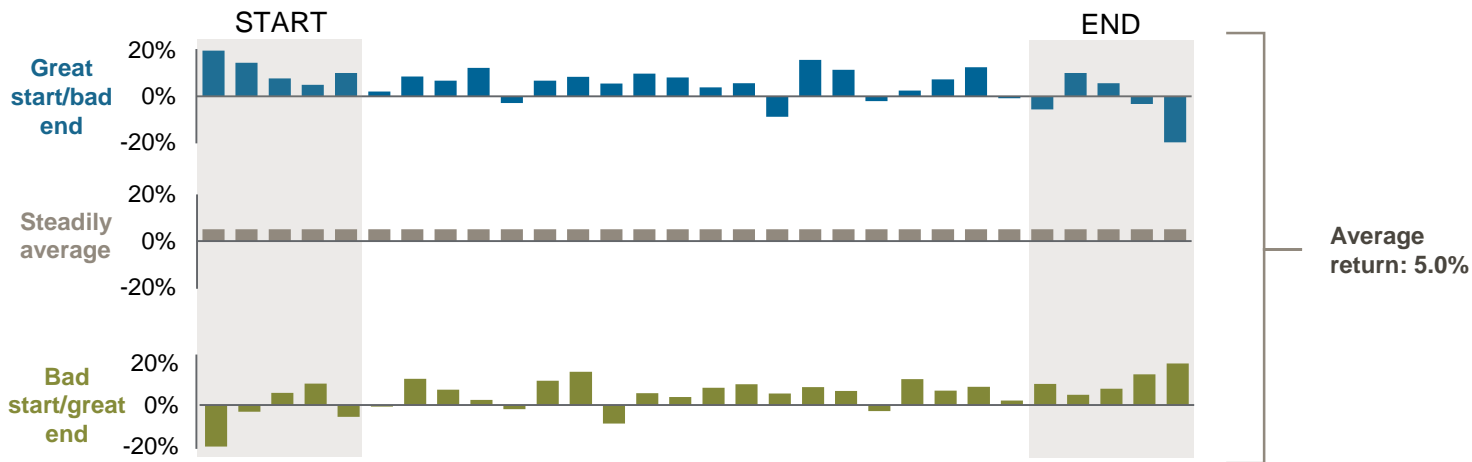
\$300,000 lump sum investment with an average return of 5.0%



GET INVESTED AND STAY INVESTED

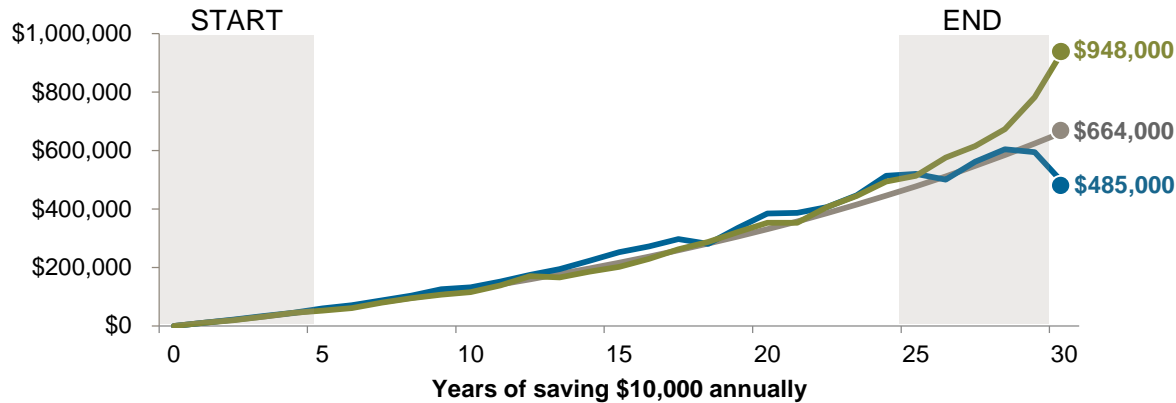
When making a one-time long-term investment, your average annual return will determine your outcome, regardless of the sequence in which the return is experienced.

Annual returns by scenario



Investing

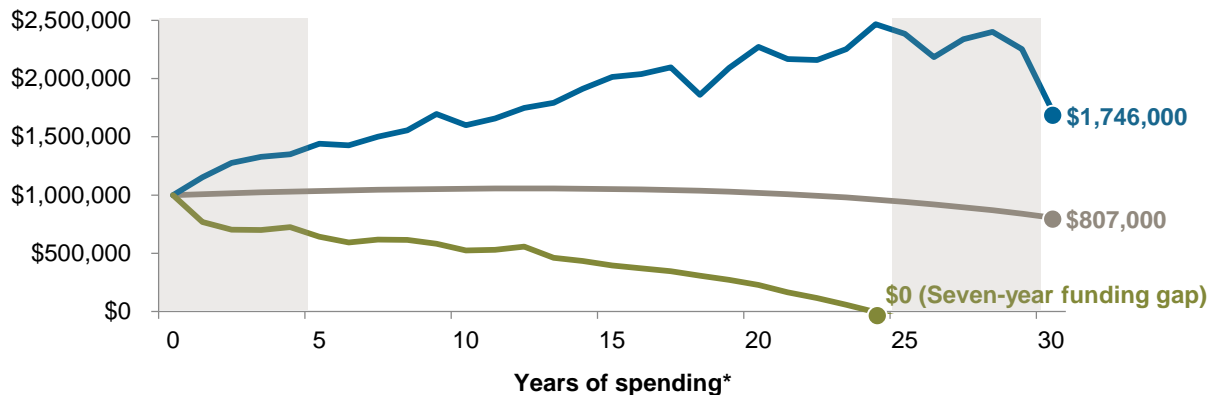
Portfolio values assuming various return sequence scenarios



■ Great start/bad end ■ Steadily average ■ Bad start/great end

THE GREATEST RISK IS WHEN WEALTH IS GREATEST

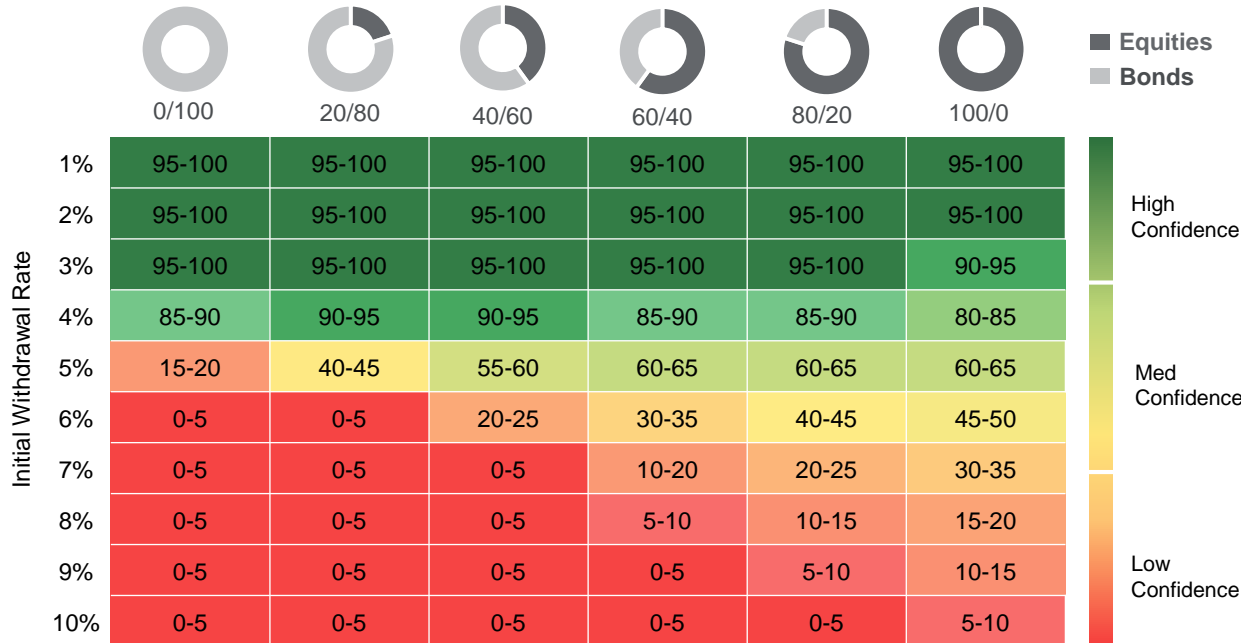
When saving for retirement, the return experienced in the early years has little affect compared to growth achieved through regular savings. However, the rates of return just before and after retirement – when wealth is greatest – can have a significant impact on retirement outcomes.



For return sequence scenarios, see page 39. Hypothetical return scenarios are for illustrative purposes only and are not meant to represent an actual asset allocation. *Spending in retirement chart assumes an initial \$1,000,000 and a 4% withdrawal adjusted annually for inflation of 2%.

Likelihood of success after 30 years

Various initial withdrawal rates and asset allocations



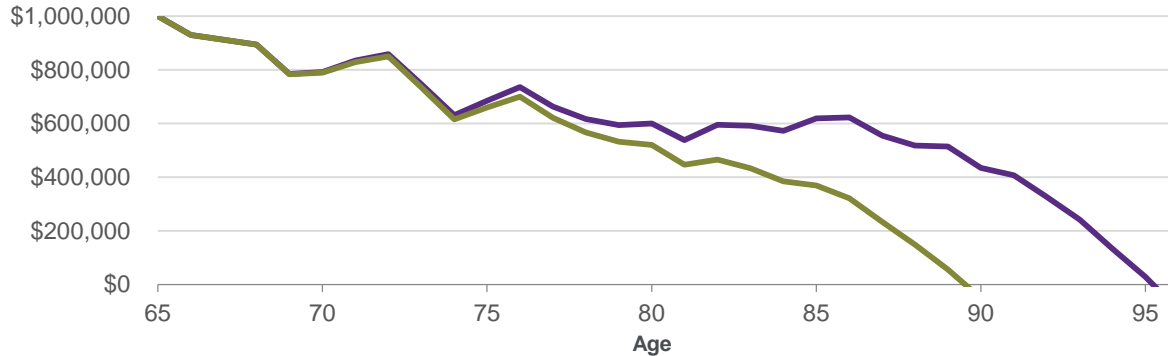
FIND YOUR BALANCE

At both the highest and the lowest confidence levels, you may want to consider adjusting your spending and/or asset allocation. An overly conservative withdrawal rate may require unnecessary lifestyle sacrifices, whereas an equity-heavy portfolio may lead to a lower likelihood of success. A well-diversified portfolio with a dynamic withdrawal strategy is typically optimal.

This chart is for illustrative purposes only and must not be used, or relied upon, to make investment decisions. Portfolios are described using equity/bond denotation (e.g. a 40/60 portfolio is 40% equities and 60% bonds). Hypothetical portfolios are composed of All Country World Equity and US Aggregate Bonds, with compound returns projected to be 6.0% and 4.0%, respectively. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary Long-Term Capital Market Assumptions (10-15 years). The resulting projections include only the benchmark return associated with the portfolio and does not include alpha from the underlying product strategies within each asset class. The yearly withdrawal amount (1% to 10%) is set as a fixed percentage of the initial amount of \$1,000,000 and is then inflation adjusted over the period (2.0%). The percentile outcomes represent the percentage of simulated results with an account balance greater than \$0 after 30 years (e.g. "95-100" means that 95-100% of simulations had account balances greater than \$0 after 30 years). Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward tradeoffs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve.

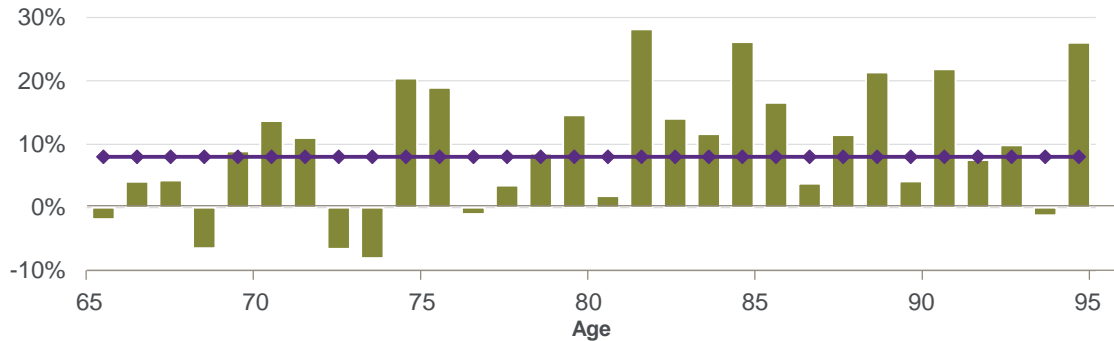
Portfolio value over time (1966-1995) Assumes 5.2% initial withdrawal rate

- Withdrawal dynamically adjusted based on performance
- Withdrawal annually increased by inflation



Rate of return: average vs. actual (1966-1995)

- Assumed annual rate of return: 8%
- 40/60 portfolio: Actual average annual return: 9.1%



Assumptions (top chart): Retire at age 65 with \$1,000,000 and withdraw 5.2% of the initial portfolio value (\$52,000). “Withdrawal annually increased each year by inflation” assumes 3% inflation rate. Dynamic withdrawal scenario assumes that if the annual rate of return on portfolio is: 1) less than 3%, withdrawal remains the same as the prior year. 2) between 3% and 15%, withdrawal is increased by inflation (3%). 3) greater than 15%, withdrawal is increased by 4%. While the dynamic withdrawal scenario during this historical period provided 14% more total spending in today’s dollars, it is for illustrative purposes only and may not be successful during other time periods.

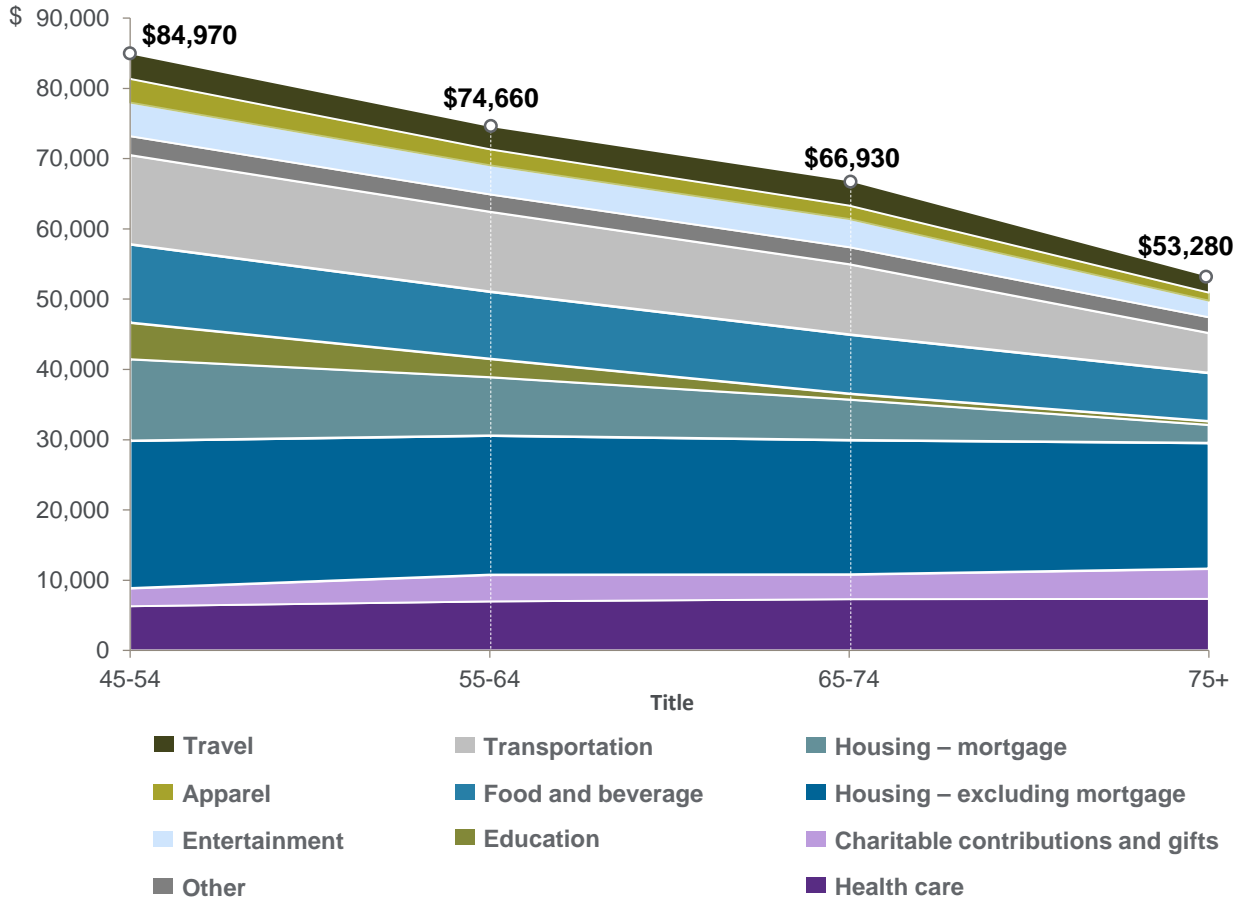
Source: J.P. Morgan Asset Management. Returns are based on a hypothetical portfolio, which is assumed to be invested 40% in the S&P 500 Total Return Index and 60% in the Barclays Capital U.S. Aggregate Index. The assumptions are presented for illustrative purposes only. They must not be used, or relied upon, to make investment decisions. There is no direct correlation between a hypothetical investment and the anticipated future return of an index. Past performance does not guarantee future results.

BE FLEXIBLE

Spending the same amount in retirement grown by inflation regardless of how your portfolio is performing can result in an unsuccessful outcome. Consider adjusting your spending strategy based on market conditions to help make your money last and provide more total spending through your retirement years.

Average household spending patterns by various age groups

For those with a bachelor's degree or higher

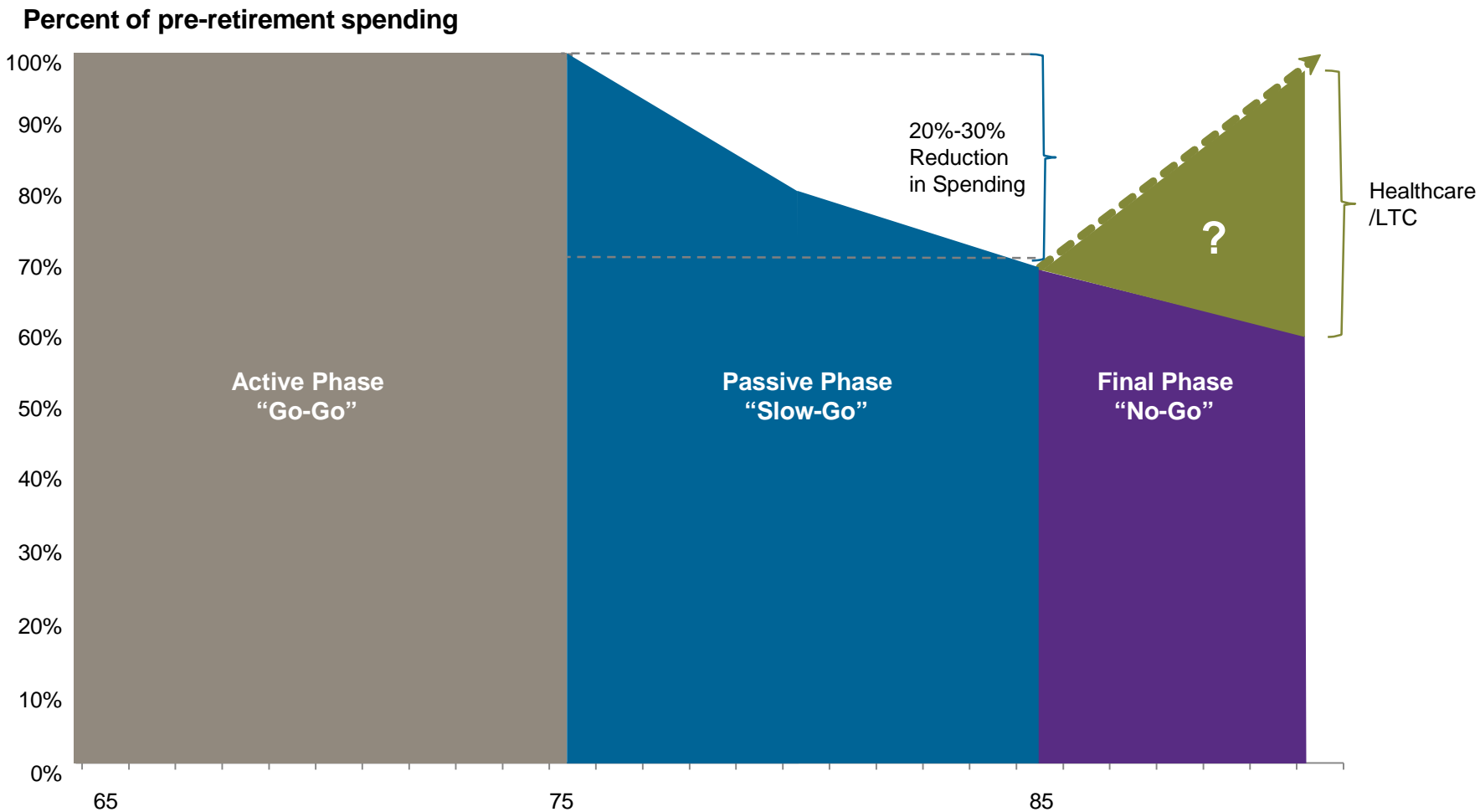


WHAT TO EXPECT

Household spending peaks at the age of 45, after which spending declines in all categories but health care and charitable contributions and gifts. Housing is the largest expense, even at older ages.

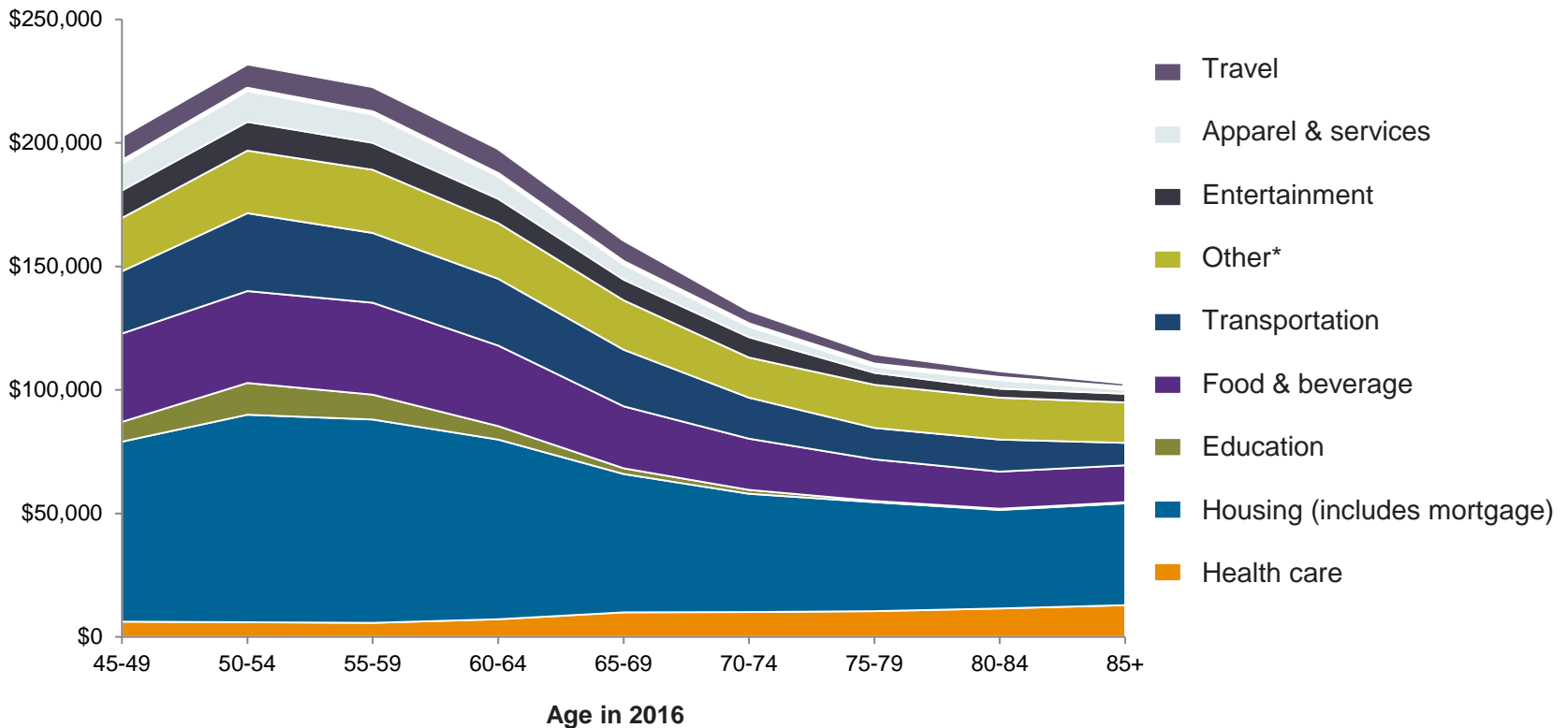
Source: J.P. Morgan Asset Management. Estimates based on average consumer expenditure from 2015-2017. Consumer Expenditure Surveys (BLS) for each age group excluding pension contributions. Population includes households where a bachelor's degree or higher is achieved by any member. Average household size for age 45-54 is 3.0, age 55-64 is 2.3, age 65-74 is 1.9 and age 75+ is 1.8.

“The Prosperous Retirement” – theoretical spending profile



Lifecycle of spending: \$1 million - \$3 million in assets

Median spending: Chase data with estimated categorization of checks and cash

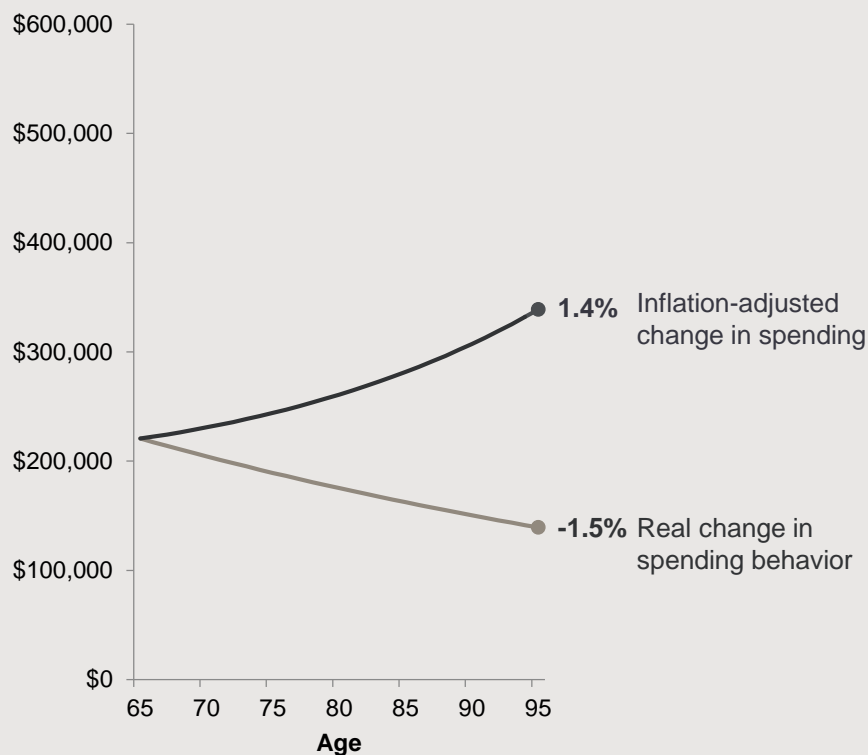


*Other includes: gifts & donations, gambling, personal care, tax payments, insurance and uncategorized items.

Source: Total spending and all category sub-totals except checks, cash and health care costs: Chase data including Chase credit card, debit card, electronic payment, ATM withdrawal and check transactions from January 1 – December 31, 2016; J.P. Morgan analysis. Health care costs age 65+: Employee Benefit Research Institute (EBRI) data as of December 31, 2016; SelectQuote data as of January 16, 2017; J.P. Morgan analysis. Health care costs pre-age 65 and check and cash distribution excluding health care costs after age 65: 2016 Consumer Expenditure Survey, College Educated; J.P. Morgan analysis. Information that would have allowed identification of specific customers was removed prior to the analysis.

Average change in spending for households \$1 million - \$3 million

Projected change in spending at age 65



Category-specific rates

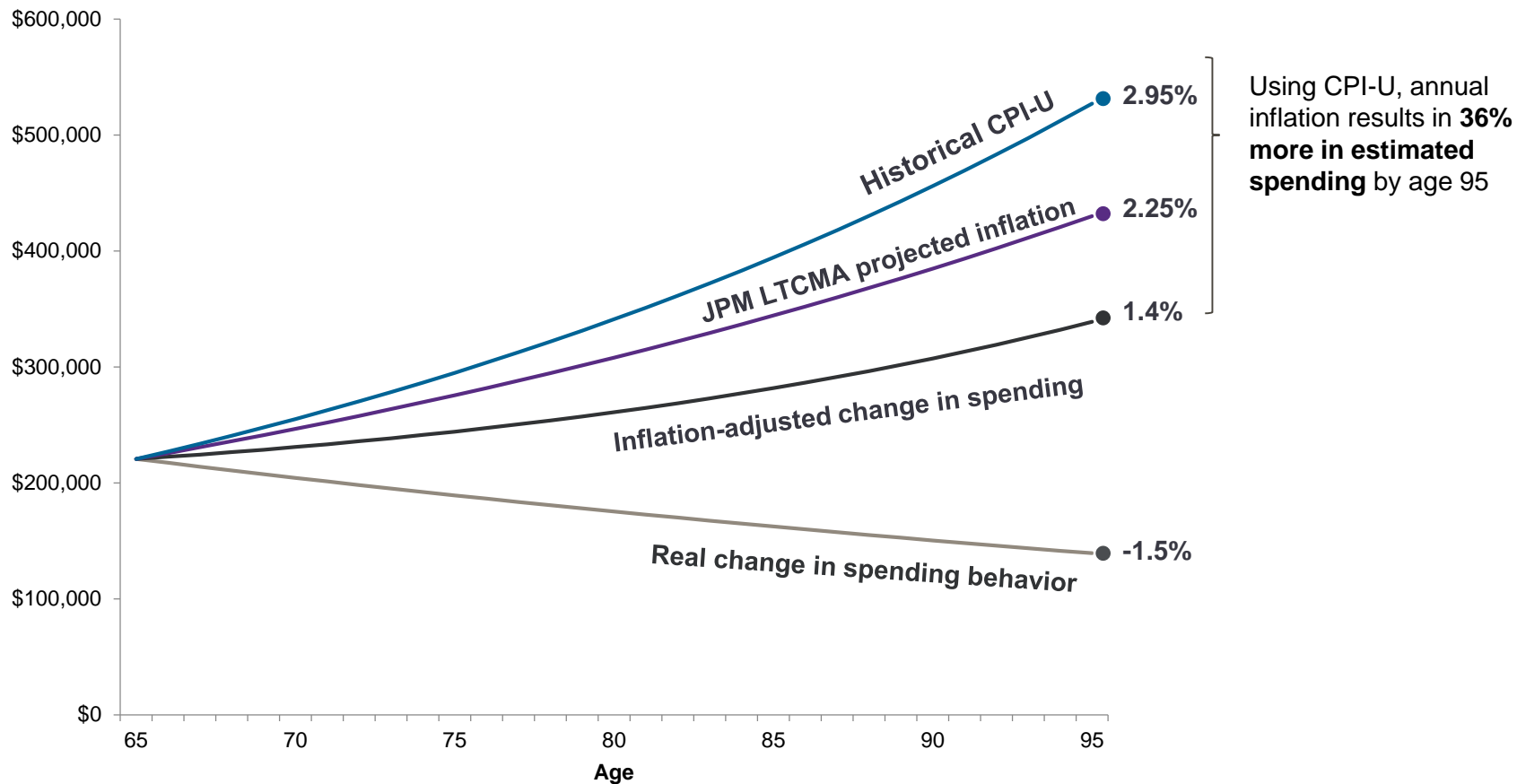
Category	Real change in spending behavior	Historical spending inflation	Inflation-adjusted change in spending
Apparel & services	-3.8%	0.7%	-3.1%
Education	-4.3%	5.1%	0.6%
Entertainment	-3.0%	1.1%	-1.9%
Food & beverage	-1.5%	2.8%	1.2%
Health care	1.0%	4.9%	6.0%
Housing	-1.0%	2.8%	1.8%
Transportation	-3.3%	2.1%	-1.3%
Travel	-5.0%	2.8%	-2.4%
Other*	-0.4%	2.8%	2.4%
Total inflation-adjusted change in spending			1.4%
...excluding health care			1.0%

*Other includes: gifts & donations, gambling, personal care, tax payments, insurance and uncategorized items.

Historical spending inflation estimates based on BLS, Consumer Price Index, J.P. Morgan Asset Management. Data represent annual percentage increase from December 1981 through December 2016 with the exception of entertainment and education, which date back to 1993. The inflation rate for the Other category is historical CPI-E 1984 - 2016. Total spending and all category sub-totals except checks, cash and health care costs: Chase data including Chase credit card, debit card, electronic payment, ATM withdrawal and check transactions from January 1 – December 31, 2016; J.P. Morgan analysis. Health care costs age 65+: Employee Benefit Research Institute (EBRI) data as of December 31, 2016; SelectQuote data as of January 16, 2017; J.P. Morgan analysis. Health care costs pre-age 65 and check and cash distribution excluding health care costs after age 65: 2016 Consumer Expenditure Survey, College Educated; J.P. Morgan analysis. Information that would have allowed identification of specific customers was removed prior to the analysis. Real change in spending by category is based on the average for the category.

Planning assumptions for 65-year-olds today

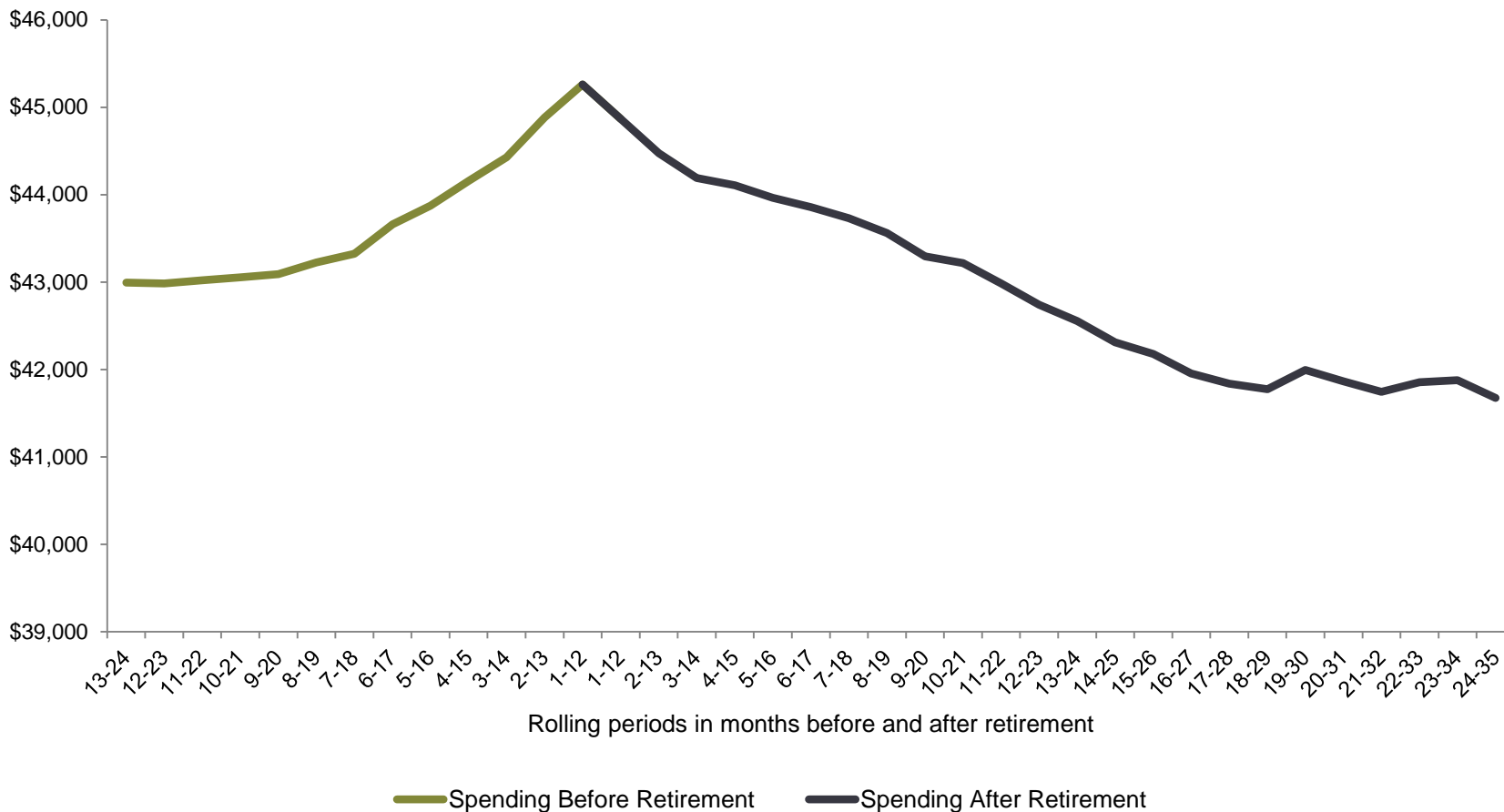
Projected change in spending at age 65: \$1 million - \$3 million in assets



CPI-U represents annual average between 1926 and 2016. Historical spending inflation for apparel and services represents annual average December 1981 through December 2016. LTCMA: long-term capital market assumptions. Used average spending by category. Source: BLS, J.P. Morgan Asset Management analysis, 2017 J.P. Morgan Long-Term Capital Market Assumptions.

All asset levels: evidence of retirement spending surge

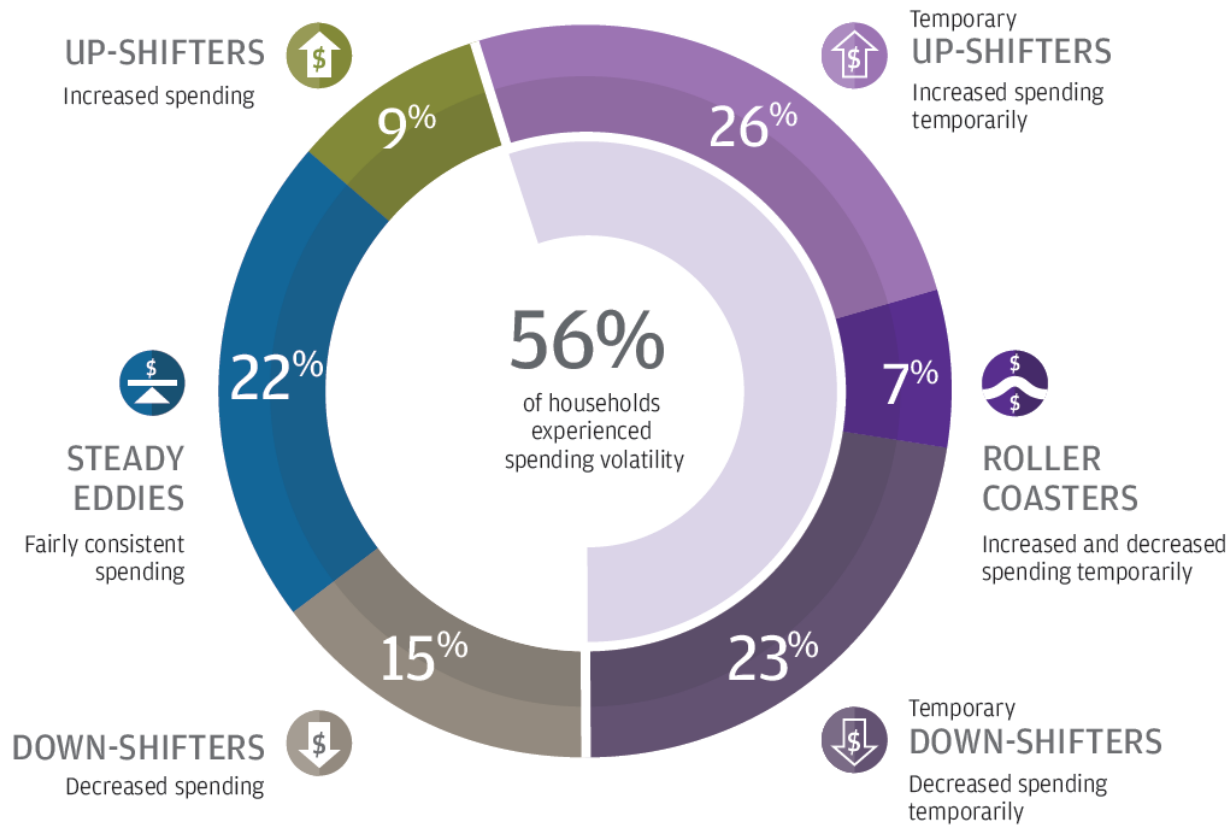
Median spending rolling periods before and after retirement
Retirement age 60–69



Source: Chase credit card, debit card, electronic payment, ATM withdrawal and check transactions from October 1, 2012 to December 31, 2016. Outliers in each asset group were excluded (0.1% of top spenders in each spending category). Information that would have allowed identification of specific customers was removed prior to the analysis.

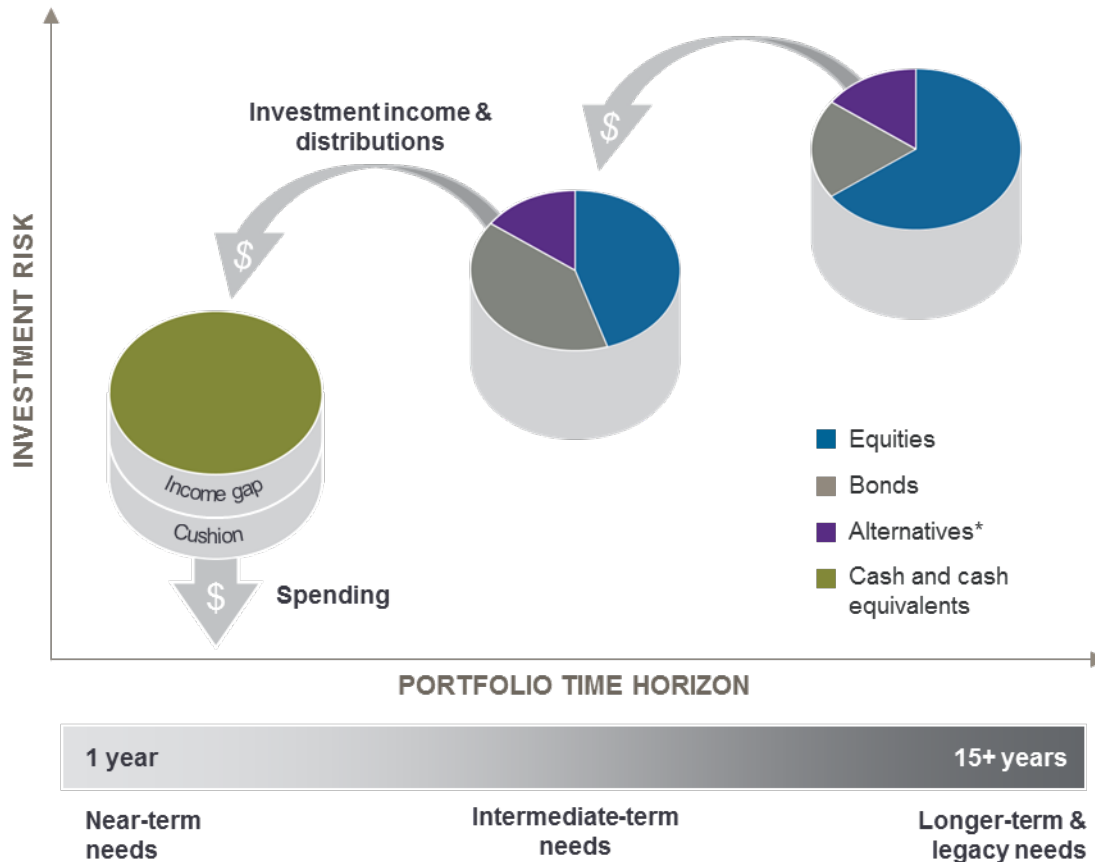
Most had spending volatility when adjusting to a new phase of life

Spending volatility: for each of the three years after retirement, a greater than 20% change in spending compared to the year before retirement



Note: for those who retired age 60 – 69. Total may be more than 100% due to rounding.

Source: Chase credit card, debit card, electronic payment, ATM withdrawal and check transactions from October 1, 2012 to December 31, 2016. Outliers in each asset group were excluded (0.1% of top spenders in each spending category). Information that would have allowed identification of specific customers was removed prior to the analysis.



TIME-BASED SEGMENTATION

Aligning your time horizon with an investment approach may help you be more comfortable with maintaining diversified portfolio allocations in retirement.

For the near-term portfolio, consider maintaining:

- Funds to cover 1-3 years worth of the gap between your income and spending needs
- A cushion for unexpected expenses

For illustrative purposes only. Source: J.P. Morgan Asset Management. Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise. The price of equity securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. Equity securities are subject to "stock market risk," meaning that stock prices in general may decline over short or extended periods of time. Investing in alternative assets involves higher risks than traditional investments and is suitable only for the long term. They are not tax efficient and have higher fees than traditional investments. They may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain.

*Equity, fixed income and cash are considered "traditional" asset classes. The term "alternative" describes all non-traditional asset classes. They include private and public equity, venture capital, hedge funds, real estate, commodities, distressed debt and more.

Retirement savings checkpoints

Household Income ≤ \$90k
Annual Savings Rate: 5%

	\$30,000	\$40,000	\$50,000	\$60,000	\$70,000	\$80,000	\$90,000
Current age	Checkpoint (x current household income)						
25	0.3	0.4	0.4	0.5	0.7	0.9	1.0
30	0.6	0.7	0.8	0.9	1.1	1.3	1.4
35	1.0	1.1	1.2	1.4	1.6	1.8	2.0
40	1.5	1.6	1.7	1.9	2.2	2.5	2.7
45	2.1	2.3	2.4	2.6	3.0	3.3	3.5
50	2.8	3.0	3.1	3.4	3.9	4.3	4.6
55	3.7	3.9	4.1	4.4	5.0	5.4	5.8
60	4.7	5.0	5.2	5.6	6.3	6.8	7.3
65	6.1	6.4	6.7	7.1	8.0	8.7	9.3

MODEL ASSUMPTIONS

Annual gross savings rate: **5%***

Pre-retirement investment return: **6.0%**

Post-retirement investment return: **5.0%**

Inflation rate: **2.0%**

Retirement age –
 • Primary earner: **65**
 • Spouse: **62**

Years in retirement: **30**

*5% is approximately the U.S. average annual savings rate

How to use:

- This analysis assumes you would like to maintain an equivalent lifestyle in retirement.
- Household income is assumed to be gross income (before tax and savings).
- Go to the intersection of your current age and your closest current household income.
- Multiply your salary by the checkpoint shown. This is the amount you should have saved today, assuming you continue contributions of 5% going forward.
- Example: For a 40-year-old with a household income of \$50,000: \$50,000 x 1.7 = \$85,000

This chart is for illustrative purposes only and must not be relied upon to make investment decisions. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary long-term capital market assumptions (10-15 years) and an 80% confidence level. Household income replacement rates are derived from an inflation-adjusted analysis of: Consumer Expenditure Survey (BLS) data (2013-2016); Social Security benefits using modified scaled earnings in 2019 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums. For more details, see slide 16.

Consult with a financial advisor for a more personalized assessment. Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward tradeoffs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve.

	\$100,000	\$125,000	\$150,000	\$175,000	\$200,000	\$250,000	\$300,000
Current age	Checkpoint (x current household income)						
25	0.1	0.2	0.4	0.6	0.7	0.9	1.0
30	0.6	0.8	1.0	1.2	1.4	1.6	1.8
35	1.3	1.5	1.8	2.0	2.2	2.5	2.7
40	2.1	2.3	2.7	3.0	3.2	3.6	3.8
45	3.0	3.3	3.8	4.2	4.4	4.9	5.1
50	4.2	4.6	5.1	5.6	5.9	6.4	6.8
55	5.6	6.1	6.7	7.3	7.7	8.3	8.7
60	7.3	7.9	8.7	9.4	9.8	10.6	11.1
65	9.6	10.3	11.3	12.1	12.7	13.7	14.3

MODEL ASSUMPTIONS

Annual gross savings rate: **10%***

Pre-retirement investment return: **6.0%**

Post-retirement investment return: **5.0%**

Inflation rate: **2.0%**

Retirement age –

- Primary earner: **65**
- Spouse: **62**

Years in retirement: **30**

*10% is approximately twice the U.S. average annual savings rate

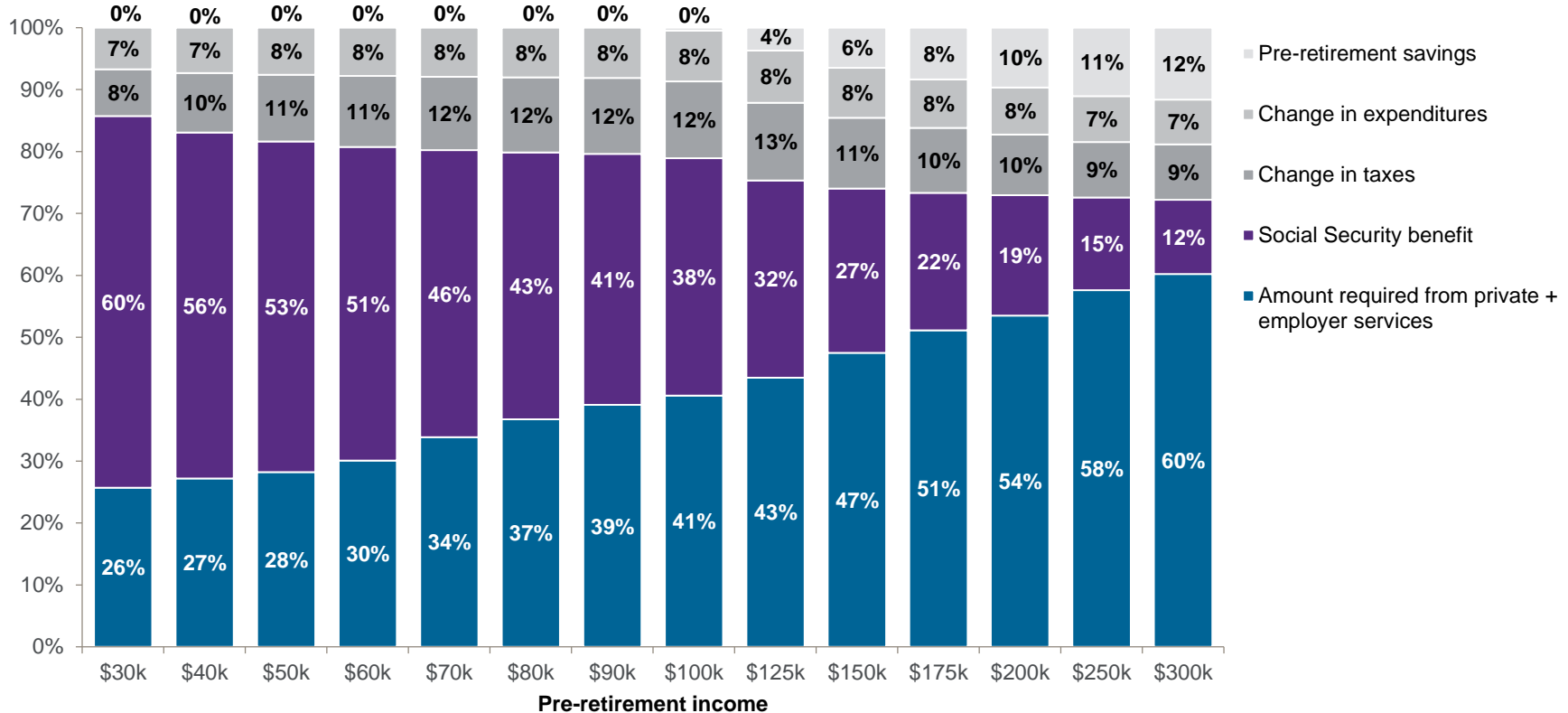
How to use:

- This analysis assumes you would like to maintain an equivalent lifestyle in retirement.
- Household income is assumed to be gross income (before tax and savings).
- Go to the intersection of your current age and your closest current household income.
- Multiply your salary by the checkpoint shown. This is the amount you should have saved today, assuming you continue contributions of 10% going forward.
- Example: For a 40-year-old with a household income of \$100,000: $\$100,000 \times 2.1 = \$210,000$.

This chart is for illustrative purposes only and must not be relied upon to make investment decisions. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary long-term capital market assumptions (10-15 years) and an 80% confidence level. Household income replacement rates are derived from an inflation-adjusted analysis of: Consumer Expenditure Survey (BLS) data (2013-2016); Social Security benefits using modified scaled earnings in 2019 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums. For more details, see slide 16.

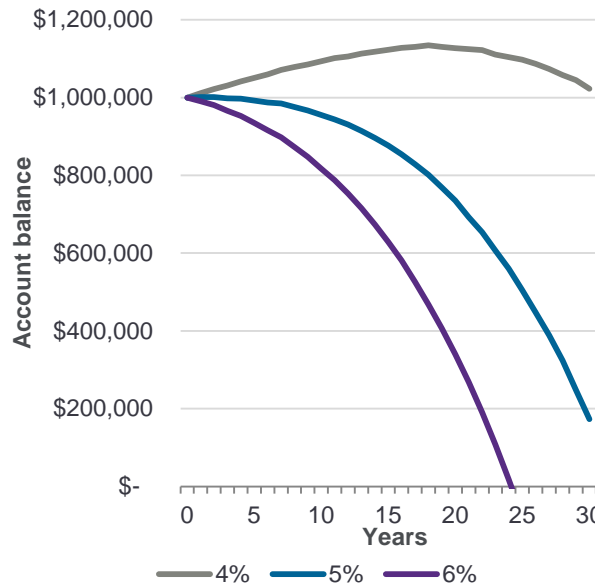
Consult with a financial advisor for a more personalized assessment. Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward tradeoffs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve.

Replacement rate detail by household income

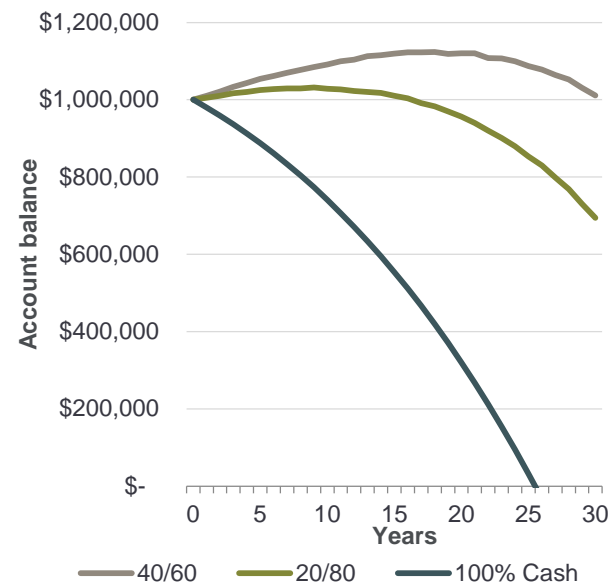


Source: J.P. Morgan Asset Management analysis, 2019. Household income replacement rates are derived from an inflation-adjusted analysis of: Consumer Expenditure Survey (BLS) data (2013-2016); Social Security benefits using modified scaled earnings in 2019 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums. The income replacement needs may be lower for households in which both spouses are working and the second spouse's individual benefits are greater than their spousal benefit. Single household income replacement needs may vary as spending is typically less than a two-spouse household; however, the loss of the Social Security spousal benefit may offset the spending reduction. Percentages and values may not sum due to rounding.

40/60 portfolio at various initial withdrawal rates
Projected nominal outcomes, 50th percentile



Various portfolios at 4% initial withdrawal rate
Projected nominal outcomes, 50th percentile



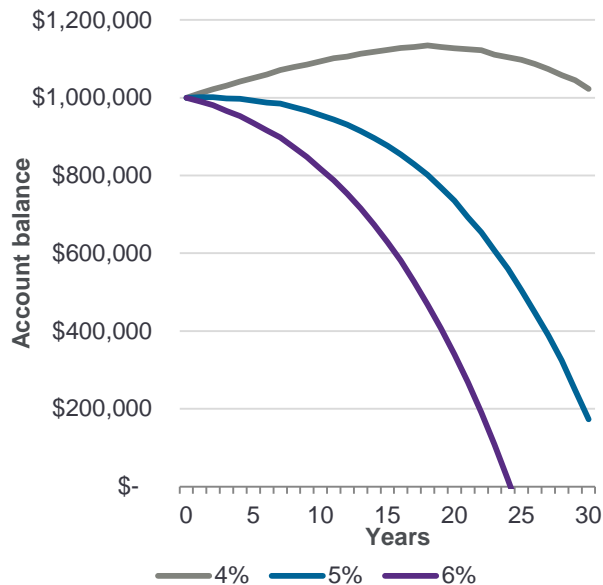
ONE SIZE DOES NOT FIT ALL

Higher initial withdrawal rates or overly conservative portfolios can put your retirement at risk. However, setting your spending at retirement too low and not adjusting along the way may require unnecessary lifestyle sacrifices in retirement. You may want to consider a dynamic approach that adjusts over time to more effectively use your retirement savings.

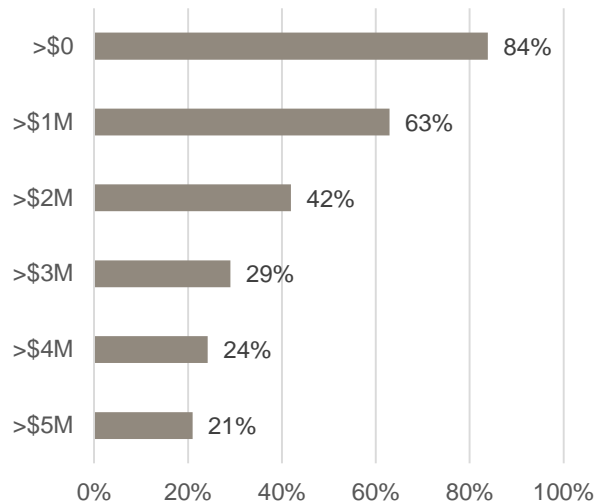
The 50th percentile may be considered the most likely due to the high percentage of outcomes that tend to be clustered near the median. Ending value of the 4% initial withdrawal rate and 40/60 portfolio value is \$1,011,237 (\$558,275 in today's dollars) and the 20/80 portfolio value is \$694,232 (\$383,265 in today's dollars).

These charts are for illustrative purposes only and must not be used, or relied upon, to make investment decisions. Portfolios are described using equity/bond denotation (e.g. a 40/60 portfolio is 40% equities and 60% bonds). Hypothetical portfolios are composed of All Country World Equity, US Aggregate Bonds and US Cash, with compound returns projected to be 6.0%, 4.0% and 2.0%, respectively. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary Long-Term Capital Market Assumptions (10-15 years). The resulting projections include only the benchmark return associated with the portfolio and does not include alpha from the underlying product strategies within each asset class. The yearly withdrawal amount is set as a fixed percentage of the initial amount of \$1,000,000 and is then inflation adjusted over the period (2.0%). Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward tradeoffs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve.

40/60 portfolio at various initial withdrawal rates
Projected nominal outcomes, 50th percentile



Historical ending wealth at 4% initial withdrawal rate
Rolling 30-year periods



**GOOD IN THEORY,
POOR IN PRACTICE**

The 4% rule is the maximum initial withdrawal percentage that has a high likelihood of not running out of money after 30 years. It is not guidance on how to efficiently use your wealth to support your retirement lifestyle as illustrated by the range of outcomes observed in the past.

The 50th percentile may be considered the most likely due to the high percentage of outcomes that tend to be clustered near the median. Ending value of the 4% initial withdrawal rate and 40/60 portfolio value is \$1,011,237 (\$558,275 in today's dollars) and the 20/80 portfolio value is \$694,232 (\$383,265 in today's dollars).

These charts are for illustrative purposes only and must not be used, or relied upon, to make investment decisions. Portfolios are described using equity/bond denotation (e.g. a 40/60 portfolio is 40% equities and 60% bonds). Hypothetical portfolios are composed of All Country World Equity, US Aggregate Bonds and US Cash, with compound returns projected to be 6.0%, 4.0% and 2.0%, respectively. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary Long-Term Capital Market Assumptions (10–15 years). The resulting projections include only the benchmark return associated with the portfolio and does not include alpha from the underlying product strategies within each asset class. The yearly withdrawal amount is set as a fixed percentage of the initial amount of \$1,000,000 and is then inflation adjusted over the period (2.0%). Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward tradeoffs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve.

Medicare is a federal health care plan for individuals age 65 and older.

There are two plan choices - Traditional Medicare or Medicare Advantage

	Traditional Medicare 'A la Cart'	Medicare Advantage (‘All-in-One,’ usually limited to a network of providers)
Part A: inpatient hospital insurance		✓
Part B: doctors, tests and outpatient hospital insurance		✓
Medigap: standardized plans that cover Part A and Part B co-pays and deductibles	✓	Not available
Part D: prescription drug insurance	✓	✓ Most plans include Part D
Prescription drug co-pays and deductibles	Not covered	Not covered
Most vision, dental and hearing expenses	Not covered	✓ Coverage varies by plan
Long-term care*	Not covered	Not covered

MEDICARE DETAILS

Individuals who have paid Medicare taxes for 40 quarters (and their spouses) are eligible for Medicare at age 65.

Be sure to enroll during your Initial Enrollment Period, which is 3 months before and 3 months after your 65th birthday month, or face lifetime penalties.

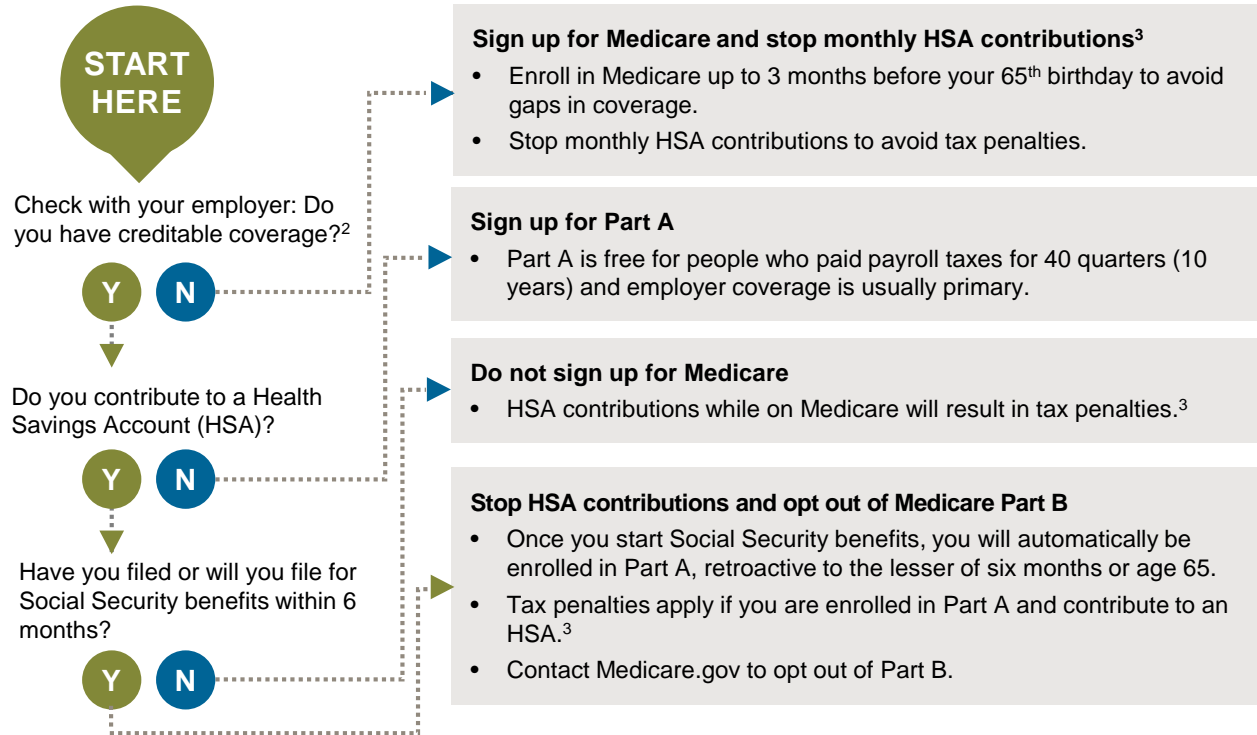
You should reevaluate your choice and provider(s) annually during Open Enrollment.

*Medicare does not cover most long-term care costs. Medicare does pay for medically necessary skilled nursing facility or home health care on a very limited basis. Custodial care is not covered.

Medicare Advantage plans are often referred to as ‘Part C.’ Individuals under age 65 may also be eligible if they are considered disabled by Social Security or the Railroad Retirement Board for more than 24 months. Disabled individuals may have different eligibility requirements. When switching to Traditional Medicare during Open Enrollment, Medigap plans may deny coverage or underwrite (in most states). For more information please consult the Medicare Rights Center in your state or the Medicare.gov website.

Source: Medicare.gov as of January 23, 2019.

Assumes adequate employer coverage and qualification for Medicare at age 65¹



AVOID COVERAGE GAPS AND PENALTIES

Creditable coverage is key: If you don't have it, sign up for Medicare.

COBRA coverage (a temporary extension of major medical employer coverage when work stops) is not creditable.⁴

Do not contribute to an HSA while enrolled (including Part A through Social Security receipt).

¹ Assumes Part A is no cost (generally for people who paid payroll taxes for 40+ quarters or are married to a beneficiary who did so). Some individuals may choose to sign up for Parts A and Part B earlier than shown if they want additional coverage.

² Ask your employer for documentation of creditable coverage. Employer coverage for <20 people is usually not creditable and will end at age 65 or become secondary after Medicare has paid. If you don't have creditable coverage, late penalties will apply if you don't sign up in your initial enrollment window and Medigap plans may deny coverage or underwrite after the initial enrollment period in most states.

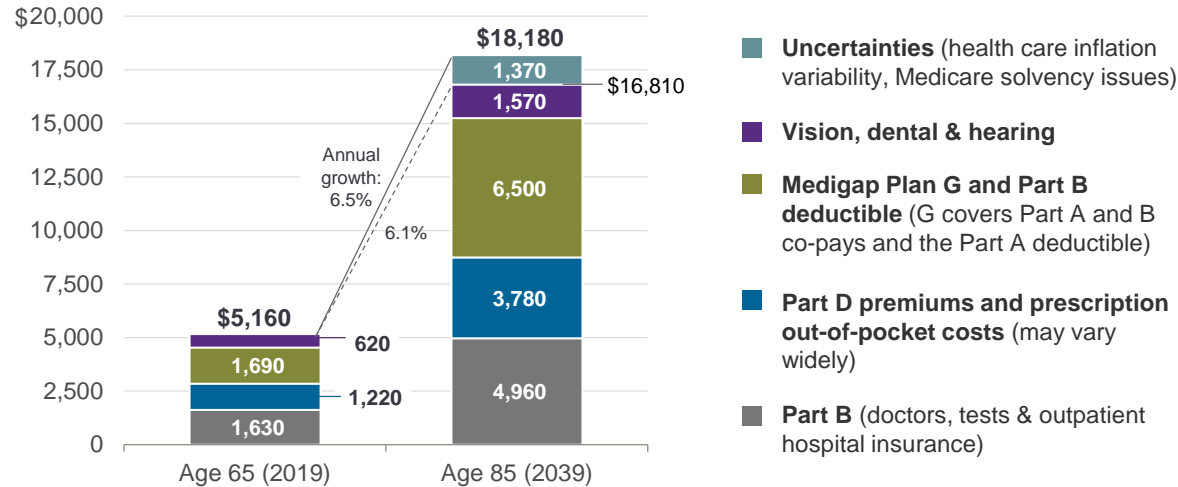
³ Total HSA contributions for the year in excess of the maximum contribution for the year / the number of months you are eligible to make contributions will result in tax penalties. This is not intended to be individual tax advice; consult IRS Publication 969 or your tax advisor.

⁴ Some extended prescription coverage may be creditable. Ask your benefits administrator.

For more information, see www.mymedicarematters.org/enrollment/am-i-eligible, sponsored by the National Council on Aging.

Source: IRS Publication 969, National Council on Aging and Medicare.gov websites as of January 23, 2019; JPM analysis.

Traditional Medicare estimated median health care costs per person



A GROWING CONCERN

Given variation in health care cost inflation from year to year, it may be prudent to assume an annual health care inflation rate of 6.5%, which may require growth as well as current income from your portfolio in retirement.

2019 additional premium per person for Modified Adjusted Gross Incomes (MAGI) of:

FILING SINGLE	MARRIED FILING JOINTLY	ADDITIONAL PREMIUM	TOTAL MEDIAN COSTS
\$85,001 – \$107,000	\$170,001 – \$214,000	\$798	\$5,958
107,001 – 133,500	214,001 – 267,000	2,008	7,168
133,501 – 160,000	267,001 – 320,000	3,217	8,377
160,001 – 499,999	320,001 – 749,999	4,426	9,586
>499,999	>749,999	4,829	9,989

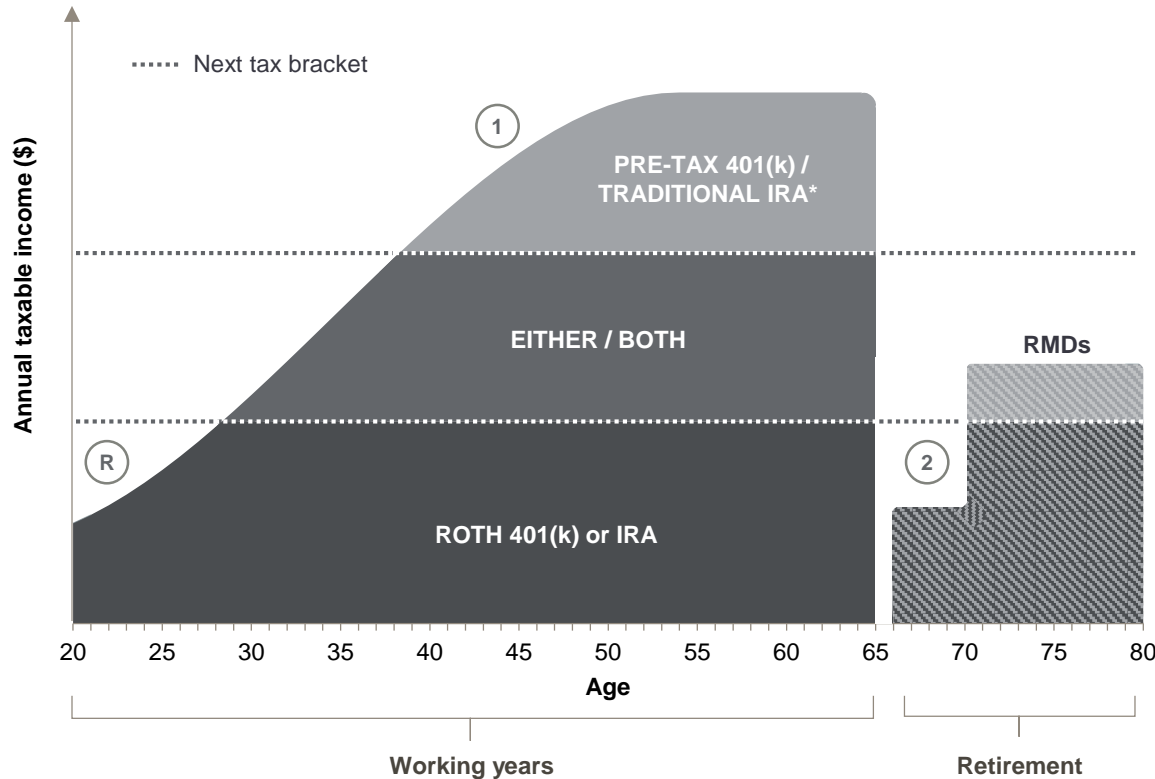
Notes: Age 85 estimated total median cost in 2019 is \$6,776. Medigap premiums usually increase due to age, in addition to annual inflation, except for most policies in the following states: AR, CT, MA, ME, MN, NY, VT WA, AZ, FL, ID and MO. If Plan G is not available, analysis includes the most comprehensive plan excluding Plan F.

Parts B and D additional premiums are calculated from federal tax returns two years prior; individuals may file an exception on form SSA-44 if they reduce or stop work. For the definition of MAGI, please see slide 47.

Source: Employee Benefit Research Institute (EBRI) as of January 18, 2019; SelectQuote as of January 18, 2019; Milliman as of January 21, 2019; CMS website as of January 18, 2019; Consumer Expenditure Survey as of January 18, 2019; J.P. Morgan analysis.

Changes in lifetime taxable income

Hypothetical wage curve



TAX DIVERSIFICATION

Managing taxes over a lifetime requires a balance of your current and future tax pictures. Make income tax diversification a priority to have more flexibility and control in retirement.

Rule: Contributing to a Roth early in your career and shifting as your income increases.

1. Roth 401(k) contributions in peak earning years if wealth is concentrated in tax-deferred accounts.

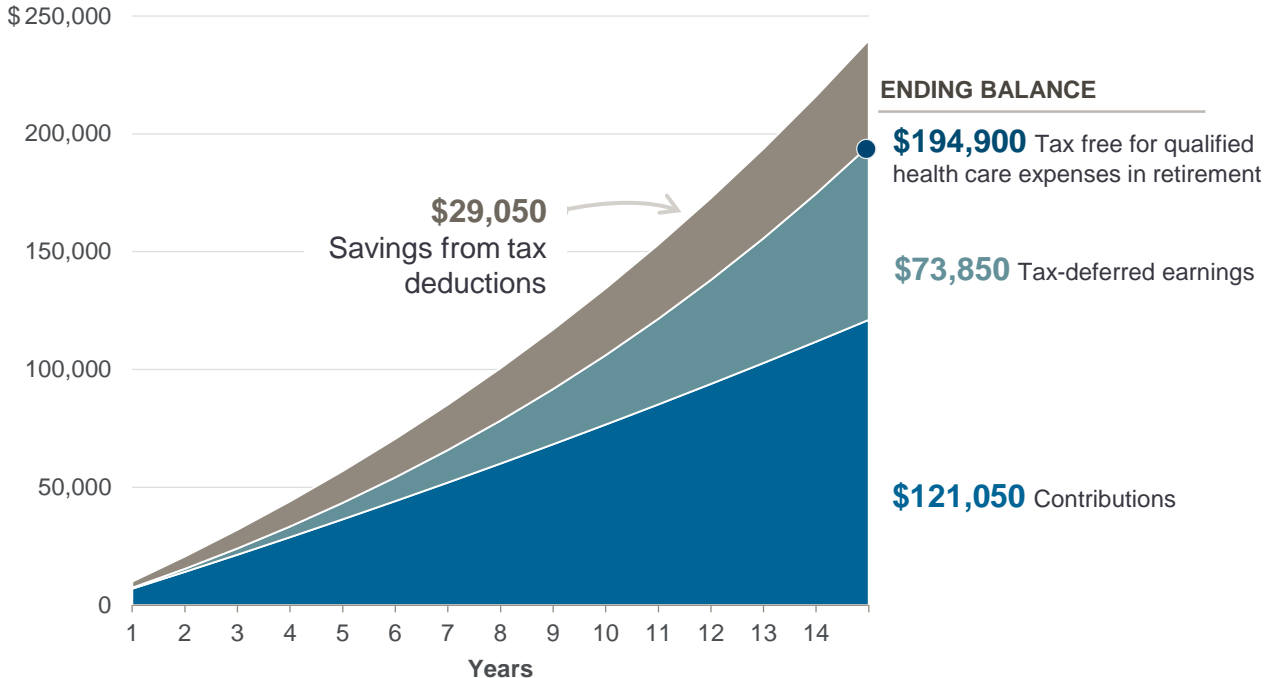
2. Proactive Roth conversions in lower income retirement years if RMDs are likely to push you into a higher bracket.

*If eligible to make a deductible contribution (based on your MAGI). The illustration reflects savings options into Traditional and Roth IRA accounts, as well as into pre-tax and Roth 401(k) accounts. RMD = Required Minimum Distributions, which are typically due no later than April 1 following the year the owner turns 70½ and are calculated every year based on the year-end retirement account value and the owner/plan participant's life expectancy using the IRS Uniform or Joint Life Expectancy Table. Employer contributions are typically pre-tax and are subject to tax upon distribution.

The above example is for illustrative purposes only. Source: J.P. Morgan Asset Management.

Health Savings Account (HSA) savings are triple tax advantaged¹

Maximum annual family contributions, 6% return and 24% marginal tax rate



MAKE THE MOST OF IT

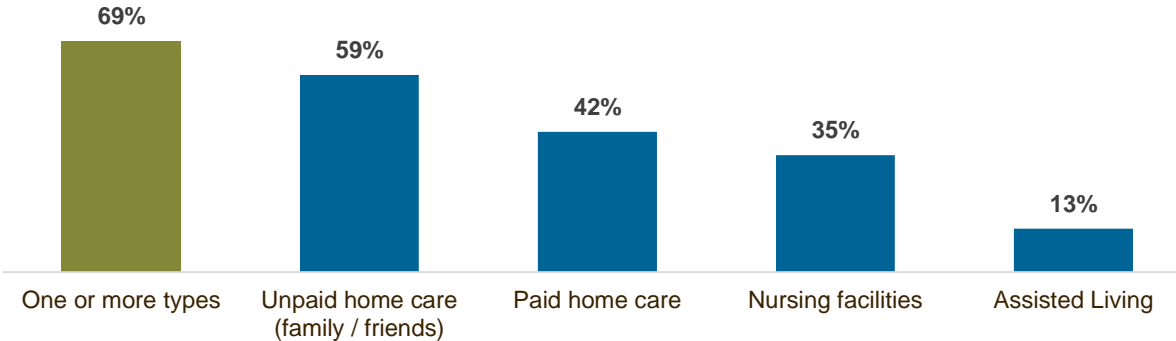
If you are enrolled in a qualified high-deductible health plan and are eligible to contribute to a Health Savings Account, be sure to open and fund your HSA.

Investing your HSA contributions for the long term and paying for current health care expenses out of income or short-term savings can provide significant tax-free funds for health care expenses in retirement.

¹Must have a qualifying high-deductible health plan to make contributions. Funds in the HSA may be withdrawn tax free for qualified medical expenses unless a credit or deduction for medical expenses is claimed. After age 65 funds also may be withdrawn at ordinary income tax rates without penalty for any reason. Health insurance premiums are qualified medical expenses. This includes health insurance premiums prior to retirement, Medicare Part B and D premiums and qualified long-term care insurance premiums up to certain limits, but excludes Medigap / Medicare supplement policies and most long-term care policies that include annuity income or life insurance. See IRS Publication 502 for details. This is not intended to be individual tax advice; consult your tax advisor.

The above example is for illustrative purposes only and not indicative of any investment. Does not include account fees. Present value of illustrated HSA after 15 years is \$144,800. Estimated savings from tax deductions at a 37% marginal rate are \$44,790. Assumes cash or income used for health care expenses is not withdrawn from an account with a tax liability. The example assumes the HSA is fully invested; if \$2,000 was held in a cash account, the illustrated cumulative HSA account value would be \$190,110. 2019 family contribution limit is \$7,000 adjusted for inflation of 2.0% for 30 years. Individual 2019 contribution limit is \$3,500. \$194,900 is projected to be enough to fund about 13 years of projected average qualified Medicare-related health care expenses for a couple.

Lifetime probability of needing long-term care (LTC) services by type

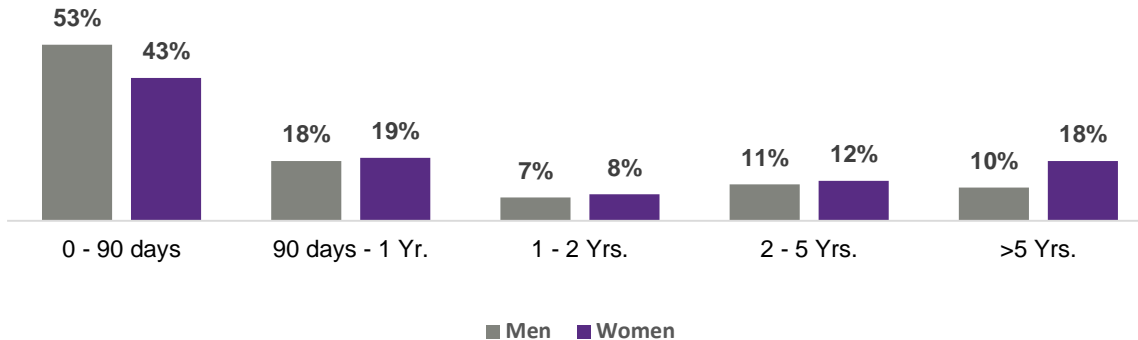


CONSIDER THE RANGE OF POSSIBLE CARE NEEDS

There is a high likelihood of needing care. This often starts at home before progressing to other settings.

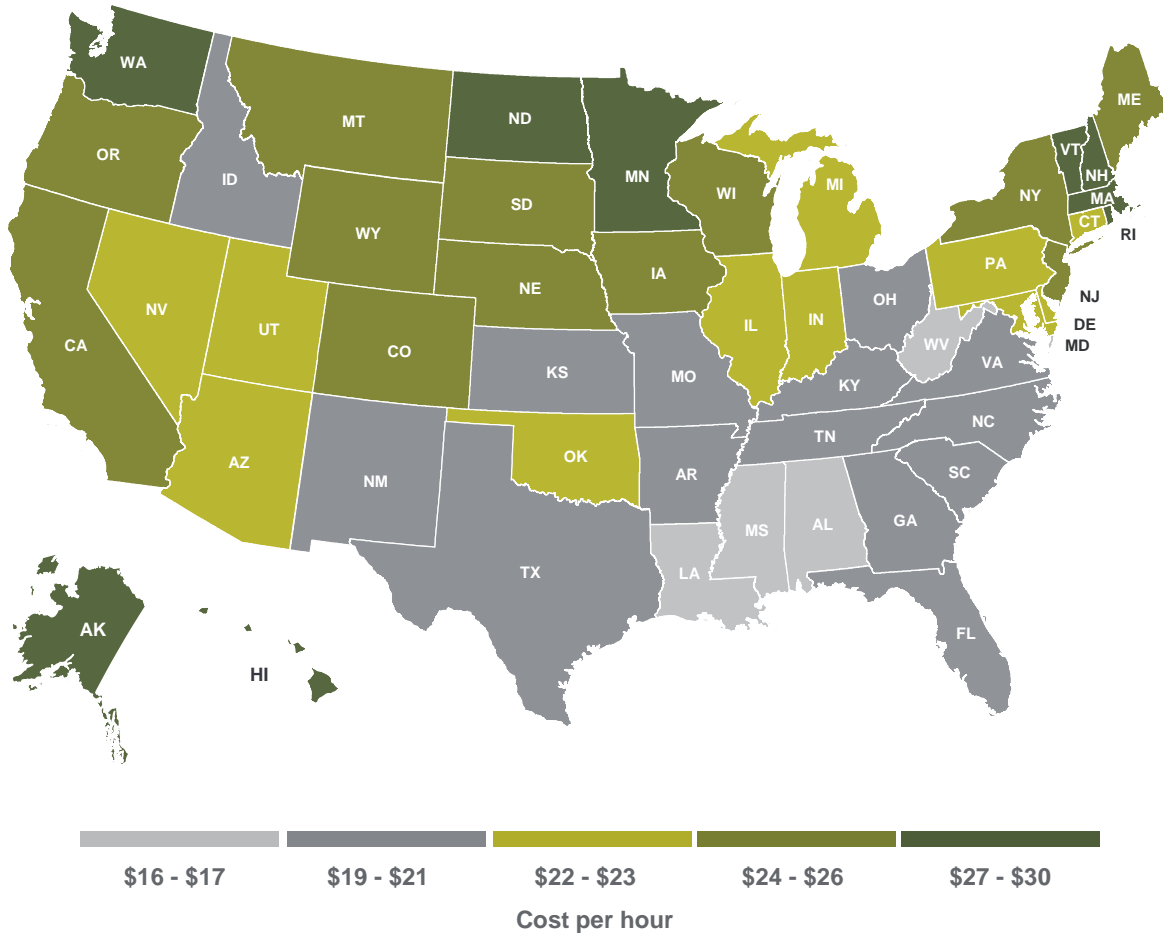
While considering the range of possibilities, take into account that 1 in 10 men and nearly 2 in 10 women are projected to have a significant care need for more than 5 years.

Lifetime distribution and duration of need for significant LTC at age 65



Top chart: Includes all types of care including managing finances, taking medications, shopping, using transportation and food preparation, as well as more significant care needs. Bottom chart: Significant care needs includes two or more activities of daily living such as eating, dressing, bathing, transferring and toileting or severe cognitive impairment. Those who meet the cognitive impairment criteria who require care for less than 90 days are included in the 90 days – 1 year category.

Source: Top chart: U.S. Department of Health and Human Services, ASPE Issue Brief, Revised February 2016, Table 1. Bottom chart: U.S. Department of Health and Human Services, Administration on Aging statistics last updated October 10, 2017. Most recent data available as of December 31, 2018.

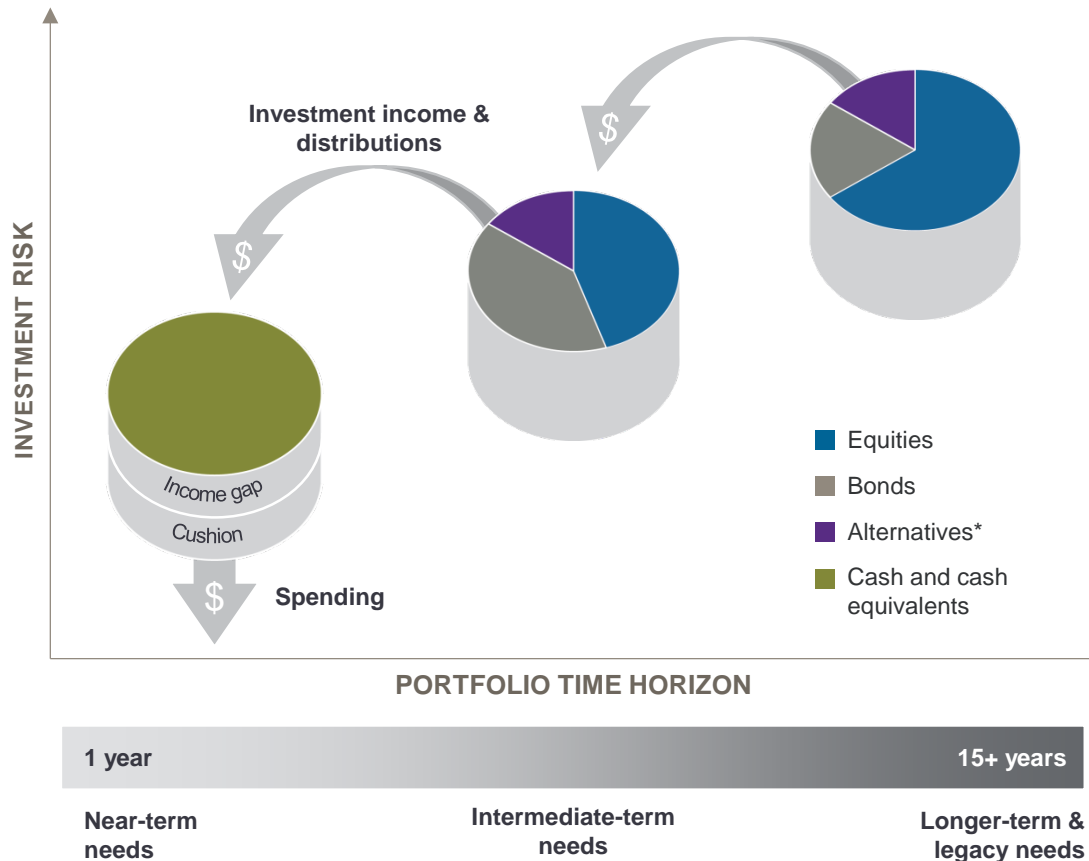


THE COST OF CARE

The median cost for a home health aide is \$22 an hour but can vary widely. While the most common starting point for care is at home, it may progress to other settings.

The national annual median cost for a private room in a nursing home is \$100,375. These costs are commonly between \$85,000 and \$120,000 but may be lower or higher. For costs specific to your area see: www.genworth.com/costofcare

Notes: Costs also vary within states by county and city. Median values are rounded to the nearest dollar. For more information on cost of care in your location see the Genworth website at: www.genworth.com/costofcare
 Source: Genworth Cost of Care Survey 2018, conducted by CareScout®, June 2018. © 2019 Genworth Financial, Inc. All rights reserved.
 Methodology document: <https://pro.genworth.com/riiproweb/productinfo/pdf/131168.pdf>



TIME-BASED SEGMENTATION

Aligning your time horizon with an investment approach may help you be more comfortable with maintaining diversified portfolio allocations in retirement.

For the near-term portfolio, consider maintaining:

- Funds to cover 1-3 years worth of the gap between your income and spending needs
- A cushion for unexpected expenses

For illustrative purposes only. Source: J.P. Morgan Asset Management. Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise. The price of equity securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. Equity securities are subject to "stock market risk," meaning that stock prices in general may decline over short or extended periods of time. Investing in alternative assets involves higher risks than traditional investments and is suitable only for the long term. They are not tax efficient and have higher fees than traditional investments. They may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain.

*Equity, fixed income and cash are considered "traditional" asset classes. The term "alternative" describes all non-traditional asset classes. They include private and public equity, venture capital, hedge funds, real estate, commodities, distressed debt and more.

Unless otherwise indicated, all illustrations are shown in U.S. dollars.

Past performance is no guarantee of comparable future results.

Diversification does not guarantee investment returns and does not eliminate the risk of loss.

Indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. This world-renowned index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the S&P 500 Index focuses on the large cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market. An investor cannot invest directly in an index.

The **Barclays Capital U.S. Aggregate Index** represents securities that are SEC-registered, taxable and dollar denominated. The index covers the U.S. investment-grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities and asset-backed securities. These major sectors are subdivided into more specific indexes that are calculated and reported on a regular basis.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

The price of **equity** securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk," meaning that stock prices in general may decline over short or extended periods of time.

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Opinions and estimates offered constitute our judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. References to future returns are not promises or even estimates of actual returns a client portfolio may achieve.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be a recommendation for any specific investment product, strategy, plan feature or other purposes. By receiving this communication you agree with the intended purpose described above. Any examples used in this material are generic, hypothetical and for illustration purposes only. None of J.P. Morgan Asset Management, its affiliates or representatives is suggesting that the recipient or any other person take a specific course of action or any action at all.

Communications such as this are not impartial and are provided in connection with the advertising and marketing of products and services. Prior to making any investment or financial decisions, you should seek individualized advice from your personal financial, legal, tax and other professional advisors that take into account all of the particular facts and circumstances of your own situation.

JPMorgan Distribution Services, Inc., member FINRA.

J.P. Morgan Asset Management is the marketing name for the asset management businesses of JPMorgan Chase & Co. and its affiliates worldwide.

Copyright © 2019 JPMorgan Chase & Co. All rights reserved.

JP-GTR | 0903c02a81c9c127

NOT FDIC INSURED. NO BANK GUARANTEE. MAY LOSE VALUE.