Guide to Retirement℠

2018 Edition
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The retirement equation

A SOUND RETIREMENT PLAN
Make the most of the things that you can control but be sure to evaluate factors that are somewhat or completely out of your control within your comprehensive retirement plan.

If you're 65 today, the probability of living to a specific age or beyond

Average life expectancy at age 65

<table>
<thead>
<tr>
<th>Year</th>
<th>Women</th>
<th>Men</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>84.1</td>
<td>80.1</td>
<td>4.0</td>
</tr>
<tr>
<td>2016</td>
<td>85.7</td>
<td>83.2</td>
<td>2.5</td>
</tr>
<tr>
<td>2090</td>
<td>89.5</td>
<td>87.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

PLAN FOR LONGEVITY

Average life expectancy continues to increase and is a mid-point not an end-point. You may need to plan on the probability of living much longer – perhaps 30+ years in retirement – and invest a portion of your portfolio for growth to maintain your purchasing power over time.

Probability at least one member of a same-sex female couple lives to age 90 is 56% and a same-sex male couple is 40%.
Older Americans in the workforce

Percent of people in the civilian labor force 1996-2026

- **65-69**:
  - 1996: 7%
  - 2006: 13%
  - 2016: 19%
  - 2026: 23%

- **70-74**:
  - 1996: 10%
  - 2006: 17%
  - 2016: 22%
  - 2026: 29%

- **75-79**:
  - 1996: 12%
  - 2006: 23%
  - 2016: 32%
  - 2026: 37%

**Total civilian population 65+**:
- 32mm (1996)
- 36mm (2006)
- 48mm (2016)
- 67mm (2026)

**Major reasons people work in retirement**

- **NEEDS**
  - Buy extras: 31%
  - Make ends meet: 19%
  - Decline in savings/investments: 9%
  - Keep insurance or benefits: 4%

- **WANTS**
  - Stay active and involved: 64%
  - Enjoy working: 48%
  - Job opportunity: 23%
  - Try new career: 10%

Source (top chart): Bureau of Labor Statistics, Employment Projections, Table 3.2 and Table 3.3. Actual data to 2016 and projection to 2026. Civilian population age 65+ is non-institutionalized population.

Managing expectations of ability to work

Expectations of workers vs. retirees
To retire at age 65 or older

- Current workers’ expectations: 75%
- Experience of actual retirees: 23%

Reasons cited for retiring earlier than planned

- Health problems or disability: 41%
- Changes at company (downsizing/closing): 26%
- Other work-related reason: 16%
- Care for spouse or family member: 14%
- Outdated skills: 4%
- Able to afford early retirement: 24%
- Want to do something else: 10%

Median retirement age
- Expected: 65
- Actual: 62


EARLY RETIREMENT
You may not have complete control over when you retire, so you should consider having a back-up plan. You may have to draw income earlier and make your portfolio last longer than you anticipate.
Changes in lifestyle

Amount of daily hours spent per activity by age

Activity trends in retirement

Values include people who do and do not participate in the activities. Values are weighted by the age and then averaged across rolling five-year age groups. Each category includes time spent traveling to and from the activity if applicable.

Benefits differ by birth year and claim age
Full Retirement Age = 100% benefit

**Birth year: 1954 or earlier**
- Full Retirement Age: 66
- Decreased benefits: -6.25% average per year
- Increased benefits: +8% per year
- Age 62: 75%
- Age 66: 100% benefit
- Age 70: 132%
- Full Retirement Age: 66 + 2 months: 130.7%
- 1956 (62): 66 + 4 months
- 1957 (61): 66 + 6 months
- 1958 (60): 66 + 8 months
- 1959 (59): 66 + 10 months

**Birth year: 1960 or later**
- Full Retirement Age: 67
- Decreased benefits: -6.00% average per year
- Increased benefits: +8% per year
- Age 62: 70%
- Age 67: 124%
- 1959 (59): 66 + 2 months
- 1958 (60): 66 + 4 months
- 1957 (61): 66 + 6 months
- 1956 (62): 66 + 8 months
- 1955 (63): 66 + 10 months

**Cost of living increase for benefits (2018)**: 2.0%
**Average cost of living adjustment (1985-2018)**: 2.6%

For illustrative purposes only. For those born in 1956 or earlier, there is a 7.3% compound growth rate for each year of waiting to take benefits; 7.4% for those born in 1957 or after. The Social Security Amendments Act of 1983 increased FRA from 65 to 67 over a 40-year period. The first phase of transition increased FRA from 65 to 66 for individuals turning 62 between 2000 and 2005. After an 11-year hiatus, the transition from 66 to 67 (2017-2022) will complete the move.

Source: Social Security Administration, J.P. Morgan Asset Management
Maximizing Social Security benefits

Cumulative individual benefit by claim age
Full Retirement Age (FRA) = Age 66 & 4 months

- **Claim at 70:**
  - $4,672 per month
  - **FRA/70:** $1,540k
  - **62/FRA:** $424k
  - **$703k**

- **Claim at FRA:**
  - $3,260 per month
  - **FRA/70:** $1,340k
  - **62/FRA:** $478k
  - **$694k**

- **Claim at 62:**
  - $2,147 per month
  - **FRA/70:** $1,100k
  - **62/FRA:** $467k
  - **$626k**

**At age 62, probability of living to at least age:**

<table>
<thead>
<tr>
<th>Age</th>
<th>62</th>
<th>66</th>
<th>70</th>
<th>76</th>
<th>80</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>94%</td>
<td>87%</td>
<td>73%</td>
<td>60%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>97%</td>
<td>92%</td>
<td>81%</td>
<td>71%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>99%</td>
<td>99%</td>
<td>95%</td>
<td>89%</td>
<td>47%</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Social Security Administration, J.P. Morgan Asset Management.

*Couple assumes at least one lives to the specified age or beyond. Breakeven assumes the same individual, born in 1956, earns the maximum wage base, retires at the end of age 61 and claims at 62 & 1 month, 66 & 4 months and 70, respectively. Benefits are assumed to increase each year based on the Social Security Administration 2017 Trustee’s Report “intermediate” estimates (annual benefit increase of 3.1% in 2019 and 2.6% thereafter). Monthly amounts without the cost of living adjustments (not shown on the chart) are: $2,147 at age 62; $2,928 at FRA; and $3,787 at age 70. Exact breakeven ages are 76 & 3 months and 80 & 5 months.

**PLANNING OPPORTUNITY**

Delaying benefits means increased Social Security income later in life, but your portfolio may need to bridge the gap and provide income until delayed benefits are received.
Social Security benefit claiming considerations

Comparison of claim age based on an individual’s expected rate of return and longevity
Color represents the claim age with the highest expected lifetime benefits

How to use:
- Go to the intersection of your expected rate of return and your expected longevity.
- The color at this intersection represents the Social Security claim age that maximizes total Social Security benefits over the course of one’s life – given the three options of age 62, Full Retirement Age (age 66 & 4 months) and age 70.
- Example: For an individual invested in a diversified 40/60 portfolio (expected rate of return of 5%) and average expected female longevity (age 86) = Claim at age 70.

Source (chart): Social Security Administration, J.P. Morgan Asset Management.
Assumes the same individual, born in 1956, retires at the end of age 61 and claims at 62 & 1 month, 66 & 4 months and 70, respectively. Benefits are assumed to increase each year based on the Social Security Administration 2017 Trustee’s Report “intermediate” estimates (annual benefit increase of 3.1% in 2019 and 2.6% thereafter). Expected rate of return is deterministic, in nominal terms, and net of fees.

Consider portfolio returns and your life expectancy
The lower your expected long-term investment return and the longer your life expectancy – the more it pays to wait to take your benefit.
Los Angeles, California, USA

Inflation can disproportionately affect older Americans due to differences in spending habits and price increases in those categories.

Average inflation by spending category 1982-2017

*There are no individual inflation measures for these specific subcategories.

Source (top chart): BLS, 2016 Consumer Expenditure Survey for households where at least one member has a bachelor’s degree. Charitable contributions include gifts to religious, educational and political organizations, and other cash gifts. Spending percentages may not equal 100% due to rounding.

Source (bottom chart): BLS, Consumer Price Index, J.P. Morgan Asset Management. Data represent annual percentage increase from December 1981 through December 2017 with the exception of entertainment and education, which date back to 1993. The inflation rate for the Other category is derived from personal care products and tobacco. Tobacco has experienced 7% inflation since 1986 but each age group only spends 0.4%-0.7% on tobacco (21%-37% of combined personal care products and tobacco), which is a lower proportion than represented in the Other inflation rate.
Modest forward-looking returns may require higher savings going forward
Values assume you would like to maintain an equivalent lifestyle in retirement

<table>
<thead>
<tr>
<th>Current age</th>
<th>$50,000</th>
<th>$75,000</th>
<th>$100,000</th>
<th>$150,000</th>
<th>$200,000</th>
<th>$250,000</th>
<th>$300,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>-</td>
<td>0.3</td>
<td>0.6</td>
<td>1.0</td>
<td>1.3</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>30</td>
<td>0.3</td>
<td>0.9</td>
<td>1.2</td>
<td>1.7</td>
<td>2.1</td>
<td>2.4</td>
<td>2.5</td>
</tr>
<tr>
<td>35</td>
<td>0.9</td>
<td>1.6</td>
<td>2.0</td>
<td>2.6</td>
<td>3.0</td>
<td>3.4</td>
<td>3.5</td>
</tr>
<tr>
<td>40</td>
<td>1.6</td>
<td>2.4</td>
<td>2.9</td>
<td>3.6</td>
<td>4.2</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>45</td>
<td>2.5</td>
<td>3.4</td>
<td>4.0</td>
<td>4.8</td>
<td>5.5</td>
<td>6.0</td>
<td>6.2</td>
</tr>
<tr>
<td>50</td>
<td>3.5</td>
<td>4.6</td>
<td>5.3</td>
<td>6.3</td>
<td>7.1</td>
<td>7.7</td>
<td>8.0</td>
</tr>
<tr>
<td>55</td>
<td>4.7</td>
<td>6.0</td>
<td>6.9</td>
<td>8.1</td>
<td>9.1</td>
<td>9.7</td>
<td>10.1</td>
</tr>
<tr>
<td>60</td>
<td>6.2</td>
<td>7.7</td>
<td>8.8</td>
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<td>11.4</td>
<td>12.2</td>
<td>12.6</td>
</tr>
<tr>
<td>65</td>
<td>8.1</td>
<td>10.0</td>
<td>11.3</td>
<td>13.0</td>
<td>14.5</td>
<td>15.5</td>
<td>16.0</td>
</tr>
</tbody>
</table>

How to use:
- 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 x 2.9 = $290,000.

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 2017 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums; and 2017 OASDI and FICA taxes. For more details, see slide 15.
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.
### Income replacement needs in retirement

**Income replacement rate methodology**
Based on gross annual household income

<table>
<thead>
<tr>
<th>$150,000 income</th>
<th>Pre-retirement</th>
<th>Post-retirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>Less pre-retirement savings</td>
<td>Amount required from private + employer sources</td>
</tr>
<tr>
<td>6%</td>
<td>Less change in expenditures</td>
<td>$74,500</td>
</tr>
<tr>
<td>8%</td>
<td>Less change in taxes</td>
<td>Social Security benefit</td>
</tr>
<tr>
<td>11%</td>
<td></td>
<td>$36,500</td>
</tr>
<tr>
<td>24%</td>
<td>REPLACEMENT RATE: 74%</td>
<td>Income needed to maintain an equivalent lifestyle = $111,000</td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td>$150,000 income</td>
</tr>
</tbody>
</table>

**Source:** J.P. Morgan Asset Management analysis, 2017. 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 2017 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums; and 2017 OASDI and FICA taxes. 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.

**ESTIMATING RETIREMENT LIFESTYLE NEEDS**
Less income may be needed in retirement to maintain an equivalent lifestyle due to no longer needing to save, lower spending in certain categories and lower income taxes.
Income replacement needs vary by household income

Replacement rate detail by household income

- Less pre-retirement savings
- Less change in expenditures
- Less change in taxes
- Social Security benefit

Amount required from private + employer sources

Source: J.P. Morgan Asset Management analysis, 2017. 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 2017 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums; and 2017 OASDI and FICA taxes. 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.
Benefit of saving and investing early

The above example is for illustrative purposes only and not indicative of any investment. Account value in this example assumes a 6.0% annual return and cash assumes a 2.0% annual return. Source: J.P. Morgan Asset Management, Long-Term Capital Market Assumptions. Compounding refers to the process of earning return on principal plus the return that was earned earlier.

Consistent Chloe invests from ages 25 to 65 earning 6.0% ($200,000 total)
Late Lyla invests from ages 35 to 65 earning 6.0% ($150,000 total)
Quitter Quincy invests from ages 25 to 35 earning 6.0% ($50,000 total)
Nervous Noah saves from ages 25 to 65 in cash earning 2.0% ($200,000 total)

Consistent Chloe
$820,238
76%

Late Lyla
$419,008
64%

Quitter Quincy
$401,230
88%

Nervous Noah
$308,050
35%

SAVING FUNDAMENTALS
Saving early and often, and investing what you save, are some of the keys to a successful retirement due to the power of compounding over the long term.

Consistent Chloe
Late Lyla
Quitter Quincy
Nervous Noah

The chart above illustrates the account growth of $5,000 invested/saved annually from ages 25 to 65. The account values are shown for ages 25 to 65, with Consistent Chloe earning 6.0% annually, Late Lyla earning 6.0% from ages 35 to 65, Quitter Quincy earning 6.0% from ages 25 to 35, and Nervous Noah saving in cash and earning 2.0% from ages 25 to 65.
### MODEL ASSUMPTIONS

- **Pre-retirement investment return:** 6.0%
- **Post-retirement investment return:** 5.0%
- **Inflation rate:** 2.25%
- **Retirement age:**
  - Primary earner: 65
  - Spouse: 62
- **Years in retirement:** 30

### Start saving age | $50,000 | $75,000 | $100,000 | $150,000 | $200,000 | $250,000 | $300,000
--- | --- | --- | --- | --- | --- | --- | ---
25 | 9% | 11% | 13% | 15% | 16% | 18% | 18%
30 | 12 | 15 | 16 | 19 | 21 | 22 | 23
35 | 15 | 19 | 21 | 25 | 27 | 29 | 30
40 | 20 | 25 | 28 | 33 | 36 | 29 | 40
45 | 28 | 35 | 39 | 45 | 50 | 54 | 55
50 | 41 | 51 | 58 | 67 | 74 | 79 | 82

### How to use:
- Go to the intersection of your current age and your closest current household income.
- This is the percentage of your current household income you should contribute annually going forward if you have $0 saved for retirement today.
- Example: A 40-year-old with household income of $100,000 and $0 saved for retirement today will need to save 28% every year until retirement.

### Important things you need to know:
- Modest forward-looking returns may require higher savings going forward.
- Values assume you would like to maintain an equivalent lifestyle in retirement.
- Household income is assumed to be gross income (before tax and savings).

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 2017 for a single wage earner at age 65 and a spousal benefit at age 62 reduced by Medicare Part B premiums; and 2017 OASDI and FICA taxes. For more details, see slide 15.

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The power of tax-deferred compounding

Taxable vs. tax-deferred investing over a 30-year timeframe
Growth of $100,000 for a household in the 24% tax bracket

Source: JP Morgan Asset Management. Chart shows after-tax $100,000 initial account value in the beginning of year one for a tax-deferred account and a taxable account. Assumes a 6.0% annual return for both accounts. Investment returns in taxable account are taxed annually at 24% (capital gains and qualified dividends are not considered in this analysis). Tax-deferred account balance is taken as a lump sum after year 30 and taxed at 24% federal tax rate. If tax-deferred account is taken as lump sum at other tax rates, after-tax balance will be $517,427 (12%), $469,992 (22%), $422,557 (32%), $408,327 (35%), $398,840 (37%). This hypothetical illustration is not indicative of any specific investment and does not reflect the impact of fees or expenses. This chart is for illustrative purposes only. Past performance is no guarantee for future results.
Changes in lifetime taxable income
Hypothetical wage curve

*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 retirement and Roth 401(k) accounts. RMD = Required Minimum Distribution. RMDs 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. IRA owners must begin taking RMDs no later than April 1 following the year the owner turns age 70½. For participants of qualified employer sponsored retirement plans, RMDs must by April 1 following the year the participant turns age 70½ or by April 1 following the year the participant retires. Owners of Roth IRAs are not required to take RMDs; however, RMDs are required in designated Roth accounts. Any employer contribution will be applied to the participant’s pre-tax retirement account for both Traditional and Roth 401(k) plans, and subsequent distributions will be subject to tax.

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

THINK OPPORTUNISTICALLY

Effectively managing taxes over a lifetime requires a careful balance of your current income tax picture and a focus on income tax diversification. Consider:

**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.
Health Savings Account (HSA) savings are triple tax advantaged

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

ENDING BALANCE

- **$370,000** Tax free for qualified health care expenses in retirement
- **$224,427** Tax-deferred earnings
- **$145,574** Contributions

**$34,938** Savings from tax deductions

1 Must have a qualifying high-deductible health plan to make contributions. After age 65 funds in the HSA may be withdrawn tax free for qualified medical expenses or withdrawn at ordinary income tax rates for other expenses. See IRS Publication 502 for details.

The above example is for illustrative purposes only and not indicative of any investment. Federal taxes; states may differ. Does not include account fees. Present value of illustrated HSA after 30 years is $189,803. If the annual tax deduction is invested with an after-tax return of 4.56%, the cumulative hypothetical return is $34,809. 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 $360,516. 2018 contribution limit is $3,450 adjusted for inflation of 2.25% for 30 years.

HSA contributions made through payroll deduction or qualified employer 457 cafeteria plans may also avoid federal payroll and unemployment taxes unless you are self-employed. These tax reductions may result in lower Social Security and unemployment insurance benefit amounts. Contributions outside of an employer plan are generally tax deductible but do not avoid payroll and unemployment taxes. This is not intended to be individual tax advice; consult your tax advisor.

MAXIMUM ANNUAL INDIVIDUAL CONTRIBUTIONS

- **$3,450** Adjusted for inflation of 2.25% for 30 years

MAKE THE MOST OF IT

If you are enrolled in a high-deductible health plan, be sure to contribute to an 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.
Changes in spending

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 the 2016 Consumer Expenditure Survey (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 2.0 and age 75+ is 1.7.
50th percentile means that 50% of the time you’ll have better outcomes. Based on the high percentage of outcomes that tend to be clustered near the median, this may be considered the most likely potential outcome. For the 40/60 portfolio at a 4% withdrawal rate, the real portfolio value at period 30 is $214,164 vs. $417,489 nominal.

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 US Large Cap for equity, US Aggregate Bonds and US Cash for cash, with compound returns projected to be 5.50%, 3.25% and 2.00%, 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 (2.25%). 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.
Dollar cost ravaging—timing risk of withdrawals

Sequence of return risk

Withdrawing assets in down markets early in retirement can ravage a portfolio. Consider investment solutions that incorporate downside protection such as:

- Greater diversification among non-correlated asset classes
- Investments that use options strategies for defensive purposes
- Annuities with guarantees and/or protection features

Growth of an investment 1966-1995

Assumptions: Enter retirement at age 60 with $1,000,000. Start with a 5.4% withdrawal of $54,000. Increase dollar amount of withdrawal by overall rate of inflation (3%) each year, which is lower than the average inflation rate of the period between 1966-1995.

Rate of return: average vs. actual 1966-1995

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

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.
### Top tax changes for individuals and small business owners

<table>
<thead>
<tr>
<th>HOW DOES THE NEW TAX LAW IMPACT YOUR BOTTOM LINE?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive tax reform through the Tax Cuts and Jobs Act of 2017 (TCJA) may affect almost every taxpayer beginning in 2018.</td>
</tr>
</tbody>
</table>

#### 2017 vs. 2018:

<table>
<thead>
<tr>
<th><strong>Individual income tax brackets</strong>&lt;sup&gt;1&lt;/sup&gt;</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seven income tax brackets</td>
<td>Top bracket: 39.6% at $418,400 individual / $470,700 married</td>
<td>Top bracket: 37% at $500,000 individual / $600,000 married</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Alternative Minimum Tax</strong></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemption: $54,300 / $84,500</td>
<td>Phase-out threshold: $120,700 / $160,900</td>
<td>Exemption: $70,300 / $109,400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Standard Deduction</strong></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,350 / $12,700</td>
<td>$12,000 / $24,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>State and local tax deduction</strong></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductible&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Capped at $10,000 on state / local income, property and sales tax</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Mortgage interest deduction</strong></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest deductible up to $1mm for primary and secondary homes; $100k home equity debt</td>
<td>Limited to $750,000 new debt on primary and secondary homes; deduction for home equity debt up to $750,000 allowed when debt is used to make home repairs and/or improvements</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Estate, gift and Generation Skipping Transfer (GST) tax</strong></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5.49mm / $10.98mm</td>
<td>$11.18mm / $22.36mm&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tax rate for owners of pass-through entities</strong></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business income taxed at individual rate (max 39.6%)</td>
<td>May deduct 20% of qualified business income&lt;sup&gt;4&lt;/sup&gt;; 29.6% effective rate</td>
<td></td>
</tr>
</tbody>
</table>

---

<sup>1</sup> 2018 top income tax bracket 40.8% inclusive of 3.8% Medicare Surtax on earned/investment income; for 2017, top rate was 43.4%.<br>2 Deduction was limited or phased-out for AMT filers.<br>3 Subject to IRS guidance.<br>4 The 20% deduction phases out for individuals earning $157,500/$315,000 (married) and disappears entirely for individuals with income exceeding $207,500/$415,000 (married) engaged in a “specific service business.” These are businesses that focus on health, law, consulting, athletics, financial services, brokerage service or where the main asset is the skill or reputation of employees/owners. For business owners in other businesses and with income above the thresholds, the deduction may not exceed 50% of owner’s share of W-2 employee wages paid by the business or 25% of W-2 wages paid by the business plus 2.5% of original purchase price of long-term property used in production of income. Further IRS guidance to follow.
The Tax Cuts and Jobs Act: Marginal tax brackets

Federal income tax rates
Comparison of marginal tax brackets by filing status

MARRIED FILING JOINTLY

<table>
<thead>
<tr>
<th>Income</th>
<th>2017</th>
<th>TCJA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0k</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>100</td>
<td>15%</td>
<td>22%</td>
</tr>
<tr>
<td>200</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>300</td>
<td>28%</td>
<td>32%</td>
</tr>
<tr>
<td>400</td>
<td>33%</td>
<td>35%</td>
</tr>
<tr>
<td>500</td>
<td>35%</td>
<td>37%</td>
</tr>
<tr>
<td>600+</td>
<td>39.6%</td>
<td></td>
</tr>
</tbody>
</table>

Capital gains

<table>
<thead>
<tr>
<th>Income</th>
<th>2017</th>
<th>TCJA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
<td>15%</td>
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<td>0%</td>
</tr>
<tr>
<td>200</td>
<td>25%</td>
<td>12%</td>
</tr>
<tr>
<td>300</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>400</td>
<td>33%</td>
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</tr>
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<td>600+</td>
<td>39.6%</td>
<td>37%</td>
</tr>
</tbody>
</table>

INDIVIDUAL

<table>
<thead>
<tr>
<th>Income</th>
<th>2017</th>
<th>TCJA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0k</td>
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<td>12%</td>
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Capital gains

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<tr>
<td>600+</td>
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<td>37%</td>
</tr>
</tbody>
</table>

Top tax rate not reflective of additional 3.8% Medicare Surtax on unearned/investment income for individuals/married couples with MAGI at or exceeding $200,000/$250,000. Marginal tax brackets under TCJA will sunset after 2025. Note that capital gains and qualified dividends are aligned to income thresholds and not marginal brackets under the new law. In the future, tax brackets will be adjusted for inflation using chained-CPI (also known as C-CPI-U); this is a permanent feature under TCJA.
The Tax Cuts and Jobs Act: Potential impact on effective tax rates

**Salaried worker with high deductions**

Effective federal and state tax rate, 2018

- **Previous tax law**
- **TCJA**
- **Difference**

**Business owner with high deductions**

Example assumes income for a married couple filing jointly. Effective tax rates are computed as total federal, state and local income taxes paid as a percentage of gross income, which includes all forms of earned and unearned income. Analysis does not reflect the impact of tax credits, although this example assumes taxpayers will receive two child tax credits. Home values were estimated as a multiple of income from data based on the Home Mortgage Disclosure Act. Home loan to value ratio is 80% and mortgage interest rate of 5%. See slide 24 for explanation of how 20% deduction is applied to taxable income of certain pass-through business owners. In this scenario, we assume the pass-through entity pays out 50% of its income as W-2 wages and qualifies for the full deduction.


**YOU TAKE THE GOOD, YOU TAKE THE BAD**

While the Tax Cuts and Jobs Act (TCJA) is expected to benefit many taxpayers, it is unclear how some households who previously had high itemized deductions may fare, as they balance the benefit of lower marginal rates with new limits on itemized deductions.

Be sure to work with a tax professional to understand how the changes may affect your overall tax bill.
Comparison of state taxes paid by a retiree household

MODEL ASSUMPTIONS
Scenario based on retired married couple filing jointly

State income tax on 1 –
- Annual retirement plan distribution: $80,000
- Total Social Security benefits: $42,000

Property tax on 2: 2.5x median home value by state

Sales/average local sales tax on 3: Remaining income net of federal & state income and property tax

Tax favorability based on household overall effective state tax rate: Top tax friendly (<8%), Tax friendly (8%-9.9%), Less tax friendly (10%-13%), Not tax friendly (>13%). Retired married household age 65. 1 State income tax liability is based on all taxable sources of retirement income minus allowable state personal exemptions and a standard deduction. State-specific exemptions, deductions and/or credits related to eligible retirement income and Social Security are included. States with no income tax: AK, FL, NV, SD, TX, WA, WY. States that tax interest and dividends only: TN and NH. States that tax Social Security: CO, CT, KS, MN, MO, MT, NE, NM, ND, RI, UT, VT, WV. States that do not tax retirement plan distributions or Social Security: IL, MS, PA. 2 State property tax applies to home value only and includes state-specific homestead exemptions/credits. 3 States with no sales tax: AK, DE, MT, NH, OR (local taxes may apply).

Of note: CA imposes a 1% surtax on taxpayers earning more than $1mm ($1,074,996 married) for a top marginal tax rate of 13.3%. NYC levies an additional 3.078-3.876% on taxable income. From 2018 to 2025, certain New York tax rates will be incrementally reduced. HI top marginal income tax rate reduced to 8.25% in 2017 and increased to 11% in 2018. Illinois tax rate increased to 4.95% on all income in 2018.

Source: J.P. Morgan Asset Management. The presenter of this slide is not a tax or legal advisor, and this slide should not be used as such. Clients should consult a personal tax or legal advisor prior to making any tax- or legal-related investment decisions.
A closer look at state taxes paid by a retiree household

Composition of estimated state taxes

- **State income tax** on $1M ($1,074,996 married) for a top marginal tax rate of 13.3%.
- **Property tax** on median home value by state.
- **Sales/average local sales tax** on remaining income net of federal & state income and property tax.

**Effective state tax rates**

<table>
<thead>
<tr>
<th>Effective state tax rate</th>
<th>&lt;8%</th>
<th>8%-9.9%</th>
<th>10%-13%</th>
<th>&gt;13%</th>
</tr>
</thead>
</table>

Retired married household age 65. 1 State income tax liability is based on all taxable sources of retirement income minus allowable state personal exemptions and a standard deduction. State-specific exemptions, deductions and/or credits related to eligible retirement income and Social Security are included. States with no income tax: AK, FL, NV, SD, TX, WA, WY. States that tax interest and dividends only: TN and NH. States that tax Social Security: CO, CT, KS, MN, MO, MT, NE, NM, ND, RI, UT, VT, WV. States that do not tax retirement plan distributions or Social Security: IL, MS, PA. 2 State property tax applies to home value only and includes state-specific homestead exemptions/credits. 3 States with no sales tax: AK, DE, MT, NH, OR (local taxes may apply).

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Source: J.P. Morgan Asset Management. The presenter of this slide is not a tax or legal advisor, and this slide should not be used as such. Clients should consult a personal tax or legal advisor prior to making any tax- or legal-related investment decisions.
Consider proactive tax management strategies

Taxable vs. tax-deferred investing over a 30-year timeframe

<table>
<thead>
<tr>
<th>Account value</th>
<th>Account value after taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAX-DEFERRED ACCOUNT</td>
<td>TAXABLE ACCOUNT</td>
</tr>
<tr>
<td>$460,909</td>
<td>$315,196</td>
</tr>
<tr>
<td>$425,400</td>
<td>(35% tax rate)</td>
</tr>
<tr>
<td>$389,891</td>
<td>12% tax rate</td>
</tr>
<tr>
<td>$357,341</td>
<td>24% tax rate</td>
</tr>
<tr>
<td>$125,909</td>
<td>35% tax rate</td>
</tr>
</tbody>
</table>

KEEP A BIGGER SLICE
Tax-advantaged accounts can shelter income-producing investments from current income taxation and result in greater long-term growth than taxable accounts. Actively managing your tax picture in retirement may help you keep even more of your tax-deferred wealth.

Source: J.P. Morgan Asset Management. Assumes $5,500 after-tax contributions at the beginning of each year for 30 years and 6.0% annual investment return that is assumed to be subject to ordinary income taxes (capital gains and qualified dividends are not considered in this analysis). Tax-deferred account balance is taken as lump sum and taxed at the 12%, 24% and 35% federal tax rate, respectively, at time of withdrawal. Taxable account contributions are after tax and assume a 35% federal tax rate during accumulation. This hypothetical illustration is not indicative of any specific investment and does not reflect the impact of fees or expenses. This chart is shown for illustrative purposes only. Past performance is no guarantee of future results.
Rising annual health care costs in retirement

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.

Notes: Age 85 estimated total median cost in 2018 is $7,097. 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. Analysis includes the most comprehensive and expensive plan available in each state.

Parts B and D additional premiums are calculated from federal tax returns two years prior; individuals may file for an exception on form SSA-44 if they reduce or stop work. For the definition of MAGI, please see slide 41.

Source: Employee Benefit Research Institute (EBRI) data as of December 31, 2017; SelectQuote data as of January 18, 2018; Centers for Medicare and Medicaid Services website, January 22, 2018; CMS Annual Release of Part D National Average Bid Amount, July 31, 2017; 2017 Medicare Trustees Report, July 13, 2017; Consumer Expenditure Survey data as of December 31, 2017; J.P. Morgan analysis.
Projected Medicare cost growth

Long-term projected average annual Medicare cost increases for individuals

- **6.5%**
- **5.8%**
- **4.2%**

**Uncertainties** (health care inflation variability, Medicare solvency issues)

- **Increased use of prescriptions, vision, dental and hearing services**

- **Medigap premium increases due to age thresholds**

- **Inflation** Medicare premiums and related out-of-pocket costs

Note: Excludes government costs. National weighted average by state population used to estimate Medigap age-related premium increases; these will vary by geography. Medigap premiums usually increase due to age, in addition to annual inflation, except for most policies in the following states, which are community rated (all ages experience the same rates): AR, CT, MA, ME, MN, NY, VT, WA, and the states that are mostly issue-age rated (rates are the same for all who first purchased at a particular age): AZ, FL, GA, ID, MO and NH. Analysis includes the most comprehensive Medigap plan available in each state.

Source: Employee Benefit Research Institute (EBRI) data as of December 31, 2017; SelectQuote data as of January 18, 2018; Centers for Medicare and Medicaid Services website, January 22, 2018; CMS Annual Release of Part D National Average Bid Amount, July 31, 2017; 2017 Medicare Trustees Report, July 13, 2017; Consumer Expenditure Survey data as of December 31, 2017; J.P. Morgan analysis.
Variation in Medicare Advantage costs

Estimated Medicare Advantage with Part D and out-of-pocket expenses
Annual amount per person

Total costs = annual premium + out-of-pocket costs for those with relatively low costs (those in the lowest third of the cost distribution), median costs and high costs (those in the highest third of the cost distribution).

Age 85 estimated median cost in 2018 is $4,617. Cost estimates above show age 85 in 2038 adjusted for inflation and increased use of medical care at older ages. Since plans are sold by private companies, premiums will vary based on plan characteristics. Out-of-pocket expenses, including out-of-pocket prescription costs, will vary by plan and include co-pays and deductibles. Those with high incomes pay higher premiums (above $85,000 single or $170,000 filing jointly).

Source: Employee Benefit Research Institute (EBRI) data as of December 31, 2017; SelectQuote data as of January 18, 2018; 2017 Medicare Trustees Report, July 13, 2017; J.P. Morgan analysis.

DRAMATIC DIFFERENCES IN COSTS DEPENDING ON HEALTH

Be prepared to pay more for health care in the event you experience a health issue, which becomes more common as one ages.

• Be aware: Although Medicare Advantage plans have out-of-pocket caps, those limits do not include prescriptions
• Consider maintaining an emergency reserve fund for high out-of-pocket cost years
Long-term care considerations

New long-term care insurance claims

By type

- Home care: 52%
- Nursing home: 28%
- Assisted living: 20%

By age

- < 70: 68%
- 70 - 79: 24%
- 80 +: 8%

LONG-TERM CARE: NOT JUST NURSING HOMES

Many individuals will need long-term care, which often starts with home care and may progress to assisted living or care in a nursing home.

While the majority had care needs at age 80 or older, nearly one-third experienced a care need before then.

Source (charts): American Long-Term Care Association for Long-Term Care Insurance, 2015 LTC Sourcebook.

Annualized historical inflation for nursing home (private room): 3.8%; assisted living (one-bedroom): 2.6%; home health aide: 2.5%. 5-year CAGR represents the compound annual growth rate based on Genworth Cost of Care Survey. Source for cost of care inflation information: Genworth 2017 Cost of Care Survey, conducted by CareScout®. © 2017 Genworth Financial, Inc. All rights reserved. Methodology document for inflation information: https://www.genworth.com/dam/Americas/US/PDFs/Consumer/corporate/cost-of-care/131168_081417.pdf
Significant long-term care needs include requiring assistance with at least 2 or more activities of daily living that are expected to last at least 90 days or the need for substantial supervision for health and safety threats due to severe cognitive impairment. Activities of daily living include eating, dressing, bathing, transferring and toileting. Those who meet the cognitive impairment criteria who require care for less than 90 days are included in the 90 days – 1 year category above.

Not included: non-acute care for rehabilitation; less severe impairment such as requiring assistance with 1 activity of daily living; needing assistance with incidental activities of daily living such as shopping, cooking, taking medication, using transportation and paying bills.

Source: U.S. Department of Health and Human Services, ASPE Issue Brief, Revised February 2016, Table 1.
THE COST OF CARE
There can be significant variations in cost depending on where care is utilized.

Source: Genworth 2017 Cost of Care Survey, conducted by CareScout®, June 2017. Annual median costs based on 365 days of care. © 2017 Genworth Financial, Inc. All rights reserved.
A closer look at annual cost of nursing home care (private room)

Range of annual nursing home costs

- State median
- Range of cities within each state: maximum and minimum

THE COST OF CARE
Cost of care will depend on state, city and the facility chosen.

1 The range is representative of the maximum and minimum average costs by surveyed city within each state. Data is limited to the availability of the surveyed cities so every city within each state may not be represented.


For more information on cost of care from Genworth see: https://www.genworth.com/about-us/industry-expertise/cost-of-care.html

Source: Genworth 2017 Cost of Care Survey, conducted by CareScout®, June 2017. Annual median costs based on 365 days of care.

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Goals-based wealth management

**Short-term goals**
Includes emergency reserve fund of total spending needs for 3-6 months

**Medium-term goals**
5-10 years, e.g. college, home

**Long-term goals**
15+ years, e.g. retirement

**Range of stock, bond and blended total returns**
Annual total returns, 1950-2017

**DIVIDE AND CONQUER**
Aligning your investment strategy by goal can help you take different levels of risk based on varying time horizons and make sure you are saving enough to accomplish all of your goals—not just the ones that occur first.

Source (top chart): J.P. Morgan Asset Management.

Returns shown are based on calendar year returns from 1950 to 2017. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Barclays Aggregate thereafter.

Note: Portfolio allocations are hypothetical and are for illustrative purposes only. They were created to illustrate different risk/return profiles and are not meant to represent actual asset allocation.
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.
Structuring a portfolio in retirement: The bucket strategy

Investing

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.

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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

<table>
<thead>
<tr>
<th>INVESTMENT RISK</th>
<th>INVESTMENT RISK</th>
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</thead>
<tbody>
<tr>
<td><strong>Spending</strong></td>
<td><strong>Investment income &amp; distributions</strong></td>
</tr>
<tr>
<td><strong>Cushion</strong></td>
<td><strong>Income gap</strong></td>
</tr>
</tbody>
</table>

PORTFOLIO TIME HORIZON

<table>
<thead>
<tr>
<th>Near-term needs</th>
<th>Intermediate-term needs</th>
<th>Longer-term &amp; legacy needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>15+ years</td>
<td></td>
</tr>
</tbody>
</table>

J.P. Morgan Asset Management
Impact of being out of the market

Returns of the S&P 500
Performance of a $10,000 investment between January 1, 1998 and December 29, 2017

Fully Invested 7.20% return $40,135
Missed 10 best days 3.53% $20,030
Missed 20 best days 1.15% $12,569
Missed 30 best days -0.91% $8,331
Missed 40 best days -2.80% $5,669
Missed 50 best days -4.52% $3,965
Missed 60 best days -6.11% $2,834

Six of the best 10 days occurred within two weeks of the 10 worst days
- The best day of 2015 – August 26 – was only 2 days after the worst day – August 24

PLAN TO STAY INVESTED
Trying to time the market is extremely difficult to do. Market lows often result in emotional decision making. Investing for the long term while managing volatility can result in a better retirement outcome.

Source: J.P. Morgan Asset Management analysis using data from Bloomberg. Returns are based on the S&P 500 Total Return Index, an unmanaged, capitalization-weighted index that measures the performance of 500 large capitalization domestic stocks representing all major industries. Indices do not include fees or operating expenses and are not available for actual investment. The hypothetical performance calculations are shown for illustrative purposes only and are not meant to be representative of actual results while investing over the time periods shown. The hypothetical performance calculations for the respective strategies are shown gross of fees. If fees were included returns would be lower. Hypothetical performance returns reflect the reinvestment of all dividends. The hypothetical performance results have certain inherent limitations. Unlike an actual performance record, they do not reflect actual trading, liquidity constraints, fees and other costs. Also, since the trades have not actually been executed, the results may have under- or overcompensated for the impact of certain market factors such as lack of liquidity. Simulated trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. Returns will fluctuate and an investment upon redemption may be worth more or less than its original value. Past performance is not indicative of future returns. An individual cannot invest directly in an index. Data as of December 29, 2017.
### Federal income tax rates applicable to taxable income

<table>
<thead>
<tr>
<th>Tax rate</th>
<th>Single filers</th>
<th>Married filing jointly</th>
<th>Capital gains &amp; dividends</th>
<th>Medicare tax on earned income</th>
<th>Medicare tax on investment income</th>
<th>Limits to itemized deductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>Up to $9,525</td>
<td>Up to $19,050</td>
<td>0% [up to $38,600 (single) / $77,200 (married)]</td>
<td>2.90% (includes 1.45% employer portion and 1.45% employee portion)</td>
<td>0%</td>
<td>-Medical expenses greater than 7.5% of AGI deductible**</td>
</tr>
<tr>
<td>12%</td>
<td>$9,525-$38,700</td>
<td>$19,050-$77,400</td>
<td>15% [up to $425,800 (single) / $479,000 (married)]</td>
<td></td>
<td>0%</td>
<td>-SALT (state and local taxes) deduction capped at $10,000</td>
</tr>
<tr>
<td>22%</td>
<td>$38,700-$82,500</td>
<td>$77,400-$165,000</td>
<td>3.80% (includes 2.90% tax referenced above plus additional 0.90% tax for earned income above MAGI* $200,000/$250,000 threshold)</td>
<td></td>
<td>3.80% (additional tax will be levied on lesser of i) net investment income or ii) excess MAGI above $200,000/$250,000 thresholds)</td>
<td>-Mortgage interest deduction limited to primary/secondary homes with up to $750,000 new debt. Deduction is allowed on new home equity debt that is used to repair, build or improve upon home.</td>
</tr>
<tr>
<td>24%</td>
<td>$82,500-$157,500</td>
<td>$165,000-$315,000</td>
<td>20%</td>
<td></td>
<td></td>
<td>--Cash charitable gifts deductible up to 60% of AGI</td>
</tr>
<tr>
<td>32%</td>
<td>$157,500-$200,000</td>
<td>$315,000-$400,000</td>
<td>3.80% (includes 2.90% tax referenced above plus additional 0.90% tax for earned income above MAGI* $200,000/$250,000 threshold)</td>
<td></td>
<td></td>
<td>-Misc. expenses subject to 2% AGI floor repealed</td>
</tr>
<tr>
<td>35%</td>
<td>$200,000-$500,000</td>
<td>$400,000-$600,000</td>
<td>20%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37%</td>
<td>$500,000 or more</td>
<td>$600,000 or more</td>
<td>20%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Top/tax rates for ordinary income, capital gains and dividend income

<table>
<thead>
<tr>
<th>Type of gain</th>
<th>Maximum rate</th>
<th>Alternative minimum tax (AMT) exemption**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top rate for ordinary income &amp; non-qualified dividends</td>
<td>37%/40.8%*</td>
<td></td>
</tr>
<tr>
<td>Short-term capital gains (assets held 12 months or less)</td>
<td>37%/40.8%*</td>
<td></td>
</tr>
<tr>
<td>Long-term capital gains (assets held more than 12 months) &amp; qualified dividends</td>
<td>20%/23.8%*</td>
<td></td>
</tr>
</tbody>
</table>

Federal estate, generation-skipping transfer (GST) tax & gift tax exemption

| Top federal estate tax rate | 40% |
| Federal estate, GST & gift tax exemption | $11.18 million per individual/$22.36 million per couple* |
| Annual gift tax exclusion     | $15,000 ($30,000 per couple) |

*Includes top tax rate plus 3.8% Medicare tax on net investment income beyond MAGI threshold. **The exemption amount is reduced .25 for every $1 of AMTI (income) above the threshold amount for the taxpayer’s filing status.

*Increased levels expire after 2025.
### Traditional IRAs vs. Roth IRAs—2017/2018

<table>
<thead>
<tr>
<th>Traditional IRA</th>
<th>Roth IRA</th>
<th>Roth IRA conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum contribution</strong></td>
<td>• $5,500 (earned income)</td>
<td>• $5,500 (earned income)</td>
</tr>
</tbody>
</table>
| | • $6,500 (age 50 and over)
| | • Reduced by Roth IRA contributions | • $6,500 (age 50 and over)
| | | • Reduced by Traditional IRA contributions |
| **Age limits to contribute** | Under 70½ in the year of contribution | None | None |
| **Income phase-out ranges for contribution deductibility** | | | |
| 2017 | Single: $62,000-$72,000<br>Married: $99,000-$119,000 | All contributions are non-deductible | N/A |
| 2018 | Single: $63,000-$73,000<br>Married: $101,000-$121,000 | | |
| **Phase-out ranges for Roth contribution eligibility** | | | |
| 2017 | Single: $118,000-$133,000<br>Married: $186,000-$196,000 | | N/A |
| 2018 | Single: $120,000-$135,000<br>Married: $189,000-$199,000 | | |
| **Federal tax treatment** | • Investment growth is tax deferred and contributions may be tax deductible. Deductible contributions and investment gains are taxed as ordinary income upon withdrawal. | • Taxes are due upon conversion of account balances not yet taxed. | |
| | • If non-deductible contributions have been made, each withdrawal is taxed proportionately on a pro-rata basis, taking into consideration all contributions made to all Traditional IRAs owned. | • Qualified withdrawals of contributions at any time are tax free and IRS penalty free; converted amounts may be withdrawn tax free.³ | |
| **Early withdrawals** | Early withdrawals before age 59½ are generally subject to a 10% IRS penalty unless certain exceptions apply. | | |
| **Mandatory withdrawals** | Distributions must begin by April 1 of the calendar year following the year the account owner turns age 70½. | None for account owner | None for account owner |
| **Deadline to contribute** | 2017: April 17, 2018<br>2018: April 15, 2019 | 2017: April 17, 2018<br>2018: April 15, 2019 | N/A |

¹ Must be age 50 or older by December 31 of the contribution year.
² Assumes participation in an employer’s retirement plan. No income limits apply when investors and spouses are not covered by a retirement plan at work. Income limits based on MAGI. For the definition of MAGI, please see slide 41.
³ Distributions from a conversion amount must satisfy a five-year investment period to avoid the 10% penalty. This pertains only to the conversion amount that was treated as income for tax purposes. The presenter of this slide is not a tax or legal advisor. Clients should consult a personal tax or legal advisor prior to making any tax- or legal-related investment decisions.
## Retirement plan contribution and deferral limits—2017/2018

<table>
<thead>
<tr>
<th>Type of Retirement Account</th>
<th>Specifics</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>401(k), 403(b), 457(b)</td>
<td>401(k) elective deferral limit/catch-up contribution (age 50 and over)</td>
<td>$18,000/$24,000</td>
<td>$18,500/$24,500</td>
</tr>
<tr>
<td></td>
<td>Annual defined contribution limit</td>
<td>$54,000</td>
<td>$55,000</td>
</tr>
<tr>
<td></td>
<td>Annual compensation limit</td>
<td>$270,000</td>
<td>$275,000</td>
</tr>
<tr>
<td></td>
<td>Highly compensated employees</td>
<td>$120,000</td>
<td>$120,000</td>
</tr>
<tr>
<td></td>
<td>403(b)/457 elective deferrals/catch-up contribution (age 50 and over)</td>
<td>$18,000/$24,000</td>
<td>$18,500/$24,500</td>
</tr>
<tr>
<td>SIMPLE IRA</td>
<td>SIMPLE employee deferrals/catch-up deferral (age 50 and over)</td>
<td>$12,500/$15,500</td>
<td>$12,500/$15,500</td>
</tr>
<tr>
<td>SEP IRA</td>
<td>Maximum contribution</td>
<td>$54,000</td>
<td>$55,000</td>
</tr>
<tr>
<td></td>
<td>SEP minimum compensation</td>
<td>$600</td>
<td>$600</td>
</tr>
<tr>
<td></td>
<td>SEP annual compensation limit</td>
<td>$270,000</td>
<td>$275,000</td>
</tr>
<tr>
<td>Health Savings Accounts</td>
<td>Maximum contribution amount/over age 55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(HSAs)</td>
<td>Single: $3,400/$4,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family: $6,750/$7,750</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minimum deductible</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single: $1,300</td>
<td>$1,350</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family: $2,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maximum out-of-pocket expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single: $6,550</td>
<td>$6,650</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family: $13,100</td>
<td>$13,300</td>
<td></td>
</tr>
<tr>
<td>Social Security</td>
<td>Wage base</td>
<td>$127,200</td>
<td>$128,400</td>
</tr>
<tr>
<td></td>
<td>Maximum earnings test exempt amounts under FRA for entire calendar year</td>
<td>$1,410 p/month ($16,920 p/year)/$3,740 p/month</td>
<td>$1,420 p/month ($17,040 p/year)/$3,780 p/month</td>
</tr>
<tr>
<td></td>
<td>during year of FRA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defined benefit –</td>
<td>Maximum Social Security benefit at FRA</td>
<td>$2,687 p/month</td>
<td>$2,788 p/month</td>
</tr>
<tr>
<td>Maximum annual benefit at</td>
<td>retirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>retirement</td>
<td>$215,000</td>
<td>$220,000</td>
<td></td>
</tr>
</tbody>
</table>

1. Employer may either match employee’s salary reduction contributions dollar for dollar up to 3% of employee’s compensation or make non-elective contributions equal to 2% of compensation up to $275,000.
2. Employer contributions may not exceed $55,000 or 25% of compensation. Other rules apply for self-employed individuals.
4. In calendar years before FRA, benefit reduced $1 for every $2 of earned income above the limit; during year of FRA, benefit reduced $1 for every $3 of earned income in months prior to FRA.
**Options to consider when retiring or changing jobs**

There are typically four options to consider when leaving an employer’s retirement plan, each with its benefits and considerations. Converting a portion of tax-deferred assets to a Roth IRA may be a fifth option to consider in certain circumstances described below.

<table>
<thead>
<tr>
<th>Options</th>
<th>Potential benefits</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Roll the retirement account into an IRA account (IRA rollover)  
(May also roll the Roth 401(k) portion of a retirement account into a Roth IRA) | • No income taxes or penalties for a direct rollover  
• Assets maintain tax-deferred status  
• Ability to make additional contributions subject to income limitations  
• Potential for a broader range of investment choices  
• Opportunity to consolidate multiple retirement accounts  
• If balance includes employer stock, may be eligible for preferable tax treatment (Net Unrealized Appreciation) if the stock is not rolled over | • Loans are not allowed  
• Fees may vary, and may be higher than what is charged in an employer plan |
| Leave the money in former employer plan | • Not a taxable event  
• Assets maintain tax-deferred status  
• If you are at least age 55 and are separated from service, you may be able to take withdrawals without penalties  
• Fees may be lower depending on plan size | • Investment options vary according to the plan and may be more limited  
• Ability to leave assets in the plan as well as ongoing plan options are subject to policies and contractual terms of the plan  
• Some plans may not provide periodic payments to retirees |
| Move the assets into a new employer plan | • No income taxes or penalties for a direct rollover  
• Assets maintain tax-deferred status  
• New employer plan may allow loans  
• Ability to make additional contributions potentially with a company match  
• Fees may be lower based on plan size and size of employer (number of participants) | • Investment options vary according to the plan and may be more limited  
• Assets are subject to policies or terms of new employer plan |
| Withdraw balance of assets or “cash out” of plan | • Individual may use remaining funds (after taxes and potential penalties) for other purposes | • Upon withdrawal, account balance is subject to ordinary income tax on pre-tax contributions and investment earnings  
• 20% automatically withheld for taxes upon distribution  
• Additional 10% withdrawal penalty tax may apply for owners younger than age 59½  
• Additional federal, state or local income taxes may apply  
• Loss of tax-deferred growth of assets |
| Convert all or part of retirement account into Roth IRA (Roth IRA conversion) | • May provide income tax diversification in retirement  
• After taxes are paid at conversion, future distributions are tax free  
• Required minimum distributions do not apply at 70½ | • The pre-tax amount is included in gross income in the year of conversion (and is subject to the aggregation rule)  
• Sufficient taxable assets to pay income taxes owed is strongly recommended |

---

1 In a direct rollover, qualified retirement assets are transferred directly from the former employer plan to the institution holding the new IRA or plan account, and no taxes or penalties will apply. If an owner chooses to receive the plan assets first, the distribution is subject to 20% mandatory withholding and the entire amount of the distribution must be deposited into a new plan or IRA account within 60 days of receipt to avoid further potential taxes and penalties.

2 Subject to IRA contribution limits: $5,500 in 2018 ($6,500 if age 50 or older); single filers may make Roth contributions if MAGI is $120,000 or below; married filing jointly if MAGI is $189,000 or below; phase-outs on contributions thereafter.

3 With the Net Unrealized Appreciation (NUA) strategy, an employee may transfer the employer stock portion of a retirement account to a brokerage account. The employee pays ordinary income tax on the cost basis of the stock at the time of transfer, but will owe capital gains tax when he/she later sells the stock.

4 Subject to 5-year Roth account holding period and age requirements.
### Power of attorney and asset transfer considerations

**Principal**: Individual who directs another to act for his/her own benefit | **Agent**: Individual appointed to fulfill specified directives of principal

<table>
<thead>
<tr>
<th></th>
<th>APPOINTS OR INSTRUCTS</th>
<th>TIMING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appoints an agent to manage the day-to-day affairs of the principal</td>
<td>Provides instruction to manage the health care of the principal</td>
</tr>
<tr>
<td>General power of attorney (POA)(^1)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Durable power of attorney(^1)</td>
<td>✓ Used in place of General POA</td>
<td>✓</td>
</tr>
<tr>
<td>Health care proxy</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Advance health care directive / Living will(^2)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Will</td>
<td></td>
<td>✓ Review/update periodically</td>
</tr>
<tr>
<td>Revocable trust(^3)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Irrevocable trust(^4)</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

---

\(^1\) Terminates when the principal becomes incapacitated or unable to make decisions about finances and health, whereas Durable POA continues when principal becomes incapacitated.  
\(^2\) Principal provides written instructions in advance to ensure specific medical care in case he/she becomes incapacitated; many states combine the living will with durable power of attorney. Some states may not recognize health care directive of another state.  
\(^3\) Provides instructions in the event of principal’s mental disability and to avoid probate of his/her assets; principal is the owner and beneficiary of the trust; the trust may be revoked at any time during life and becomes irrevocable at death.  
\(^4\) Principal/grantor gifts assets to trust during life to remove from his/her estate, or at death, assets are moved to the trust. Trust becomes owner of assets and any future growth is removed from grantor’s taxable estate.
Medicare is a government health care program available to those who have paid Medicare taxes while working or to non-working spouses of such individuals. Medicare is available when these individuals reach age 65. Citizens who have never paid Medicare taxes may be eligible if they pay a Medicare premium. 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.

### What is Medicare?

Medicare is available when these individuals reach age 65. Citizens who have never paid Medicare taxes may be eligible if they pay a Medicare premium. 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.

<table>
<thead>
<tr>
<th>Part A: inpatient hospital insurance</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part B: doctors, tests and outpatient hospital insurance</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medigap: standardized plans that cover Part A and Part B co-pays and deductibles</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td>Not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part D: prescription drug insurance</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Most plans include Part D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prescription drug co-pays and deductibles</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not covered</td>
<td>Not covered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Most vision, dental and hearing expenses</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not covered</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coverage varies by plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-term care*</th>
<th>Traditional Medicare</th>
<th>Medicare Advantage (usually limited to a network of providers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not covered</td>
<td>Not covered</td>
</tr>
</tbody>
</table>

* 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.
65 and working: Should I sign up for Medicare?

START HERE

Does your workplace employ 20+ people?¹

Y ☑️ N ☐️

Do you contribute to a Health Savings Account (HSA)?

Y ☑️ N ☐️

Have you filed for Social Security benefits?

Y ☑️ N ☐️

Sign up for Medicare¹
- Enroll in Parts A, B and D up to 3 months before your 65th birthday month to ensure no gap in coverage and no late enrollment penalties
- Decide on and enroll in Medigap or Medicare Advantage (most Medicare Advantage plans include Part D)

Consider signing up for Part A
- Part A is free for people who paid payroll taxes for 40+ quarters (about 10 years)
- Employer coverage is primary (check with plan administrator about any conflicts)

Consider not signing up for Medicare
- "Creditable" employer insurance benefit is primary (pays first)
- IRS tax penalties apply if you sign up for Medicare and also contribute to an HSA

Stop HSA contributions and consider opting out of Medicare Part B
- Once you start Social Security benefits, you will automatically be enrolled in Part A, retroactive six months back to age 65
- IRS tax penalties apply if you are enrolled in Part A and contribute to an HSA
- You may contact Medicare to opt out of Part B

WHAT IF I HAVE COBRA OR RETIREE COVERAGE?
- You must sign up for Medicare when you are first eligible, or you will face late enrollment penalties for Part B and possible underwriting for Medigap if you sign up for these later.
- Most retiree coverage works with Medicare Parts A and B (check with your plan administrator).
- If your COBRA coverage (a temporary extension of your employer coverage) or retiree prescription plan will continue and is "creditable" (ask your plan administrator for documentation), you may choose to delay enrollment in Part D without penalty.

¹ Most employer coverage for <20 people will end at age 65 or become secondary after Medicare has paid. 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. For more information see www.mymedicarematters.org/enrollment/am-i-eligible, sponsored by the National Council on Aging and Medicare.gov.
Understanding annuities: Which annuity may be right for you?

<table>
<thead>
<tr>
<th>RISK TOLERANCE</th>
<th>CONTRACT GROWTH AND PAYOUT</th>
<th>TYPE OF ANNUITY</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCOME NOW</td>
<td></td>
<td>Single Premium Immediate Annuity (SPIA)</td>
<td>Single premium purchase payment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deferred Rate Annuity</td>
<td>Purchase payments grow at a fixed or market rate for a specified period of time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deferred Income Annuity (DIA)</td>
<td>Often purchased to provide income in late retirement years^1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Qualified Longevity Annuity Contract (QLAC)</td>
<td>May transfer 25% or up to $130,000 from retirement account to fund annuity; this amount exempt from RMDs at age 70% Must begin distributions by age 85 or as specified by contract</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fixed Indexed Annuity (FIA)</td>
<td>Account growth is tied to a particular index (i.e. S&amp;P 500) with a cap on growth in exchange for downside protection ^2 Most contracts provide guaranteed minimum fixed growth</td>
</tr>
<tr>
<td>INCOME LATER^4</td>
<td>Risk averse investor</td>
<td>Fixed rate of growth Fixed income payout</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Variable rate of growth Variable payout with fixed minimum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk averse/moderate investor</td>
<td>Variable rate of growth Variable income with no guaranteed minimum payout^3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate investor</td>
<td>Variable rate of growth Variable income with no guaranteed minimum payout^3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate/ aggressive investor</td>
<td>Variable rate of growth Variable income with no guaranteed minimum payout^3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Variable Annuity (VA)</td>
<td>Purchase payments are invested in subaccounts like mutual funds Guaranteed living benefits (&quot;GLBs&quot;)^2 may be available for additional cost to provide minimum guaranteed account growth and/or minimum guaranteed retirement income</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Investment Only Variable Annuity (IOVA)</td>
<td>Purchase payments invested in a variety of subaccounts, including alternatives and hedge funds Used for tax deferral, estate planning and asset location</td>
</tr>
</tbody>
</table>

^1 DIAIs are also known as longevity annuities and purchased during healthy years to provide income in later years when illness, dementia or other disability may set in and hinder sound income planning decisions. ^2 Some contracts contain caps on growth and limit gains attributable to account based on participation rate or other factors. ^3 Guaranteed living benefits and death benefits may be available with certain fixed and variable annuity products at additional cost. ^4 While non-qualified annuities are not generally subject to RMDs, state laws requiring contract annuitization may apply. All guarantees are based on the claims-paying ability of the issuing insurance company. When evaluating the purchase of a variable annuity, clients should be aware that variable annuities are long-term investment vehicles designed for retirement purposes and will fluctuate in value; annuities have limitation; and investing involves market risk, including the possible loss of principal.
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.

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