

RETIREMENT  
INSIGHTS

# Guide to Retirement<sup>SM</sup>

2014 Edition

*J.P. Morgan*

**J.P.Morgan**  
Asset Management

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## Retirement landscape

“Retirement” is different now than it was for previous generations. Many issues are interconnected, which need careful consideration when developing a retirement strategy.

### Common misconceptions

*“I’ll continue to work during retirement.”*

- 68% of employed Americans plan to work beyond age 65 – but only 25% of current retirees actually did.
- A number of factors can cause people to retire earlier than expected, including health problems, employer issues and family obligations. [Page 8](#)

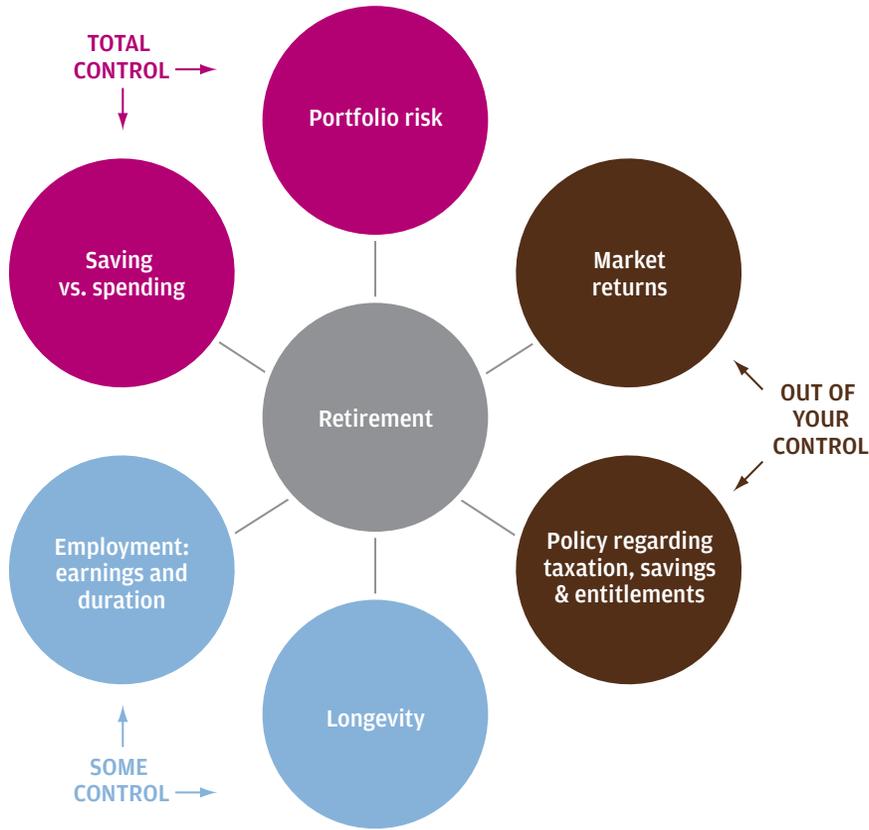
*“I need to claim my Social Security benefits as soon as I can.”*

- Claiming Social Security before full retirement age can significantly reduce your benefits. [Page 9](#)
- Increasing life expectancies may make it beneficial to delay benefits. [Page 10](#)

*“My spending patterns won’t change much when I retire.”*

- The inflation rate is higher for retirement-age Americans who spend disproportionately more on items that rise fastest in price, such as health care. [Pages 11 and 12](#)

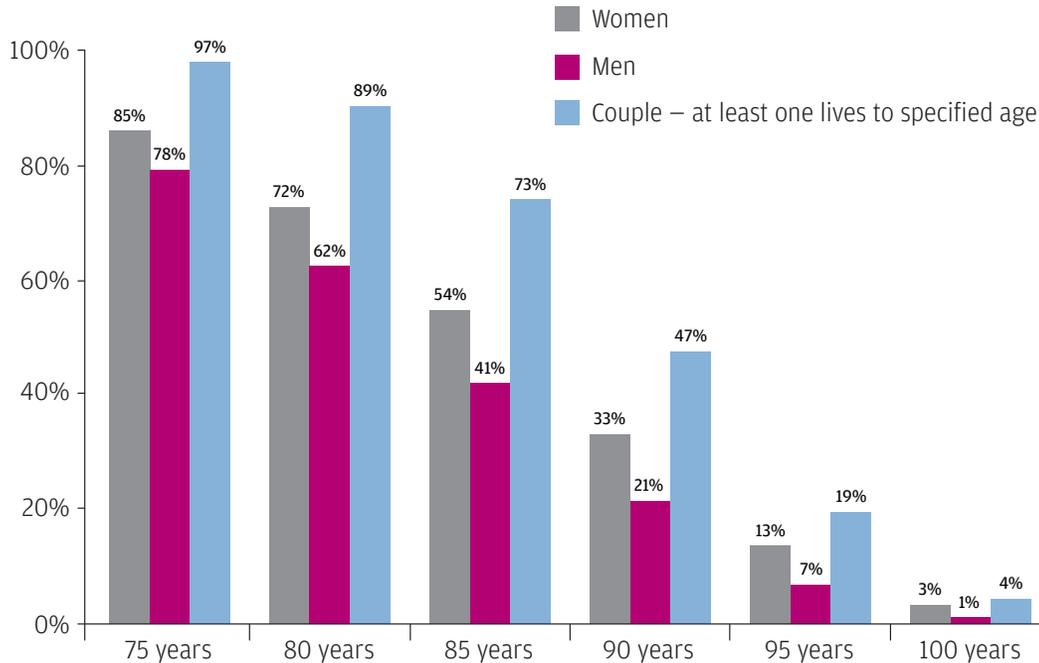
# The retirement equation



▣ **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.

Source: *The Importance of Being Earnest*, J.P. Morgan Asset Management, 2013.

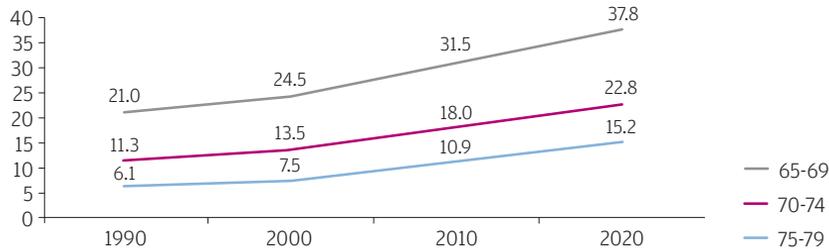
If you're 65 today, the probability of living to a specific age



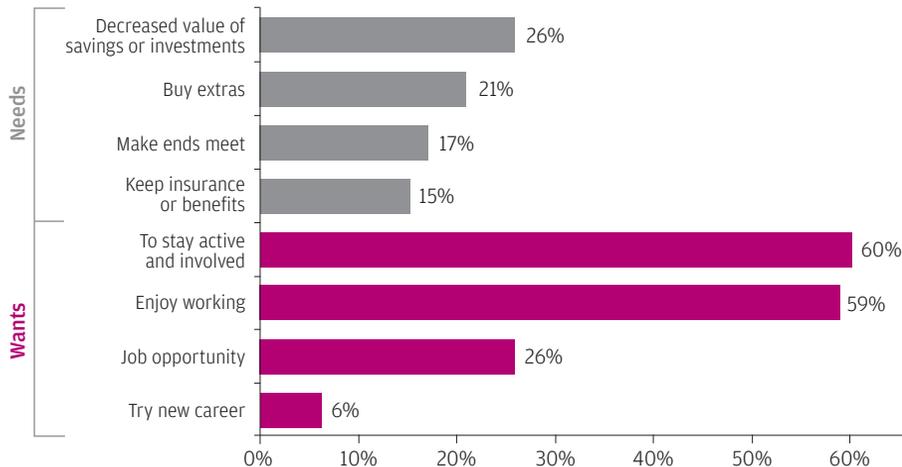
Source: Social Security Administration and J.P. Morgan Asset Management.

- ▣ **Count on longevity:** Life expectancy tells only half the story. Plan on the probability of living much longer, perhaps 30 plus years in retirement.
  - *For example, there is a 47% chance that one spouse will live to age 90, 2% higher than last year.*

Percent of people currently in the civilian labor force, 1990 - 2020



Major reasons why people work in retirement

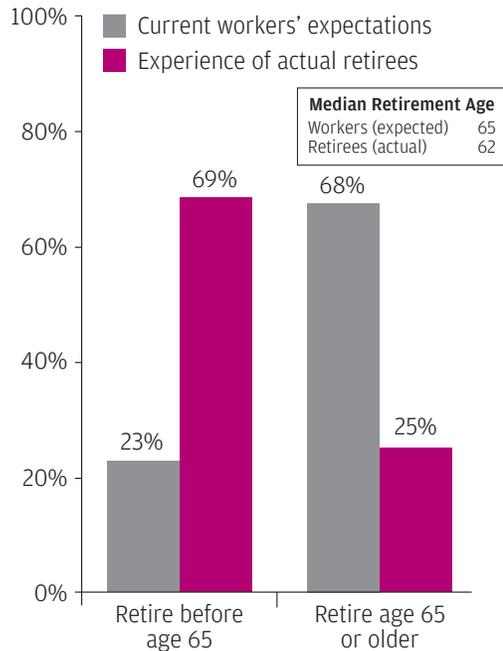


Source (top chart): Bureau of Labor Statistics. Data as of December 31, 2012.

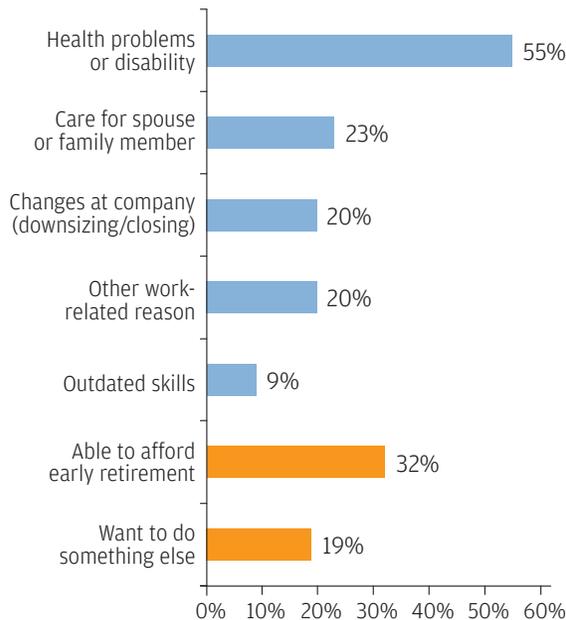
Source (bottom chart): Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2010 Retirement Confidence Survey. Data as of March 2010. Latest available data through December 31, 2012.

It's *still* off to work I go:  
More people are working beyond the age of 65 primarily motivated by the desire to do so.

Current expectations of retirement vs. actual experience of retirees



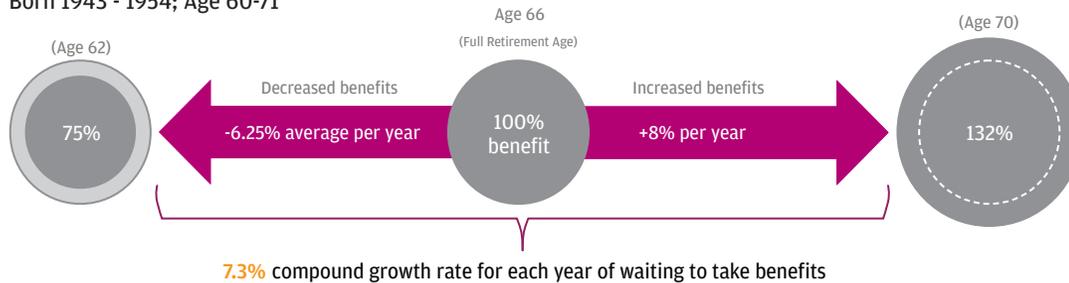
Reasons cited for retiring earlier than planned



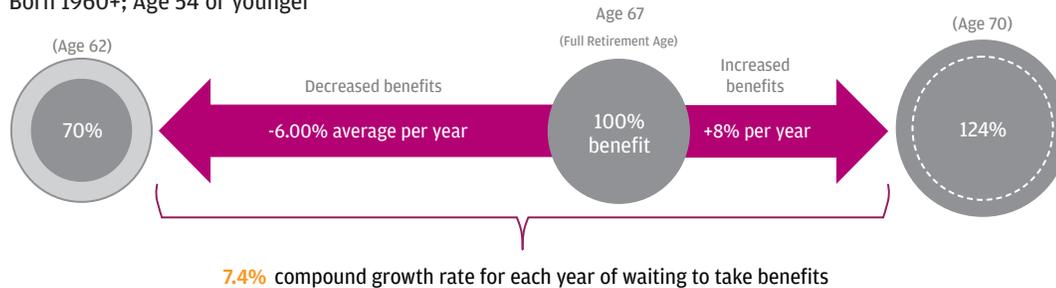
**Early retirement:** While more Americans are working past age 65, not everyone will be able to control their retirement timing.

Source: Employee Benefit Research Institute and Mathew Greenwald and Associates, Inc., 2013 Retirement Confidence Survey.

Born 1943 - 1954; Age 60-71



Born 1960+; Age 54 or younger



2.47% Average Cost of Living Adjustment (2000-2013)

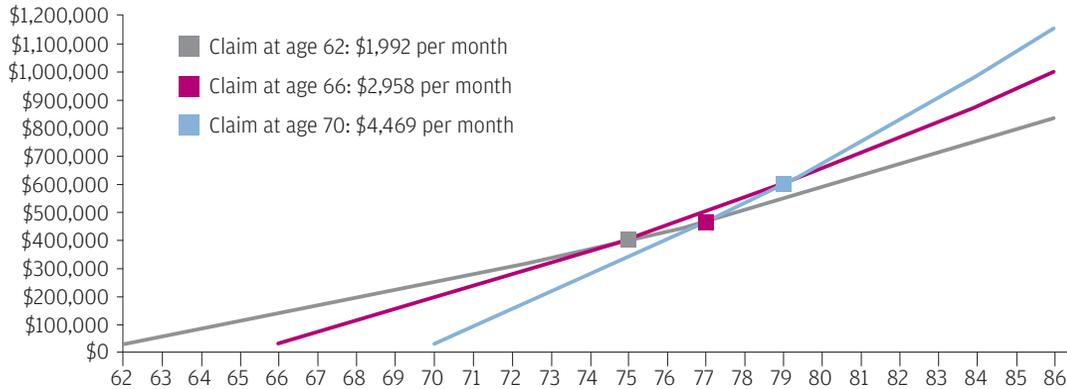
Understand the tradeoffs:

Deciding when to claim benefits will have a permanent impact on the benefit you receive. Claiming before full retirement age can significantly reduce your benefit while delaying increases it.

For illustrative purposes only. For 1955 - 1960, two months are added to the Full Retirement Age each year. Source: Social Security Administration, J.P. Morgan Asset Management.

## Social Security breakeven analysis

Estimated total benefits of the distributions beginning at a certain age assuming maximum benefits



**Planning opportunity:**  
Delaying benefits means having more money to spend later, compensating for increased longevity.

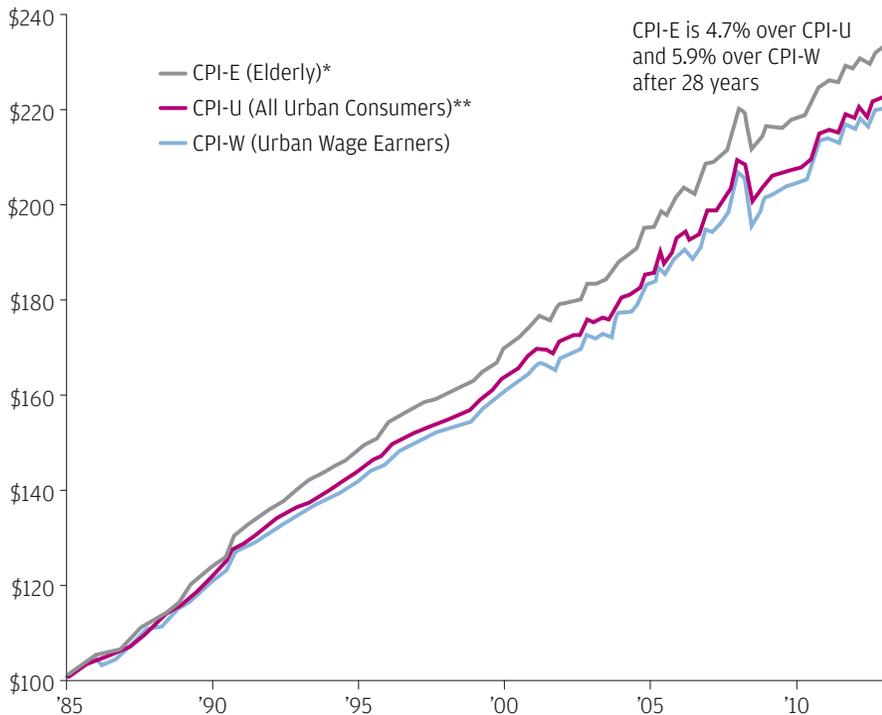
## Social Security break-even data

	Claim at age 62	Claim at age 66	Claim at age 70	At age 65, probability of living to age	
70	\$237,120	\$187,701	\$53,628		
75	\$396,206	\$403,194	\$345,151	♂ 78%	♀ 85%
77	\$466,251	\$498,075	\$473,507	♂ 72%	♀ 80%
79	\$540,274	\$598,343	\$609,152	♂ 65%	♀ 75%
82	\$659,262	\$759,522	\$827,198		
85	\$788,529	\$934,622	\$1,064,077		

Source: Break-even calculated using the Social Security Administration calculator for beginning values at each age. Assumes maximum benefits are received for individuals turning 62 and 1 month, 66 and 70 in 2014, and assumes the benefit will increase each year based on the Social Security Administration 2012 Trustee's Report "intermediate" estimates (starting at 2.0% in 2014 and gradually increasing to 2.8% in 2018). Monthly amounts without the costs of living adjustments (not shown on the chart) are: \$1,992 at age 62; \$2,671 at age 66; and \$3,544 at age 70.

## Older individuals experience higher inflation

Comparison of inflation, 1985 - 2013  
1985 = 100



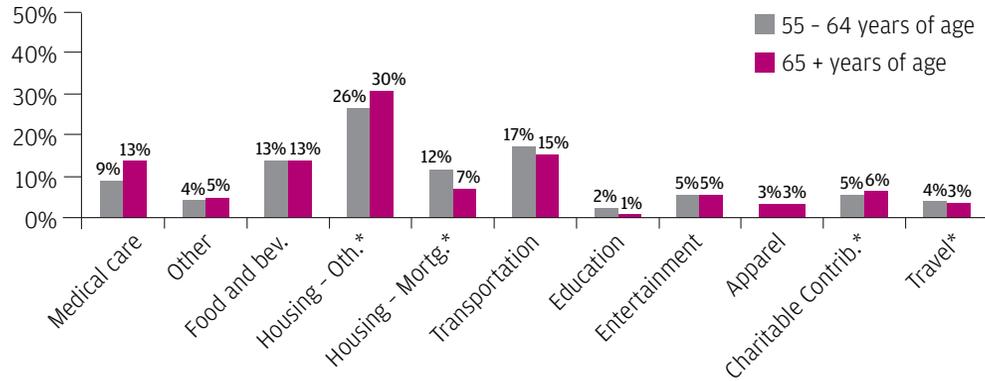
▶ **Erosion of purchasing power:** Older Americans experience a higher degree of inflation than both urban consumers (CPI-U) and the inflation measure used to adjust Social Security benefits (CPI-W).

\*CPI-E is an experimental index from BLS that is based on elderly households with the referenced individuals at age 62 and older.

\*\*CPI-U is also referred to as Headline CPI.

Source: Based on Consumer Price Indexes, BLS, J.P. Morgan Asset Management. Data as of December 31, 2013.

Spending by age and category



➤ **Losing ground:** Inflation disproportionately affects older Americans due to differences in spending habits and price increases in those categories.

Average inflation by spending category, 1982 - 2013

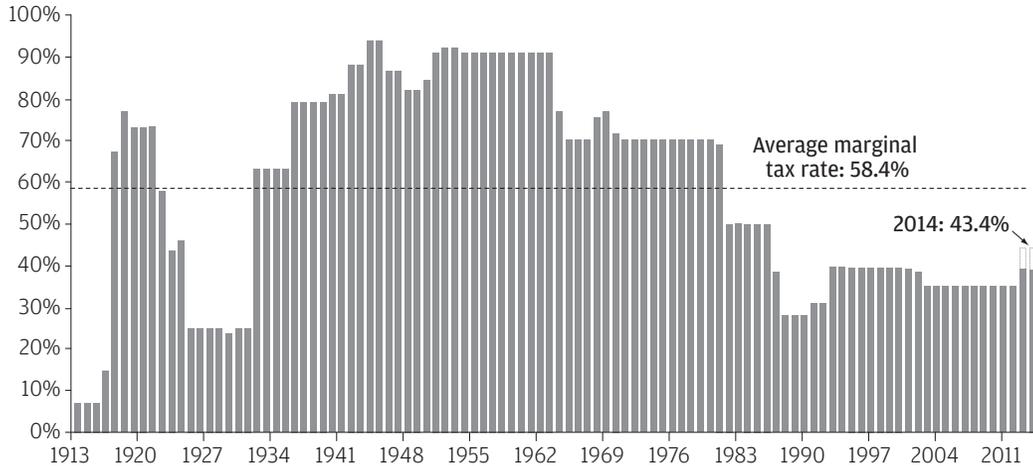


\*There are not individual inflation measures for these specific subcategories.

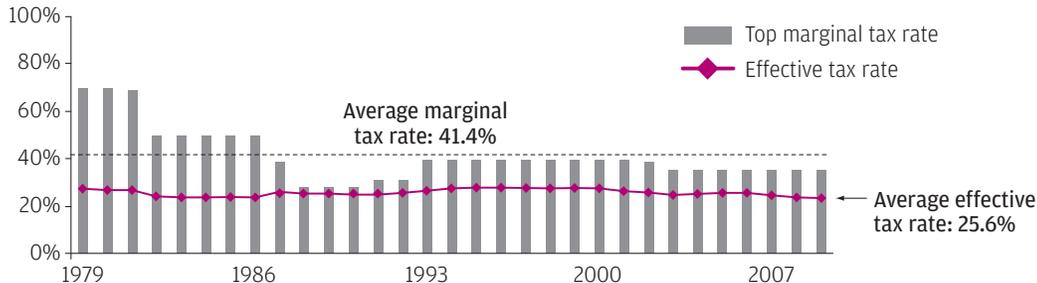
Source (Top chart): BLS, Consumer Expenditure Survey. Data as of December 31, 2013.

Source (Bottom chart): BLS, Consumer Price Index, J.P. Morgan Asset Management. Data represents annual percentage increase from December 1981 through December 2013 with the exception of entertainment and education, which were first published in 1998. The inflation rate for the Other category is derived from personal care products and tobacco. Tobacco has experienced more than 7% inflation since 1986 but each age group only spends 0.5% - 0.7% on tobacco (25% - 35% of combined personal care products and tobacco), which is a lower proportion than represented in the Other inflation rate.

Top marginal federal income tax rate (1913-2014)



Historical view of top marginal federal income tax rate vs. top effective tax rate (1979-2009)



**Importance of income tax planning:** The top marginal bracket of 39.6%, when combined with the 3.8% Medicare surcharge tax, puts high earners at a 43.4% rate for each additional dollar earned – below the long-term historical average. High earners pay on average almost 26 cents of every dollar of income to federal income taxes.

Source: IRS, The Tax Foundation, J.P. Morgan Asset Management.  
Data as of January 31, 2014.

## Saving

The single most important decision individuals can make about retirement is to take responsibility for funding it themselves. Living expenses, health care costs, Social Security, pensions and future employment are all uncertain. But saving today is one way to prepare for a more stable tomorrow.

### Common misconceptions

*“I’ve already started saving a little – I should be okay.”*

- In 2013, only 46% of workers (and/or spouses) have tried to calculate how much money they will actually need to save for a comfortable retirement.\*
- Use the retirement savings checkpoint chart to see if you are on track to reach your goals. [Page 15](#)

*“Retirement is so far away – I have plenty of time to think about it.”*

- The sooner you begin, the more time you have to maximize the power of compounding. [Page 16](#)
- Start saving early and regularly. Early withdrawals, loans and missed contributions can result in lower savings, less compounding and fewer assets at retirement. [Page 18](#)

\*Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2013 Retirement Confidence Survey.

## Retirement savings checkpoints

Current age	\$50,000	\$75,000	\$100,000	\$150,000	\$200,000	\$250,000	\$300,000	\$400,000
	Checkpoint (x Current Salary)							
30	0.4	0.6	1.0	1.7	2.0	2.2	2.4	2.8
35	0.7	1.1	1.5	2.3	2.8	3.0	3.3	3.7
40	1.2	1.6	2.2	3.2	3.7	4.0	4.3	4.9
45	1.7	2.3	3.0	4.2	4.9	5.3	5.7	6.3
50	2.4	3.1	3.9	5.5	6.3	6.8	7.3	8.1
55	3.3	4.2	5.2	7.2	8.1	8.8	9.4	10.4
60	4.4	5.5	6.7	9.2	10.4	11.2	11.9	13.1
65	5.7	7.1	8.6	11.6	13.2	14.1	15.0	16.6

### Model assumptions:

Pre-retirement investment return: (60% S&P 500/40% BarCap Agg)	7.0%
Post-retirement investment return: (30% S&P 500/70% BarCap Agg)	5.0%
Retirement age:	65
Years in retirement:	30
Wage growth rate:	2.5%
Confidence level represented:	80%
Assumed annual contribution rate:	5%

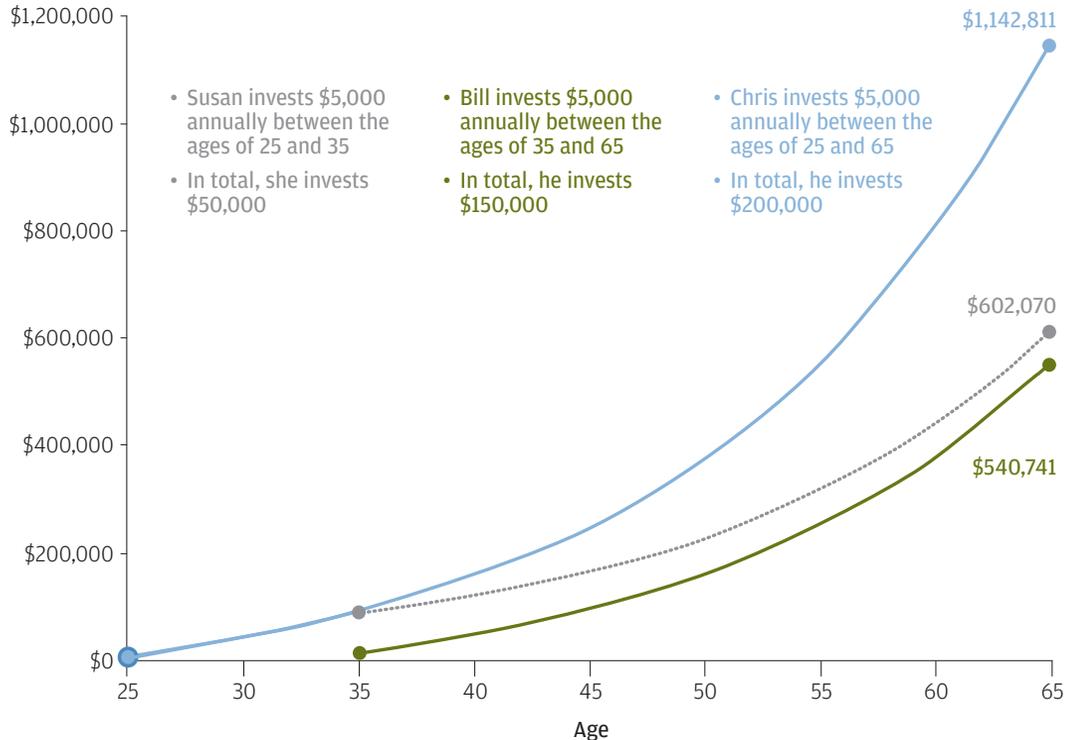
### How to use:

- Go to the intersection of your current age and your closest current salary.
- Multiply your salary by the checkpoint shown to get the amount you should have saved today, assuming you continue annual contributions of 5% going forward.
- Example: for a 40-year-old making \$100,000:  $\$100,000 \times 2.2 = \$220,000$

This chart is for illustrative purposes only and must not be used, or 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 markets assumptions (10 - 15 years). The resulting projections include only the benchmark return associated with the portfolio and do not include alpha from the underlying product strategies within each asset class. Post-retirement volatility assumption is 6.3%. Salary replacement rates are derived from Aon Consulting's 2008 Replacement Ratio Study data, which assumes individuals receive Social Security payments in retirement. Calculations assume an individual earning \$50,000 at retirement will need to replace at least 30% of their pre-retirement income; individuals earning \$75,000 will need to replace at least 37%; individuals earning \$100,000 will need to replace at least 45%; individuals earning \$150,000 will need to replace at least 61%; individuals earning \$200,000 will need to replace at least 69%; individuals earning \$250,000 will need to replace at least 74%; individuals earning \$300,000 will need to replace at least 79%; and those earning \$400,000 will need to replace 87%. Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward trade-offs 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.

## Benefit of saving early

Growth of savings accounts

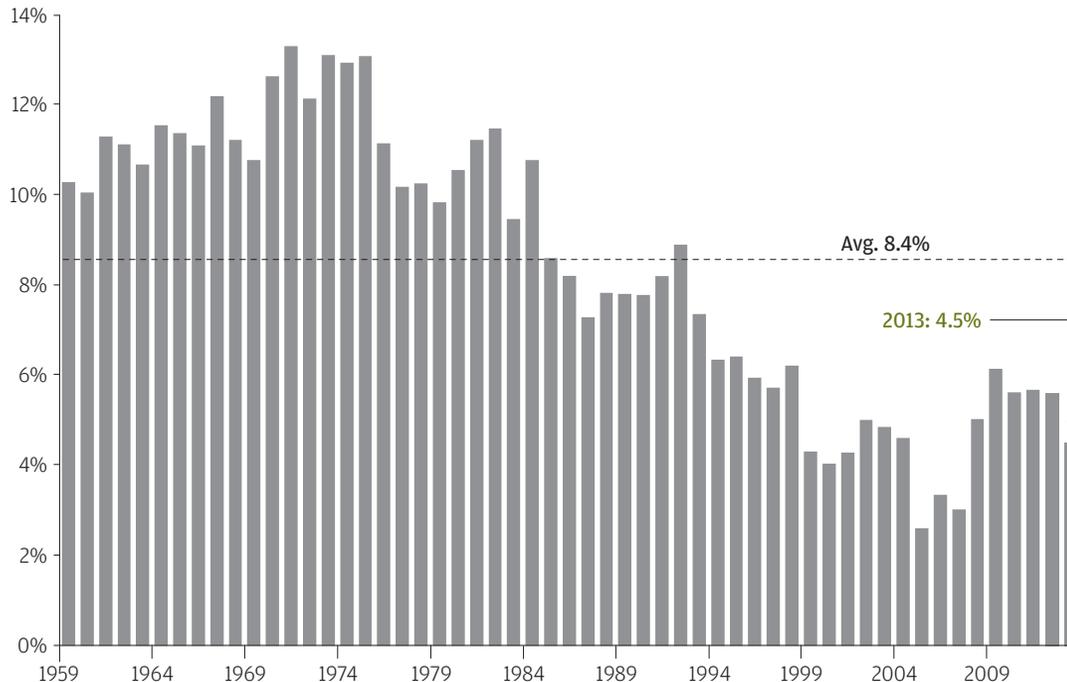


**Saving fundamentals:**  
Harnessing the power of compounding can greatly impact the amount of savings over the long term.

The above example is for illustrative purposes only and not indicative of any investment. Account value in this example assumes a 7% annual return.  
Source: J.P. Morgan Asset Management.

Compounding refers to the process of earning return on principal plus the return that was earned earlier.

**Personal savings rate**  
Annual, % of disposable income

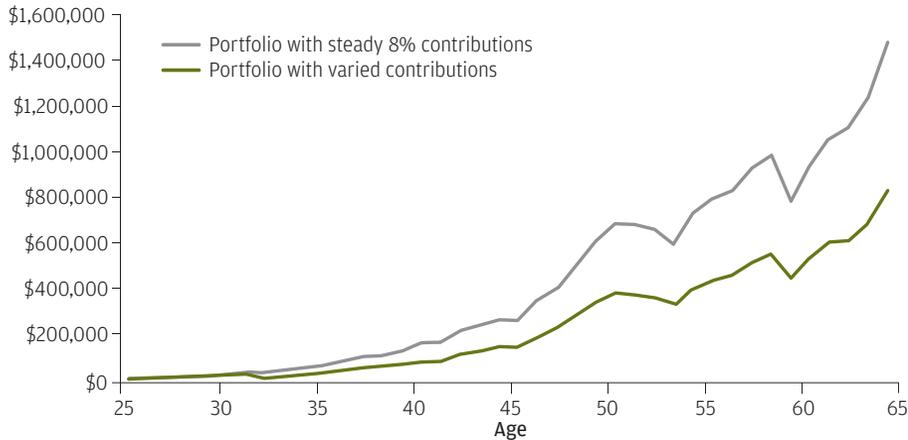


**Remember retirement:**  
Ongoing low savings rates could have negative effects on the retirement preparedness of Americans.

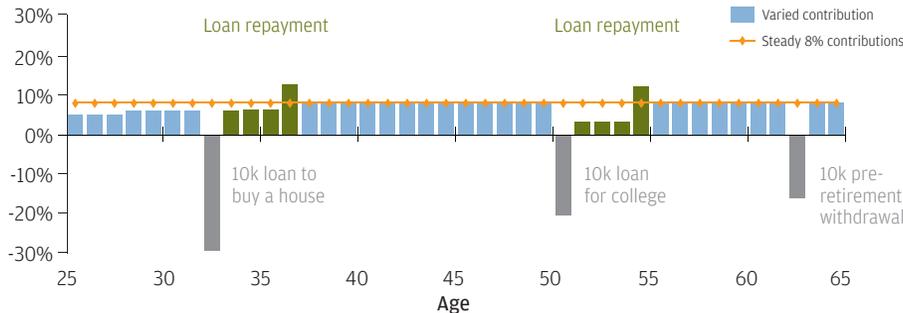
Source: J.P. Morgan Asset Management, The Bureau of Economic Analysis. Personal savings rate is calculated as personal savings (after-tax income - personal outlays) divided by after-tax income. Employer and employee contributions to retirement funds are included in after-tax income but not in personal outlays, and thus are implicitly included in personal savings. Savings rate data as of December 31, 2013.

# The toxic combination of varied savings and loans or withdrawals

Growth of a 401(k) investment



Assumed 401(k) contributions

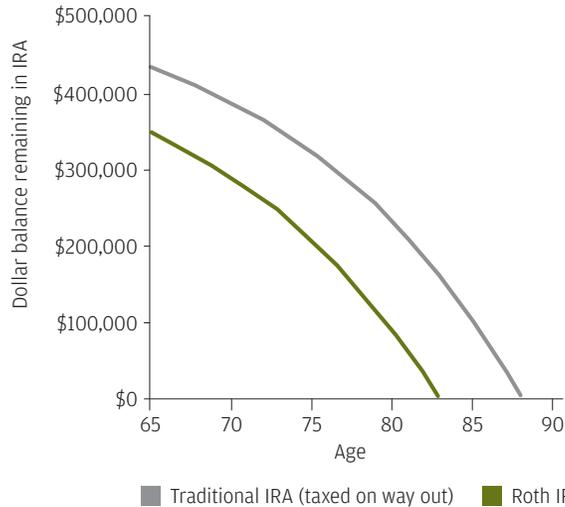


**Avoid temptation:**

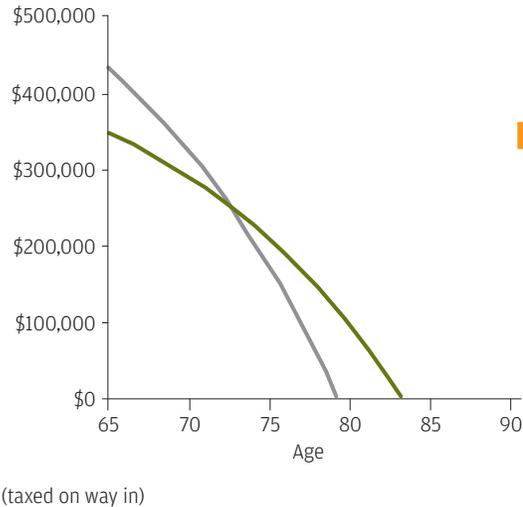
A 401(k) is for long-term retirement savings, not an emergency reserve fund. Investing with a steady contribution rate over time can maximize your account value. Taking loans and early withdrawals can drastically impact your total savings.

Source: J.P. Morgan Asset Management. For illustrative purposes only. Hypothetical portfolio is assumed to be invested 40% in the Barclays Capital U.S. Aggregate Index and 60% in the S&P 500 Total Return index from 1974 - 2013. Starting salary of \$30,000 increasing by 2% each year.

Tax rates **decrease** 10% in retirement



Tax rates **increase** 10% in retirement

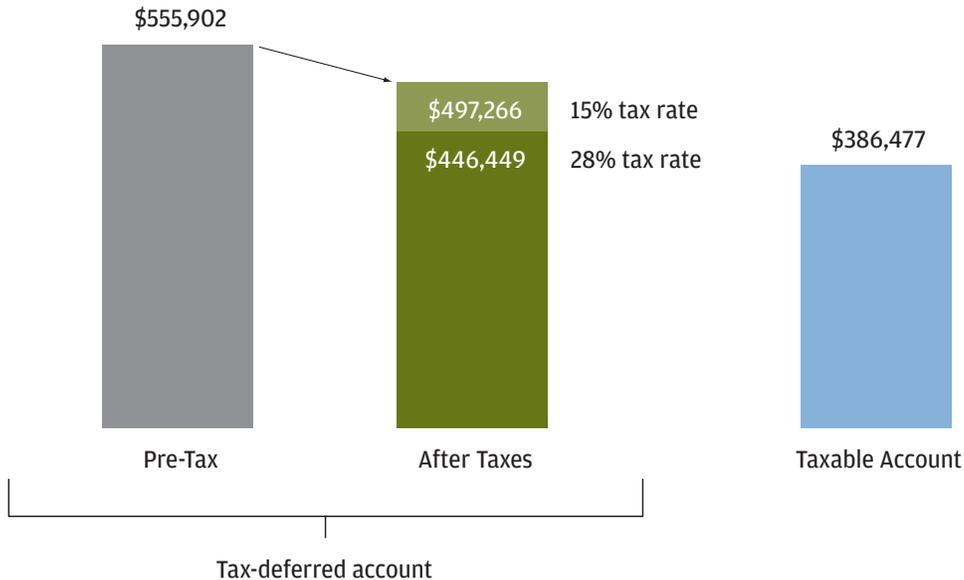


➤ **Consider income tax diversification:**  
A Roth option may make sense if your income taxes are higher in the future – but also can provide flexibility in higher income tax years when meeting your retirement income needs.

For illustrative purposes only. Hypothetical contribution to IRA accounts is assumed as an illustrative example. Traditional IRA: \$2,000 is contributed to a deductible IRA and is taxed upon withdrawal. Roth IRA: \$2,000 is taxed at 20% resulting in a \$1,600 annual contribution amount. This ensures a direct comparison of current and future income tax rates between the two account types. The assumed annual rate of return is 7%. In retirement, the person withdraws \$32,000 after tax (\$32,000 for Roth in both scenarios, \$35,556 in the 10% decrease scenario and \$45,714 in the 10% increase scenario for the regular IRA) each year until the account is depleted. The breakeven point in the 10% rate increase scenario will change depending on the specific circumstances of the individual and tax rates. Source: J.P. Morgan Asset Management.

## The power of tax-deferred compounding

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



➤ **Asset location:** Tax-advantaged accounts can shelter income-producing investments from current income taxation and result in greater long-term growth than taxable accounts.

Source: J.P. Morgan Asset Management. Assumes \$5,500 contribution at the beginning of each year and 7% annual investment return. IRA contributions are pre-tax and account balance is taken as lump sum and taxed at 15% and 28% federal tax rate, respectively, at time of withdrawal. Taxable account contributions are after-tax and assume 28% 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.

## Spending

Determining your income needs during retirement is a complex equation. During your working years, the goal was to save and accumulate as much as possible for the future. Now the challenge becomes managing your portfolio by withdrawing some money for today's expenses and investing the rest for tomorrow.

### Common misconceptions

*"I've already hit my savings target. I should be fine in retirement with the lower cost of living."*

- Spending may not decrease at all in the first few years of retirement. Some expenses tend to decline with age – while others remain steady or increase. [Page 23](#)

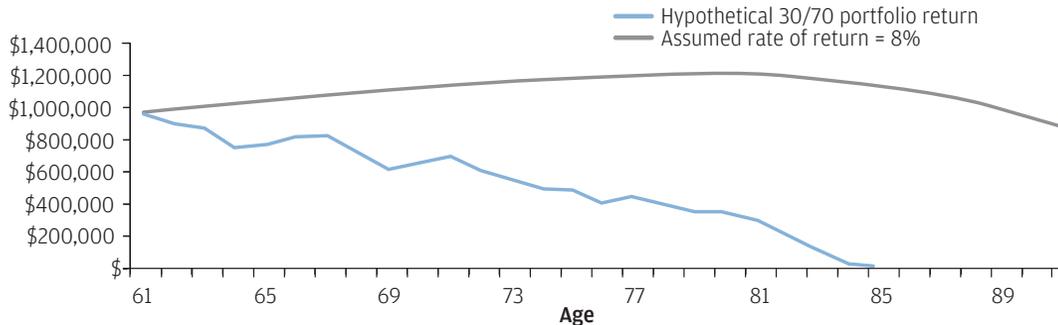
*"As long as I withdraw a steady amount, I will be okay."*

- Withdrawing assets in volatile markets early in retirement can ravage a portfolio. Adjust your plan and strategy regularly. [Page 22](#)
- There is potential danger in investing too conservatively or withdrawing too aggressively. Either may increase the risk of tapping into principal and running out of money. [Page 24](#)

## Dollar cost ravaging – timing risk of withdrawals

### Growth of investment

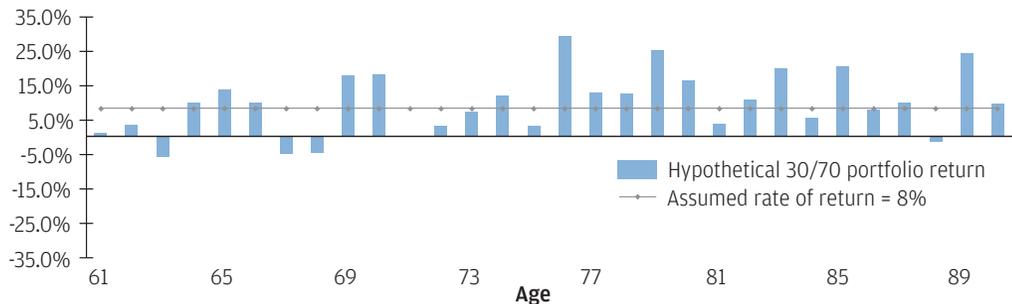
1967 - 1996



**Assumptions:** Enter retirement at age 60 with \$1,000,000 · Start with a 5.5% withdrawal of \$55,000 · Increase dollar amount of withdrawal by overall rate of inflation (3%) each year

### Rate of return: assumed vs. actual

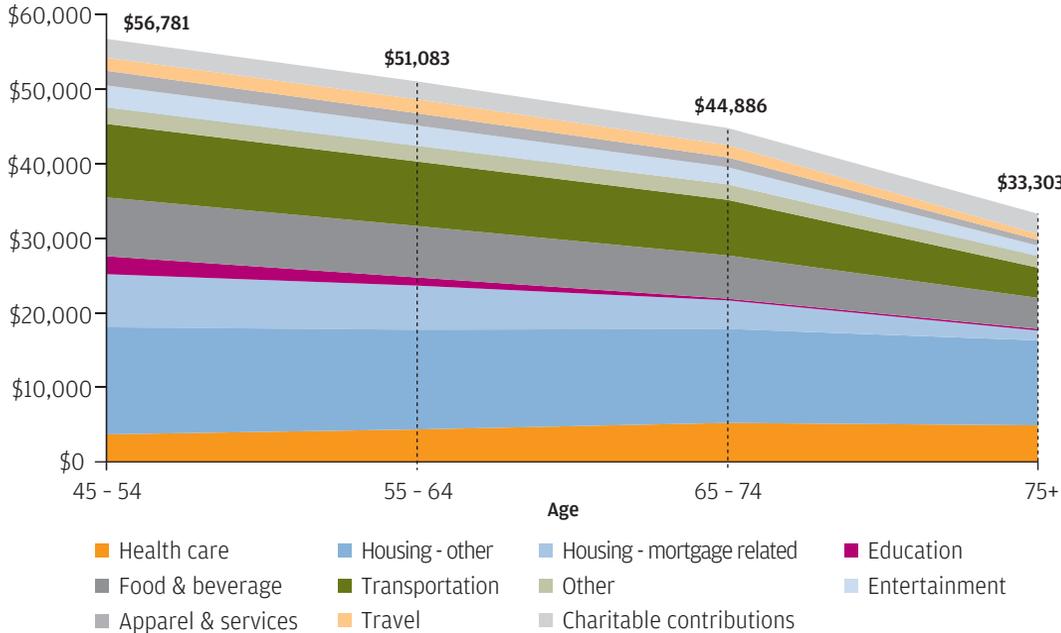
1967 - 1996



Source: J.P. Morgan Asset Management, Convergent Retirement Plan Solutions, LLC. Returns are based on a hypothetical portfolio is assumed to be invested 30% in the S&P 500 Total Return Index and 70% 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.

- ▣ **Sequence return risk:** Withdrawing assets in volatile markets early in retirement can ravage a portfolio. Adjust your plan and strategy regularly.
- Results: Actual annual average return of our hypothetical portfolio over the sample period was 9.13%.*

Average household spending patterns by various age groups



**What to expect:** Household spending peaks at the age of 45, after which spending declines in all categories but health care.

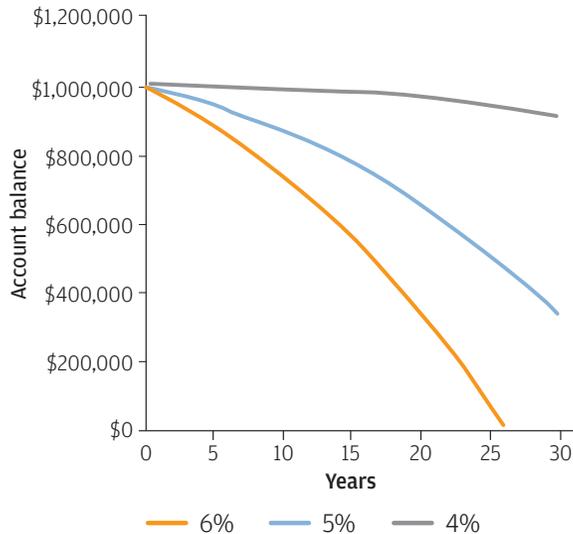
Estimates based on average consumer expenditure from the Consumer Expenditure Survey for each age group excluding pension contributions, BLS. Data as of September 2013. Average household size for age 45-54 is 2.7; age 55-64 is 2.1; age 65-74 is 1.8 and age 75+ is 1.5.

Source: J.P. Morgan Asset Management.

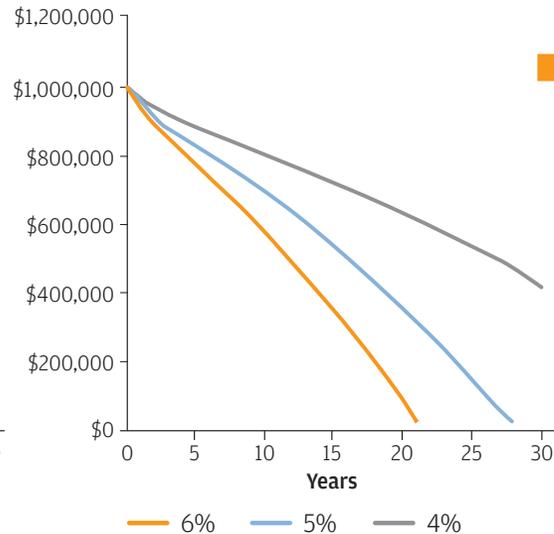
## Effects of traditional withdrawal rates on a balanced portfolio

Years of sustainable withdrawals for a portfolio of 60% equities and 40% bonds

Projected outcomes for **typical markets**  
(50% confidence level)



Projected outcomes for **extended poor markets**  
(75% confidence level)

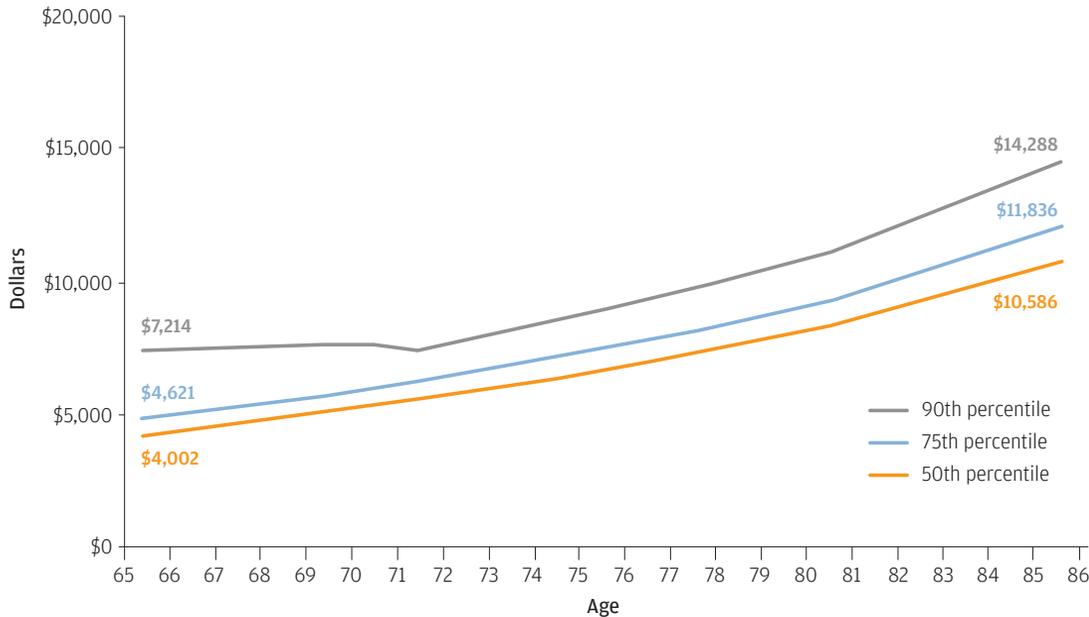


**Be cautious:** Higher initial withdrawal rates may not be sustainable in extended poor markets. Consider a dynamic approach that adjusts over time to more effectively use your retirement savings.

These charts are for illustrative purposes only and must not be used, or relied upon, to make investment decisions. Hypothetical portfolios are composed of US Large Cap for equity and US Aggregate for fixed income with projected compound returns projected to be 7.50% and 4.25%, respectively. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary long-term capital markets 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. Allocations, assumptions and expected returns are not meant to represent JPMAM performance. Given the complex risk/reward trade-offs 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.

## Rising annual health care costs

Estimated annual out-of-pocket health care costs for a 65-year-old retiring in 2014



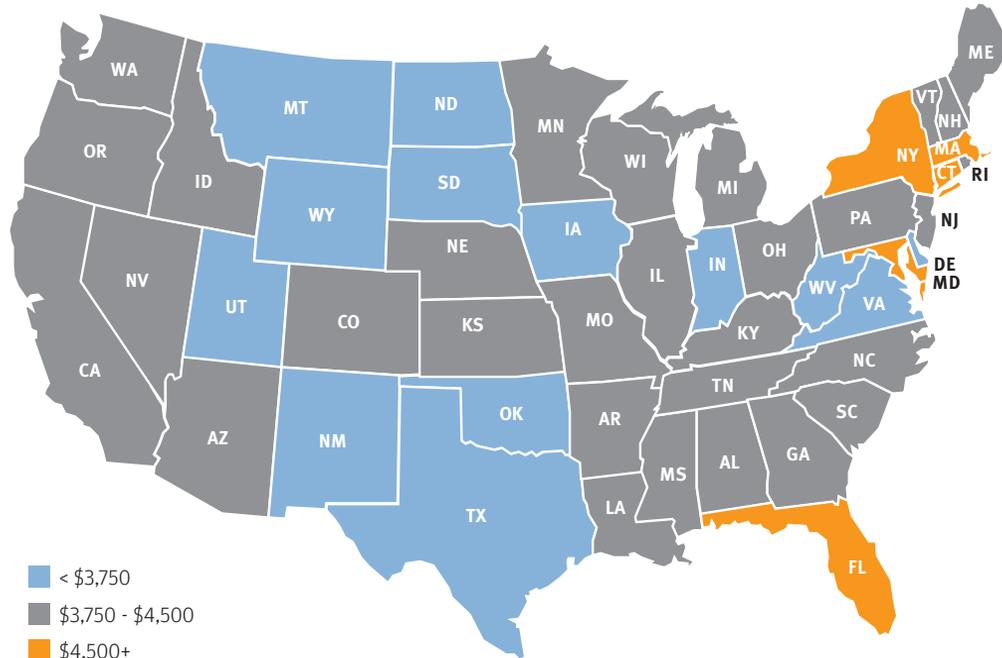
**■ A growing concern:** Lifetime retirement health care cost estimates may be overwhelming, therefore annual health care costs may be easier to digest when planning for retirement expenses.

For illustrative purposes only.

Source: Employee Benefit Research Institute (EBRI), January 17, 2014. Based on national average cost estimates for Medicare Parts A, B, D and Medigap Plan F. EBRI derived inflation estimates from US CBO estimates. On average, health care costs are estimated to increase 5.0% for the 50th percentile, 4.8% for the 75th percentile and 3.5% for the 90th percentile. Vision, dental and long-term care expenses are not included. Assumes continued implementation of the Patient Protection and Affordable Care Act. The costs at 90th percentile actually dip down in 2019 due to the implementation of the Medicare prescription drug "donut hole" being filled in as applied to Medicare prescription drug costs.

## Variation in health care costs: traditional Medicare

Average annual Medicare costs at age 65



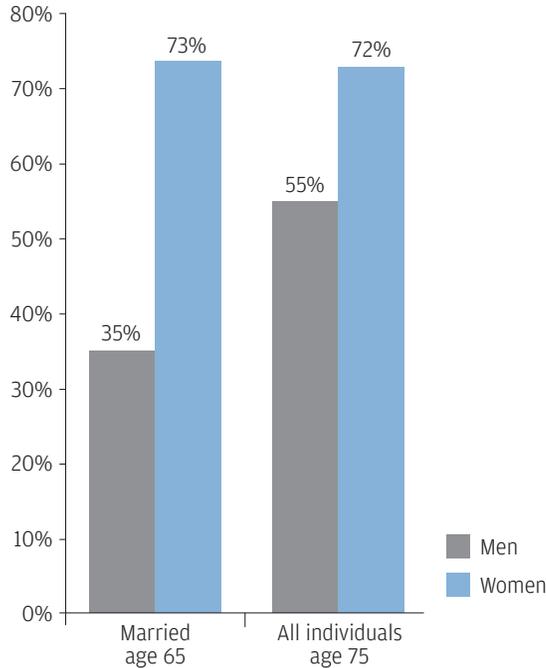
- Location matters:**  
 For those with traditional Medicare and a comprehensive Medigap plan,\* average costs vary depending on where you live in retirement
- For those with a Medicare Advantage\*\* plan, health status is the main driver of cost variation.

\*Medigap plans are standardized plans that cover co-pays and deductibles associated with traditional Medicare policies.

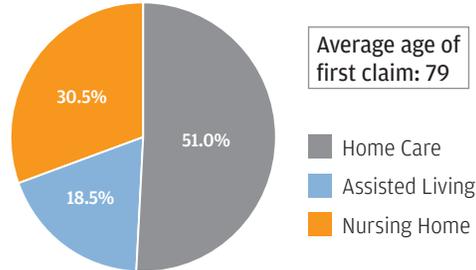
\*\*Medicare Advantage is an alternative to traditional Medicare offered by private insurance companies.

Source: SelectQuote, 2013. Traditional Medicare costs are based on national average cost estimates for Medicare Parts A, B, D and Medigap Plan F. Vision, dental and long-term care expenses are not included. Not shown on the chart: costs for Medicare Advantage. Medicare Advantage costs may vary from less than \$500 per year to more than \$10,000 per year. Data for Alaska and Hawaii not available.

Likelihood of needing long-term care

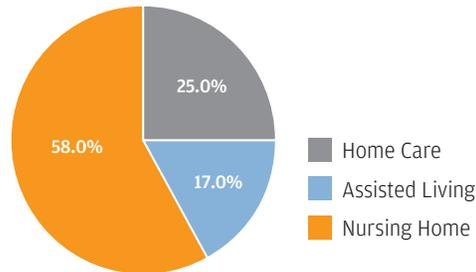


2012 new LTC claims by type



Average age of first claim: 79

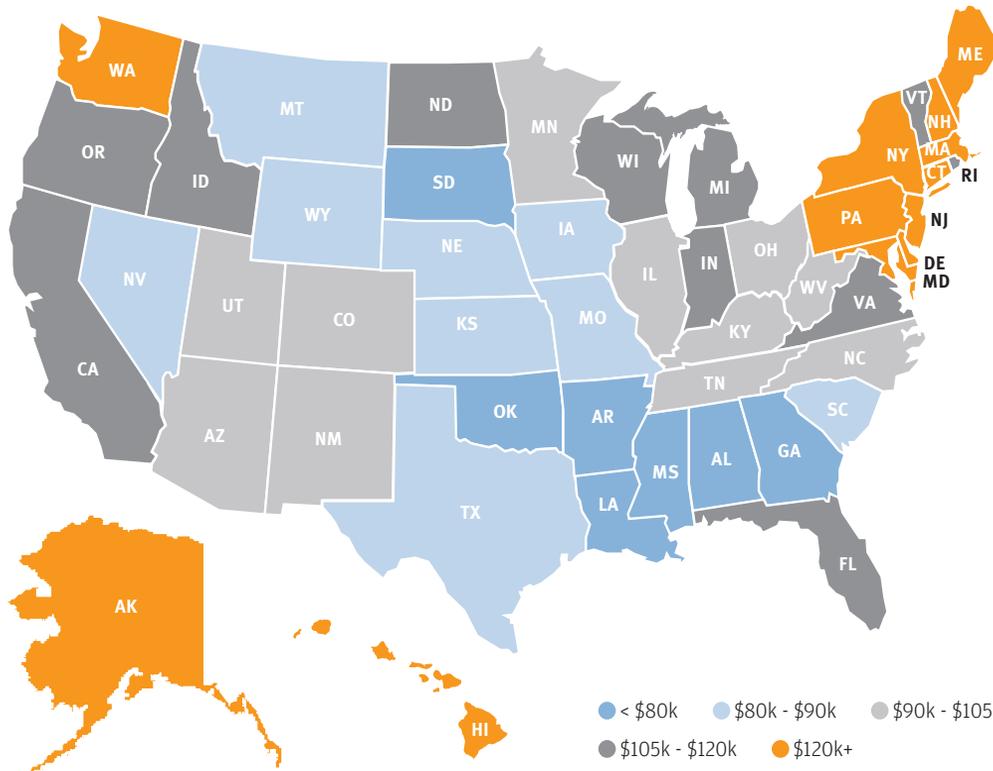
All LTC claims by type



**Long-term vision:** Many individuals will need long-term care. There may be a progression of care that starts with home care.

Source : American Association for Long-Term Care Insurance 2014 Sourcebook. [www.aaltci.org](http://www.aaltci.org). Lifetime chance of using benefits from a LTC policy purchased at age 60 with a 90-day waiting period before benefits start is 35%. There is approximately a 1 in 3 chance of filing a claim that will last less than 6 months; however, there is a 1 in 10 chance of filing a claim for 5 years or more. Annualized inflation 1994 - 2012: 3.81% nursing home care; 1.67% home health care.

## Annual cost of nursing home care (private room)



**The cost of care:**  
Many people realize nursing home care is expensive, but there is significant cost variation depending on where care is utilized.

Source: New York Life Insurance 2014 Cost of Care Survey developed in partnership with Univita. Average daily costs annualized over 365 days and weighted by city population for each state.

Spending

## Investing

Invest for long-term growth potential and consider investing in a broader mix of assets. Financial risks don't end when careers do. If you're going to enjoy a long, rewarding retirement, you must anticipate and overcome the obstacles that are likely to arise along the way.

### Common misconceptions

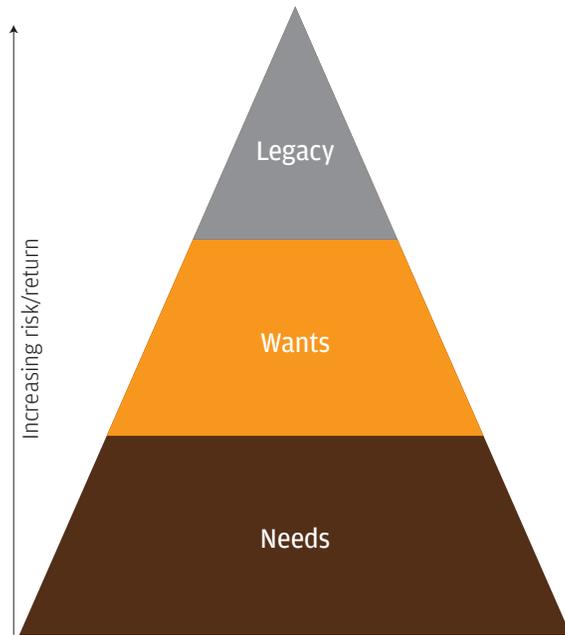
*"The market is too volatile. I'm going to sit on the sidelines for a bit so I don't lose money."*

- Don't wait to invest in volatile times. It can cause you to miss out on potential market rallies. Page 33
- Set specific retirement goals upfront – and keep focused on the long term during periods of volatility and uncertainty. Page 30

*"I should invest conservatively so I don't run the risk of losing my retirement assets."*

- Retirement-age investors have potentially long time horizons, due to rising life expectancies. By maintaining an exposure to equities in retirement, you may better keep pace with rising prices, protecting your standard of living throughout retirement. Page 34
- A well-diversified portfolio may provide a smoother ride over the long term. Pages 32 and 35

# Structuring a portfolio to match investor goals



## Considerations

- What is the time horizon and appropriate planning vehicle for your heirs and your estate planning goals?
- What are your desires/wants?
- How much risk are you willing to take?
- What are your basic needs?
- What income sources do you have or will you need to create?

## Potential solutions

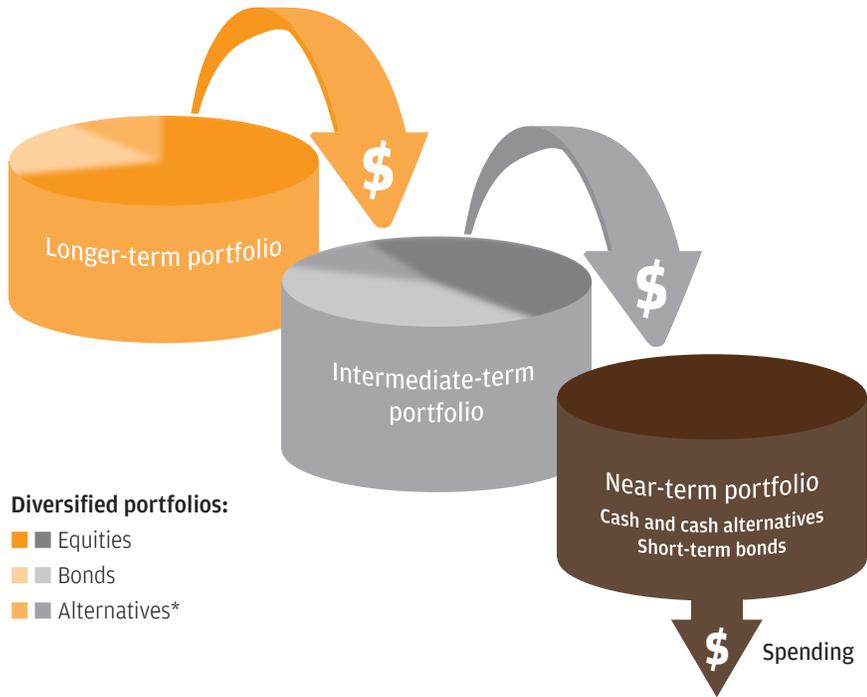
- Equities
- Alternatives\*
- Equities
- Bonds
- Social Security
- Pension
- Annuities
- Bonds
- Cash and Cash Alternatives

➤ **Building your plan:** It may be useful to match dependable income sources with fixed retirement expenses, while coordinating other investments with more discretionary expenses.

For illustration 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 are 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: the bucket strategy



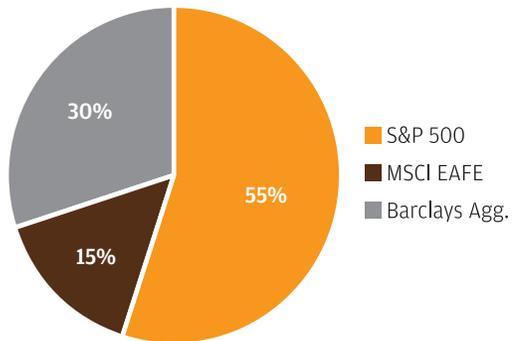
- Time-based segmentation:** Aligning your time horizon with an investment approach may help you be more comfortable with maintaining diversified portfolio allocations in retirement.

For illustration 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 are 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.

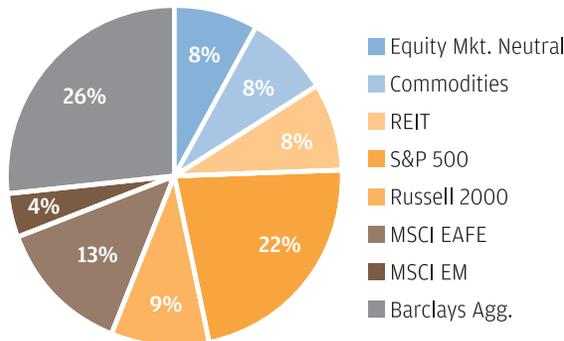
Maximizing the power of diversification, 1999-2013

Traditional Portfolio



**Return: 5.23%**  
**Standard Deviation: 10.88%**

More Diversified Portfolio



**Return: 6.85%**  
**Standard Deviation: 10.28%**

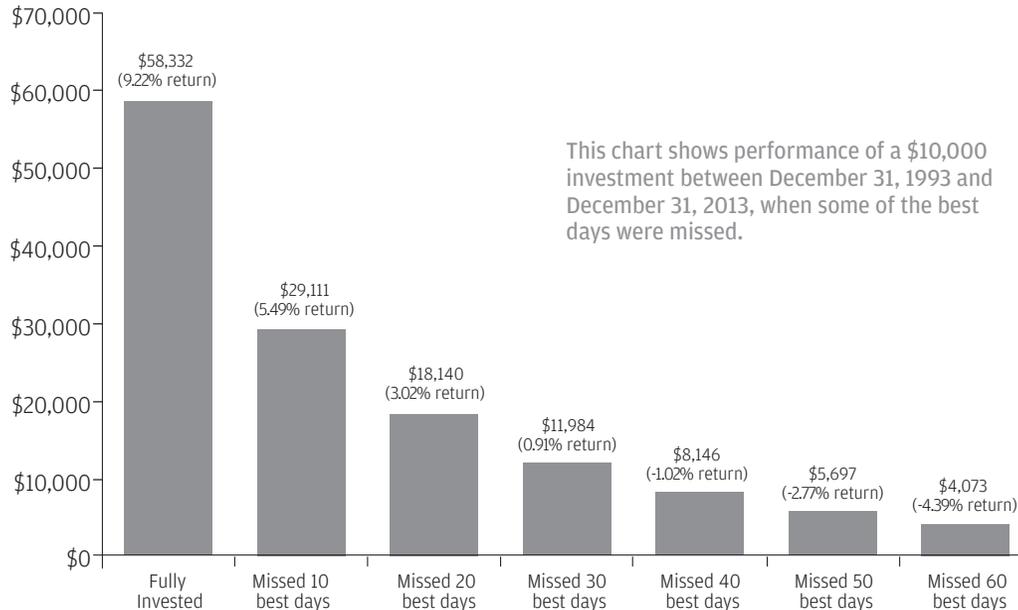
**Mix it up wisely:**  
Diversification may provide better returns with less risk.

Indexes and weights of the traditional portfolio are as follows: U.S. stocks: 55% S&P 500, U.S. bonds: 30% Barclays Capital Aggregate, International stocks: 15% MSCI EAFE. Portfolio with 25% in alternatives is as follows: U.S. stocks: 22.2% S&P 500, 8.8% Russell 2000; International Stocks: 4.4% MSCI EM, 13.2% MSCI EAFE; U.S. Bonds: 26.5% Barclays Capital Aggregate; Alternatives: 8.3% CS/Tremont Equity Market Neutral, 8.3% DJ/UBS Commodities, 8.3% NAREIT Equity REIT Index. Return and standard deviation calculated using Morningstar Direct.

Charts are shown for illustrative purposes only. Past returns are no guarantee of future results. Diversification does not guarantee investment returns and does not eliminate risk of loss. Data as of December 31, 2013.

## Impact of being out of the market

Returns of S&P 500



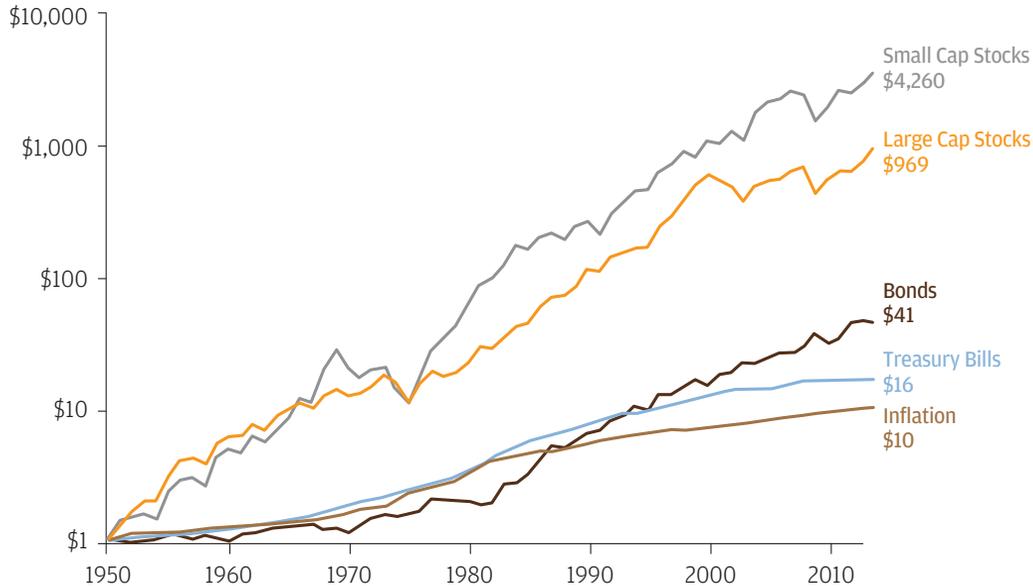
- Plan to stay invested:**  
 Trying to time the market is extremely difficult to do consistently. Market lows often result in emotional decision making. Investing for the long-term while managing volatility can result in a better retirement outcome.

This chart is for illustrative purposes only and does not represent the performance of any investment or group of investments.

Source: Prepared by J.P. Morgan Asset Management using data from Lipper. 20-year annualized 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. Past performance is not indicative of future returns. An individual cannot invest directly in an index. Data as of December 31, 2013.

## Major asset classes vs. inflation

Growth of one dollar, 1950 - 2013



**Risk averse:** Cash may not be an effective long-term solution.

Source: Morningstar, Inc., Financial Communications © 2014. All rights reserved. Used with permission.

Past performance is no guarantee of future results. Hypothetical value of \$1 invested at the beginning of 1950. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index.

Small-cap stocks in this example are represented by the Ibbotson® Small Company Stock Index. Large-cap stocks are represented by the Standard & Poor's 90® index from 1950 through February 1957 and the S&P 500 index thereafter, which is an unmanaged group of securities and considered to be representative of the U.S. stock market in general. Government bonds are represented by the 20-year U.S. government bond, Treasury bills by the 30-day U.S. Treasury bill, and inflation by the Consumer Price Index. Underlying data is from the Stocks, Bonds, Bills, and Inflation® (SBBBI®) Yearbook, by Roger G. Ibbotson and Rex Sinquefeld, updated annually. An investment cannot be made directly in an index.

Government Bonds and Treasury Bills are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest, while stocks are not guaranteed and have been more volatile than the other asset classes. Small-capitalization stocks typically carry more risk than stock funds investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

# Asset class returns

10-ys '04 - '13

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Cum.	Ann.
REITs 31.6%	MSCI EME 34.5%	REITs 35.1%	MSCI EME 39.8%	Barclays Agg 5.2%	MSCI EME 79.0%	REITs 27.9%	REITs 8.3%	REITs 19.7%	Russell 2000 38.8%	MSCI EME 197.7%	MSCI EME 11.5%
MSCI EME 26.0%	DJ UBS Cmdty 21.4%	MSCI EME 32.6%	DJ UBS Cmdty 16.2%	Cash 1.8%	MSCI EAFE 32.5%	Russell 2000 26.9%	Barclays Agg 7.8%	MSCI EME 18.6%	S&P 500 32.4%	Russell 2000 138.3%	Russell 2000 9.1%
MSCI EAFE 20.7%	MSCI EAFE 14.0%	MSCI EAFE 26.9%	MSCI EAFE 11.6%	Market Neutral 1.1%	REITs 28.0%	MSCI EME 19.2%	Market Neutral 4.5%	MSCI EAFE 17.9%	MSCI EAFE 23.3%	REITs 128.5%	REITs 8.6%
Russell 2000 18.3%	REITs 12.2%	Russell 2000 18.4%	Market Neutral 9.3%	Asset Alloc. -24.0%	Russell 2000 27.2%	DJ UBS Cmdty 16.8%	S&P 500 2.1%	Russell 2000 16.3%	Asset Alloc. 14.9%	S&P 500 104.3%	S&P 500 7.4%
Asset Alloc. 12.5%	Asset Alloc. 8.3%	S&P 500 15.8%	Asset Alloc. 7.4%	Russell 2000 -33.8%	S&P 500 26.5%	S&P 500 15.1%	Cash 0.1%	S&P 500 16.0%	Market Neutral 7.9%	MSCI EAFE 104.1%	MSCI EAFE 7.4%
S&P 500 10.9%	Market Neutral 6.1%	Asset Alloc. 15.2%	Barclays Agg 7.0%	DJ UBS Cmdty -35.6%	Asset Alloc. 22.2%	Asset Alloc. 12.5%	Asset Alloc. -0.6%	Asset Alloc. 11.3%	REITs 2.9%	Asset Alloc. 100.1%	Asset Alloc. 7.2%
DJ UBS Cmdty 9.1%	S&P 500 4.9%	Market Neutral 11.2%	S&P 500 5.5%	S&P 500 -37.0%	DJ UBS Cmdty 18.9%	MSCI EAFE 8.2%	Russell 2000 -4.2%	Barclays Agg 4.2%	Cash 0.0%	Market Neutral 62.7%	Market Neutral 5.0%
Market Neutral 6.5%	Russell 2000 4.6%	Cash 4.8%	Cash 4.8%	REITs -37.7%	Barclays Agg 5.9%	Barclays Agg 6.5%	MSCI EAFE -11.7%	Market Neutral 0.9%	Barclays Agg -2.0%	Barclays Agg 56.0%	Barclays Agg 4.5%
Barclays Agg 4.3%	Cash 3.0%	Barclays Agg 4.3%	Russell 2000 -1.6%	MSCI EAFE -43.1%	Market Neutral 4.1%	Cash 0.1%	DJ UBS Cmdty -13.3%	Cash 0.1%	MSCI EME -2.3%	Cash 17.1%	Cash 1.6%
Cash 1.2%	Barclays Agg 2.4%	DJ UBS Cmdty 2.1%	REITs -15.7%	MSCI EME -53.2%	Cash 0.1%	Market Neutral -0.8%	MSCI EME -18.2%	DJ UBS Cmdty -1.1%	DJ UBS Cmdty -9.5%	DJ UBS Cmdty 9.0%	DJ UBS Cmdty 0.9%

➤ **Maintain a diversified approach:** The best and worst performing asset classes vary greatly year to year.

Investing

Source: Russell MSCI Dow Jones, Standard & Poor's, Credit Suisse, Barclays Capital, NAREIT, FactSet, J.P. Morgan Asset Management.

The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EMI, 25% in the Barclays Capital Aggregate, 5% in the Barclays 1-3m Treasury, 5% in the CS/Tremont Equity Market Neutral Index, 5% in the DJ UBS Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. All data represents total return for stated period. Past performance is not indicative of future returns. Data are as of 12/31/13, except for the CS/Tremont Equity Market Neutral Index, which reflects data through 11/30/13. "10-ys" returns represent period of 1/1/04 - 12/31/13 showing both cumulative (Cum.) and annualized (Ann.) over the period. Please see disclosure page at end of index definitions. \*Market Neutral returns include estimates found in disclosures.

Guide to the Markets - U.S. Data are as of 12/31/13.

## Traditional IRAs vs. Roth IRAs – 2013

	Traditional IRA	Roth IRA	Roth IRA conversion
<b>Maximum contribution</b>	<ul style="list-style-type: none"> <li>• 100% of earned income up to \$5,500</li> <li>• \$6,500 if eligible for a catch-up contribution<sup>1</sup></li> <li>• Reduced by Roth IRA contributions</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of earned income up to \$5,500</li> <li>• \$6,500 if eligible for a catch-up contribution<sup>1</sup></li> <li>• Reduced by Traditional IRA contributions</li> </ul>	No limit on conversions of Traditional IRAs, SEP IRAs, SIMPLE IRAs (if open 2+ years)
<b>Age limits to contribute</b>	Under 70½ in the year of the contribution	None	None
<b>Income limits to contribute</b>	<p><b>Single:</b> Up to \$59,000 for full deduction, \$69,000 for partial<sup>2</sup></p> <p><b>Joint:</b> Up to \$95,000 for full deduction, \$115,000 for partial<sup>2</sup></p>	<p><b>Single:</b> Up to \$112,000 for full contribution, \$127,000 for partial</p> <p><b>Joint:</b> Up to \$178,000 for full contribution, \$188,000 for partial</p>	None
<b>Federal tax treatment</b>	<ul style="list-style-type: none"> <li>• Investment growth is tax deferred and contributions may be tax deductible. Deductible contributions and investment gains are taxed as ordinary income upon withdrawal.</li> <li>• 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.</li> <li>• Early withdrawals before 59½ are generally subject to a 10% IRS penalty unless certain exceptions apply.</li> </ul>	<ul style="list-style-type: none"> <li>• All contributions are non-deductible.</li> <li>• Qualified withdrawals of contributions at any time are tax free and IRS penalty free.</li> <li>• Qualified withdrawals of earnings are tax free and IRS penalty free if taken after five years have passed since the account was initially funded and the account owner is age 59½ or older (other certain exceptions may apply).</li> <li>• Early withdrawals of investment gains are subject to taxes and 10% federal penalty unless certain exceptions apply.</li> <li>• Multiple Roth IRAs are considered one Roth IRA for withdrawal purposes and distributions MUST be withdrawn in a specific order deemed by the IRS that applies regardless of which Roth IRA is used to take that distribution.</li> </ul>	<ul style="list-style-type: none"> <li>• Taxes are due upon conversion of account balances not yet taxed.</li> <li>• Converted amounts can be withdrawn tax free.<sup>3</sup></li> <li>• Qualified withdrawals of earnings are tax free and IRS penalty free if taken after five years have passed since the account was initially funded and the account owner is age 59½ or older (other certain exceptions may apply).</li> <li>• Early withdrawals of investment gains are subject to taxes and 10% federal penalty unless certain exceptions apply.</li> </ul>
<b>Mandatory withdrawals</b>	Distributions must begin by April 1 of the calendar year following the year the account owner turns 70½.	None for account owner	None for account owner
<b>Deadline to contribute</b>	April 15, 2014	April 15, 2014	n/a

Source: IRS Publication 590

<sup>1</sup>Must be age 50 or older by December 31 of the contribution year.

<sup>2</sup>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.

<sup>3</sup>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.

## Traditional IRAs vs. Roth IRAs – 2014

	Traditional IRA	Roth IRA	Roth IRA conversion
<b>Maximum contribution</b>	<ul style="list-style-type: none"> <li>• 100% of earned income up to \$5,500</li> <li>• \$6,500 if eligible for a catch-up contribution<sup>1</sup></li> <li>• Reduced by Roth IRA contributions</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of earned income up to \$5,500</li> <li>• \$6,500 if eligible for a catch-up contribution<sup>1</sup></li> <li>• Reduced by Traditional IRA contributions</li> </ul>	No limit on conversions of Traditional IRAs, SEP IRAs, SIMPLE IRAs (if open 2+ years)
<b>Age limits to contribute</b>	Under 70½ in the year of the contribution	None	None
<b>Income limits to contribute</b>	<p><b>Single:</b> Up to \$60,000 for full deduction, \$70,000 for partial<sup>2</sup></p> <p><b>Joint:</b> Up to \$96,000 for full deduction, \$116,000 for partial<sup>2</sup></p>	<p><b>Single:</b> Up to \$114,000 for full contribution, \$129,000 for partial</p> <p><b>Joint:</b> Up to \$181,000 for full contribution, \$191,000 for partial</p>	None
<b>Federal tax treatment</b>	<ul style="list-style-type: none"> <li>• Investment growth is tax deferred and contributions may be tax deductible. Deductible contributions and investment gains are taxed as ordinary income upon withdrawal.</li> <li>• 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.</li> <li>• Early withdrawals before 59½ are generally subject to a 10% IRS penalty unless certain exceptions apply.</li> </ul>	<ul style="list-style-type: none"> <li>• All contributions are non-deductible.</li> <li>• Qualified withdrawals of contributions at any time are tax free and IRS penalty free.</li> <li>• Qualified withdrawals of earnings are tax free and IRS penalty free if taken after five years have passed since the account was initially funded and the account owner is age 59½ or older (other certain exceptions may apply).</li> <li>• Early withdrawals of investment gains are subject to taxes and 10% federal penalty unless certain exceptions apply.</li> <li>• Multiple Roth IRAs are considered one Roth IRA for withdrawal purposes and distributions MUST be withdrawn in a specific order deemed by the IRS that applies regardless of which Roth IRA is used to take that distribution.</li> </ul>	<ul style="list-style-type: none"> <li>• Taxes are due upon conversion of account balances not yet taxed.</li> <li>• Converted amounts can be withdrawn tax free.<sup>3</sup></li> <li>• Qualified withdrawals of earnings are tax free and IRS penalty free if taken after five years have passed since the account was initially funded and the account owner is age 59½ or older (other certain exceptions may apply).</li> <li>• Early withdrawals of investment gains are subject to taxes and 10% federal penalty unless certain exceptions apply.</li> </ul>
<b>Mandatory withdrawals</b>	Distributions must begin by April 1 of the calendar year following the year the account owner turns 70½ .	None for account owner	None for account owner
<b>Deadline to contribute</b>	April 15, 2015	April 15, 2015	n/a

Source: IRS Publication 590

<sup>1</sup>Must be age 50 or older by December 31 of the contribution year.

<sup>2</sup>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.

<sup>3</sup>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.

## Medicare definitions and information

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 under Social Security or the Railroad Retirement Board for more than 24 months.

Part	Explanation	Enrollment information
<b>A</b>	This is hospital insurance. It pays for hospital, home health, skilled nursing facility costs (on an extremely limited basis) and hospice care for the aged or disabled.	If receiving Social Security, enrollment is automatic at age 65. If not getting Social Security, sign up in the 3 months either before or after turning age 65. There is a deductible and coinsurance for hospital stays.
<b>B</b>	This is medical insurance. It helps pay for physician, outpatient care and home health (in the rare instance when a person does not have Part A coverage). It also pays for other medical services for the aged and disabled who have voluntarily enrolled and pay Part B premiums.	Automatic enrollment like Part A, but Part B may be rejected by individual. Premiums, an annual deductible and coinsurance apply. There is a late enrollment penalty.
<b>C</b>	“Medicare Advantage” plans are private health plans offered as an alternative to Medicare Parts A and B. These plans contract with Medicare to provide coverage that is at least equal to Medicare A and B. People will need to decide whether to enroll in such a plan, and, if so, which one. This choice may involve many comparisons—between premiums, co-pays, network providers, coverage offered in addition to basic Medicare, etc. Making comparisons again at annual re-enrollment time may be helpful, too, since plan features do change. Options vary a great deal by geographic area.	Enroll as an alternative to coverage in Part A and Part B.
<b>D</b>	Offered by private insurers, these plans provide voluntary insurance for prescription drugs for all beneficiaries, and premium and cost-sharing subsidies for low-income enrollees. In many areas, insurers offer many competing plans, so choosing a Part D plan will involve comparisons between plan costs, features, providers and other factors. At annual re-enrollment time, new plans and options may be available and the relative costs may have changed, so new plan comparisons may be in order.	Enrollment is optional. There is a monthly premium, plus co-pays on certain prescription purchases. There is a late enrollment penalty.
<b>Medigap Policies</b>	Offered by private insurance companies, this insurance covers items that may not be covered by Medicare. Examples of items not covered by Medicare are listed below.	Enrollment is optional. Individual may purchase directly from a private insurance company.

Medicare does **not** cover:

- Long-term care (Medicare does pay for medically necessary skilled nursing facility or home health care on a very limited basis)
- Custodial care
- Dental care
- Vision care
- Hearing devices

Summary of information taken from Society of Actuaries, “Taking the Health Insurance Journey,” 2012.

Annuities can offer a lifetime guarantee of income as part of an effective retirement income plan. The major types of annuities used to create retirement income are highlighted below.

Type	Explanation
<b>Income Annuity</b>	<p>A contract with an insurance company to provide guaranteed income, usually for life. The purchaser pays a certain dollar amount up front and the annuity pays a fixed amount per month for life. Income annuity products come with various features that make them adaptable for individual situations. For example, income annuities:</p> <ul style="list-style-type: none"> <li>• Cover either single lives or joint lives.</li> <li>• Come with various refund options—for example, a guarantee that payments will last at least 10 years even in event of death of the payee. A popular refund feature is a death benefit equal to the original premium payment less any monthly payments made to the annuity owner to date. (The more attractive the refund feature, the lower the monthly payment.)</li> <li>• Pay a flat monthly amount for life, in most cases, or make payments that step up by a set percentage each year.</li> </ul> <p>Income annuities are similar to a traditional pension in that they generally provide no access or limited access to the original purchase payment, and there is generally no account balance.</p> <p>Income annuities are designed for clients who want to start taking income immediately or in less than one year.</p>
<b>Variable Annuity with a Guaranteed Lifetime Withdrawal Benefit</b>	<p>The variable annuity (VA) lets annuity owners invest the policy's account value in an assortment of subaccounts, including equity, bond and even a fixed interest account. Individuals can add a guaranteed lifetime withdrawal benefit (GLWB) to their VA for an annual fee. The GLWB guarantees that the policy owner can make lifetime withdrawals from the VA at a fixed percentage (typically 5%)—even if the VA subaccount values drop to zero.</p> <p>Most VAs include a minimum death benefit for heirs.</p> <p>With a GLWB, the annuity owner continues to have access to the contract value (subject to a surrender charge in the early years).</p> <p>VAs with GLWBs are designed primarily for clients who want to grow their assets before taking income.</p>
<b>Stand-alone Living Benefits</b>	<p>The stand-alone living benefit product is similar to a VA with a GLWB except the core product is a mix of mutual funds rather than VA subaccounts. The guarantee ensures that the account owner can take withdrawals at a fixed percentage—for life—even if the portfolio is depleted. The owner pays for the guarantee with an annual fee that is a percentage of the portfolio value.</p>
<b>Longevity Insurance (Deferred income annuity)</b>	<p>This product is like an income annuity except that the initial payout is delayed for a number of years. For example, a policy bought to begin at age 85 would only begin paying the individual at age 85, and then would pay for the remainder of life. This allows an individual who is concerned about outliving their savings to hedge this risk.</p>

U.S. Securities and Exchange Commission  
Society of Actuaries, "Designing a Monthly Paycheck for Retirement," 2012.  
Variable annuity guarantees are only as good as the insurance company that gives them. While it is an uncommon occurrence that the insurance companies that back these guarantees are unable to meet their obligations, it may happen. Annuity withdrawals prior to 59 ½ may be subject to tax penalties, are subject to market risk and may lose value. Riders have additional fees and costs associated with them and are subject to additional condition, restrictions and limitation.

## A closer look at tax rates

On January 2, 2013, President Obama signed the American Taxpayer Relief Act (“the Act”) into law. In short, the Act permanently extended existing income and investment tax rates for most Americans and raised income and investment tax rates on individuals and families with adjusted gross income (AGI) of \$400,000/\$450,000 beginning in 2013. The Act permanently indexed the Alternative Minimum Tax (AMT) exemption to inflation going forward; for 2014, the exemption increases to \$52,800 single/ \$82,100 for married filing jointly.

### Income, investment and estate tax rates for 2014

2014 federal income tax rates applicable to adjusted gross income (AGI)

Tax rate	Single filers	Married filing jointly	Capital gains & dividends	Medicare tax on earned income	Medicare tax on investment income
10%	Up to \$9,075	Up to \$18,150	0%	2.90% <sup>i</sup>	0%
15%	\$9,076-\$36,900	\$18,151-\$73,800			
25%	\$36,901-\$89,350	\$73,801-\$148,850	15%	3.80% <sup>ii</sup>	3.80% <sup>iii</sup>
28%	\$89,351-\$186,350	\$148,851-\$226,850			
33%	\$186,351-\$405,100	\$226,851-\$405,100			
35%	\$405,101-\$406,750	\$405,101-\$457,600	20%		
39.6%	\$406,751 or more	\$457,601 or more			

Top tax rate for income & dividends (nonqualified): 43.4%

Pep/Pease AGI Limits: \$250,000 single/\$300,000 married.<sup>iv</sup>

Top tax rate for capital gains & dividends (nonqualified): 43.4%

Top tax rate for capital gains & dividends (qualified): 23.8%

Top federal estate tax rate: 40%

2014 federal estate & gift tax exemption: \$5.34 million; \$14,000/\$28,000 gifts

<sup>i</sup> Earned income Medicare tax includes 1.45% employer portion and 1.45% employee portion

<sup>ii</sup> Earned income Medicare tax includes 2.90% combined employer/employee taxes plus an additional 0.90% tax for earned income over the \$200,000/\$250,000 income level. This additional tax was created by the Affordable Care Act.

<sup>iii</sup> Investment income above the \$200,000/\$250,000 modified adjusted gross income (MAGI) level will be subject to an additional 3.8% tax.

<sup>iv</sup> Pease: Beginning in 2013, the Limitation on Itemized Deductions (Pease) reduces most itemized deductions—including for charitable contributions, state, local and property tax, mortgage interest and health care—by the lesser of 1) 3% of income that exceeds the AGI thresholds or 2) 80% of the amount of the itemized deductions otherwise available. The Pease limitation does not apply to deductions for medical expenses, investment interest, casualty and theft losses and gambling losses.

PEP: The personal exemption phase-out (PEP) limits the amount that a taxpayer over the AGI threshold may claim a personal exemption; personal exemptions are phased out by 2% for every \$2500 the taxpayer's AGI exceeds the threshold.

**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 **S&P MidCap 400 Index** tracks a diverse basket of medium-sized U.S. firms. A mid cap stock is broadly defined as a company with a market capitalization ranging from about \$2 billion to \$10 billion.

The **S&P SmallCap 600 Index** invests in a basket of small cap equities. A small cap company is generally defined as a stock with a market capitalization between \$300 million and \$2 billion.

The **Russell 2000 Index**<sup>®</sup> measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **MSCI<sup>®</sup> EAFE (Europe, Australia, Far East) Net Index** is recognized as the pre-eminent benchmark in the United States to measure international equity performance. It comprises 21 MSCI country indexes, representing the developed markets outside of North America.

The **MSCI Emerging Markets Index**<sup>SM</sup> is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. As of June 2007, the MSCI Emerging Markets Index consisted of the following 25 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.

The **CS/Tremont Equity Market Neutral Index** takes both long and short positions in stocks with the aim of minimizing exposure to the systematic risk of the market (i.e., a beta of zero).

\*Market Neutral returns for November 2008 are estimates by J.P. Morgan Funds Market Strategy and are based on a December 8, 2008 published estimate for November returns by CS/Tremont in which the Market Neutral returns were estimated to be +0.85% (with 69% of all CS/Tremont constituents having reported return data). Presumed to be excluded from the November return are three funds, which were later marked to \$0 by CS/Tremont in connection with the Bernard Madoff scandal. J.P. Morgan Funds believes this distortion is not an accurate representation of returns in the category. CS/Tremont later published a finalized November return of -40.56% for the month, reflecting this mark-down. CS/Tremont assumes no responsibility for these estimates.

The **NCREIF Property Index** is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors – the great majority being pension funds. As such, all properties are held in a fiduciary environment.

The **FTSE NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

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.

The **HFRI Equity Market Neutral Index** is an equally weighted performance index. The HFRI is broken down into 33 different categories by strategy. The strategy of this index seeks to profit by exploiting inefficiencies between related equity securities, neutralizing exposure to market risk by combining long and short positions. In many cases, portfolios are structured to be market, industry, sector and dollar neutral. One example of this strategy is to build portfolios made up of long positions in the strongest companies in several industries and take corresponding short positions in those showing signs of weakness. Due to the mutual agreements with the hedge fund managers listed in the HFRI database, the index is not at liberty to disclose the particular funds behind this index.

The **Merrill Lynch Global Government Index** tracks the performance of investment-grade sovereign debt publicly issued and denominated in the issuer's own domestic market and currency. In order to qualify for inclusion in the Index, a country (i) must be an OECD member; (ii) must have an investment-grade foreign currency long-term sovereign debt rating (based on an average of Moody's, S&P and Fitch); (iii) must have \$50 billion (USD equivalent) outstanding face value of Index qualifying debt (i.e., after imposing constituent level filters on amount outstanding, remaining term to maturity, etc.) to enter the Index; (iv) must have at least \$25 billion (USD equivalent) in outstanding face value of Index qualifying debt in order to remain in the Index; (v) must be available to foreign investors; and (vi) must have at least one readily available, transparent price source for its securities.

The **Merrill Lynch U.S. High Yield Index** tracks the performance of US dollar-denominated below-investment-grade corporate debt publicly issued in the U.S. domestic market. Qualifying securities must have a below-investment-grade rating (based on an average of Moody's, S&P and Fitch) and an investment-grade-rated country of risk (based on an average of Moody's, S&P and Fitch foreign currency long-term sovereign debt ratings).

The **Dow Jones Industrial Average** measures the stock performance of 30 leading blue-chip U.S. companies.

The **Dow Jones-UBS Commodity Index** is composed of futures contracts on physical commodities and represents 19 separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel and zinc.

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.*

**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.

**Small capitalization** investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

**Mid capitalization** investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid cap companies' stock has experienced a greater degree of market volatility than the average stock.

**Real estate** investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

**International** investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Also, some overseas markets may not be as politically and economically stable as the United States and other nations.

Investments in **emerging markets** can be more volatile. As mentioned above, the normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

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. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The views and strategies described may not be suitable for all investors. This material has been prepared for informational purposes only and is not intended to provide, and should not be relied on for, accounting, legal or tax advice. References to future returns are not promises or even estimates of actual returns a client portfolio may achieve. Any forecasts contained herein are for illustrative purposes only and are not to be relied upon as advice or interpreted as a recommendation.

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