Perspective Matters
The case for staying invested in stocks. 6
Welcome Shareholder

The investing decisions you make today can have a significant impact on your financial future. So what’s the key to reaching your long-term goals?

Our cover story, “Perspective Matters: The Case for Staying Invested in Stocks,” explores the importance of staying focused on the long term, rather than reacting to short-term market movements and the emotional responses they can elicit.

Among other stories, we take a closer look at the benefits of systematic investing as well as the disciplined approach that has contributed to the success of T. Rowe Price’s Retirement Funds.

We hope you enjoy this issue. Best wishes to you and your family in the new year.

Sincerely,

Edward C. Bernard
Chairman, T. Rowe Price Investment Services
What Does It Mean to Feel Retirement Ready?

A recent study reveals a group of individuals who look at retirement more proactively than others.

T. Rowe Price conducted a survey in an effort to understand how prepared people feel for retirement.* The research revealed a subset of investors who are more proactively minded—that is, they thrive on a sense of accomplishment, view themselves as the type of people who get things done, and take responsibility seriously—especially when it comes to family and loved ones. Here’s a look into their thinking.

Feel prepared for retirement
Individuals with a more retirement-ready mind-set are focused on saving and preparing for their financial futures.

- 66% feel they’ve done a lot to prepare for retirement
- 73% were raised to be self-reliant and take responsibility seriously
- 74% focus their efforts on building wealth and attaining financial security

Believe retirement dreams are attainable
Proactively minded individuals believe they can achieve their ideal retirement because they have invested for the long term and have worked hard to save and prepare.

- 54% very attainable
- 41% somewhat attainable
- 3% somewhat unattainable
- 2% very unattainable

Imagine a vibrant retirement
These individuals set a high bar for the type of person they would like to be during retirement.

- Someone who is fulfilling untapped talents and unrealized dreams
- Someone who has a renewed enthusiasm for what the future holds
- Someone who is viewed as a success
- Someone who takes risks and is adventurous

*This T. Rowe Price study was conducted in December 2016 with a sample size of 2,001 individuals over the age of 35 with investable assets of at least $50,000. Respondents were either retired or had taken some steps (financially or logistically) to prepare for retirement.
Why to Invest Internationally

Investing abroad offers portfolio diversification and exposure to overseas growth opportunities.

Over the past 25 years, globalization has opened up new investment options as economies worldwide have become more intertwined. Adding international stocks and bonds to portfolios allows investors to reap the advantages of accessing some of the world’s fastest-growing economies. Exposure to those investments also offers diversification benefits that can help smooth volatility. While international investing may involve complexity—including assessing local and regional companies, economies, and politics, as well as additional risks—professional portfolio management can help investors successfully navigate this sector.

Find growth outside the U.S.

Since the early 1990s, emerging economies have become key drivers of global growth. (See “Emerging Markets Drive Global Growth.”) Countries such as Russia and China have privatized formerly state-run enterprises and opened their borders to direct foreign investment. Developing regions such as Asia and Latin America have dropped tariffs and trade barriers that once restricted the importation of goods.

Emerging markets stocks have trailed developed markets stocks in recent years, but there is still room for expansion in these countries’ economies over the long term. The International Monetary Fund projects that global growth in the next few years will come primarily from emerging markets and developing economies.* “It makes sense to have a healthy amount of exposure to both developed and developing countries around the world,” says Chris Alderson, head of International Equity at T. Rowe Price. “There are a lot of top-quality companies outside the U.S. that could do well in the medium term.”

Benefit from cycles of outperformance

While emerging markets have been more volatile than U.S. markets historically, international markets may not be uniformly volatile at the same time. What’s more, international investments go through cycles of underperformance and outperformance. (See “With Higher Return Potential Comes Greater Volatility.”)

Rather than trying to anticipate which markets will outperform, investors are better served by allocating a portion of their portfolios to multiple international regions. This strategy offers the potential to benefit from these divergent cycles of performance around the world. Be sure to evaluate your current holdings to determine how much foreign investment you already have. Keep in mind that some funds that invest primarily in the U.S. may have international holdings as well. Of course, diversification cannot assure a profit or protect against loss in a declining market.

Challenges in accessing global markets

While international investing can offer individuals more growth potential, it also entails certain risks. Political instability, war, trade disputes, and other disruptions can have a large impact on countries whose economies are less diverse or developed than the U.S. Such events can hurt both the prospects of a nation and the companies located there. In addition, some countries’ markets are less liquid than U.S. markets, which could lead...
to large price swings of a given country’s stocks or bonds in a short time period. Non-U.S. investments also are subject to currency risk, in addition to general market risks.

Investors also can have difficulty gaining access to certain international markets. They may have to pay high fees or commissions to own shares of companies that don’t trade on U.S. exchanges or to invest in non-U.S. bond issues.

International-focused mutual funds that invest in diversified holdings across sectors and countries offer a relatively easy way for investors to gain exposure to overseas opportunities. T. Rowe Price’s actively managed mutual funds benefit from a globally based research team that finds local investment opportunities and has access to many locally listed shares. Such access helps diminish transaction costs.

“Active managers have the resources to seek out global equity and fixed income opportunities by looking for improving industries and companies that are gaining market share because of better business models,” Alderson says. By relying on professional management and broad diversification, investors can manage many of the risks of global investing while gaining exposure to the rewards of investing overseas.

Emerging Markets Drive Global Growth

Gross domestic product (GDP) growth in emerging and developing markets has outpaced that of developed economies over the past 25 years (1/1/92–12/31/16).

With Higher Return Potential Comes Greater Volatility

Global developed markets generally tracked the U.S. market, while emerging markets were more volatile.

*International Monetary Fund, World Economic Outlook, April 2017.

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Market losses can be disconcerting, but investors also can find themselves thrown off by a prolonged period of rising stock prices. In fact, a bout of nerves now and then can seem inevitable—and even reasonable. When stocks have gone up so much, isn’t the wisest strategy to take a lot of money off the table and lock in gains? Or is getting out of the market at the first sign of trouble the best move?
After all, it’s not hard to find plenty of pundits advising that the market is overdue for a downturn.

Instead of staying focused on the fundamentals of a long-term strategy—including portfolio rebalancing and modest tactical adjustments—some investors let emotions drive their decisions. Doing so makes no more sense when times are good than when times are bad. “Attempting to time the market and avoid a downturn by making dramatic changes in your asset allocation can cause dramatic harm to your long-term investment results,” says Roger Young, CFP®, a senior financial planner with T. Rowe Price. “This is because you have to accurately make two decisions that are likely to trip you up: when to get out of stocks and when to get back in.”

**Getting out: Even a well-timed exit doesn’t guarantee strong results**

The example of the most recent bear market is instructive. (A bear market is a decline of 20% or more in major stock indexes.) The market downturn that began in late 2007 and lasted until early 2009 was one of the worst in history, with the broad Standard & Poor’s 500 Index falling nearly 57% before it started to recover. It took over five years for the index to regain its October 2007 peak. (See “Recovery From Bear Markets.”) Surely investors who saw it coming and got out of the way did much better than those who kept funneling money into stocks.

It may not be that simple. T. Rowe Price compared two hypothetical investors: a balanced investor and a bond investor. The bond investor saw the crash coming with remarkable accuracy. Therefore, in September 2007, that investor switched an existing retirement portfolio and $500 monthly contribution entirely to bonds (and never got back into stocks).

The balanced investor did not attempt to time the market and kept investing in a balanced portfolio of 60% stocks and 40% bonds. Both investors started the period with a portfolio worth $100,000.

The chart, “Different Investment Approaches,” on page 8 shows that the bond investor who pulled out of stocks just before the crash did indeed fare much better—for a while. But the balanced investor benefited from the stock market recovery over the full ten-year period. In addition to the eventual growth of the initial portfolio, this investor had another key advantage: ongoing investments when stock prices were very low.

**Recovery From Bear Markets**

Equity markets historically have delivered large returns in the years immediately after a bear market, with the potential to deliver double-digit average annual gains for several years. These are the average annual returns of the S&P 500 Index after declines of 20% or more (12/31/61–12/31/16).

<table>
<thead>
<tr>
<th>Year After Bear Market</th>
<th>Average Annual Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year Later</td>
<td>38.4%</td>
</tr>
<tr>
<td>3 Years Later</td>
<td>19.8%</td>
</tr>
<tr>
<td>5 Years Later</td>
<td>17.7%</td>
</tr>
<tr>
<td>10 Years Later</td>
<td>13.5%</td>
</tr>
</tbody>
</table>
low in the few years following the global financial crisis.

The bond investor made a reasonable decision to “get out” in terms of the initial portfolio, but getting out of stocks for ongoing investments proved disadvantageous. And the bond investor also missed an opportunity on another decision—when to get back in.

**Getting back in: You’re likely to miss much of the recovery**

Of course, some investors might be tempted to think that they will know when the downturn is over and it’s safe to get back into the market. But the duration and magnitude of bear markets have varied considerably, making it impossible to rely on guidelines such as “I’ll start investing in stocks again in a year” or “I’ll get back in after the market has fallen 25%.” Moreover, it is typically in the early stage of a recovery where the markets post particularly large gains. “Since the bottom of the market is very hard to identify at the time, investors who panic during a downturn often miss gains early in the recovery,” says Young.

Finally, it’s worth keeping in mind that corporate profit growth and stock prices often react to myriad forces, including economic factors such as interest rates and currency movements, political dynamics such as regulatory and tax changes, and the often vexing changes in overall investor sentiment. Stocks have often risen in times of war and economic turmoil, while they have declined in periods of peace and prosperity. For this reason, many seasoned investment professionals have thrown up their hands at predicting where stocks are headed over the short term.

Keep in mind that past performance cannot guarantee future results. But these historical returns show that stocks have proven resilient in the past and have generated positive returns over the long term.

**Considering your asset allocation strategy**

Rather than trying to time the markets, it’s important for investors to remain focused on their long-term goals and create appropriate asset allocation strategies to achieve them. The strategy you choose should be based in part on your tolerance for risk, as any strategy can be effective only if you can remain committed to it—even during challenging market periods. Time horizon is another essential consideration when establishing your asset allocation because short-term
Rather than trying to time the markets, it’s important for investors to remain focused on their long-term goals and create appropriate asset allocation strategies to achieve them.

Risk Versus Return
Over the past 30 years, a diversified portfolio would have offered 84% of the return of an all-equity portfolio (large-cap stocks) with about 63% of the volatility.

Risk/Standard Deviation (%)

Diversified Portfolio
Large-Cap Stocks
Mid- and Small-Cap Stocks
High Yield Bonds
Investment-Grade Bonds
International Stocks
Short-Term Bonds

Annualized Return (%)

4
6
8
10
12

Data from 1/87–12/16

Source: Zephyr StyleAdvisor; data analysis by T. Rowe Price.
The equity portion of the diversified portfolio includes 36% large-cap stocks, 12% mid- and small-cap stocks, and 12% international stocks; the bond portion includes 21% investment-grade bonds, 10% short-term bonds, 6% high yield bonds, and 3% international bonds. The historical performance is based on the following indexes to represent these asset classes: Bloomberg Barclays U.S. Aggregate Bond Index—investment-grade corporate and government bonds; Bloomberg Barclays 1–3 Year U.S. Gov’t/Credit Bond Index—measures the performance of investment-grade corporate debt and sovereign, supranational, local authority, and non-U.S. agency bonds that are U.S. dollar denominated; Bloomberg Barclays U.S. High Yield Bond Index—total return performance benchmark for fixed income securities having a maximum quality rating of Ba1 (as determined by Moody’s Investors Service); Citi World Global Bond Index non-U.S.—market capitalization-weighted index consisting of the government bond markets; S&P 500–500 large-cap U.S. stocks; Russell 2500 Index—measures the performance of the small- to mid-cap segment of the U.S. equity universe; and MSCI EAFE Index—the stocks of about 1,000 companies in Europe, Australasia, and the Far East. Allocations are considered static and are rebalanced monthly. The time period chosen is based on the availability of the indexes. Diversification cannot assure a profit or protect against loss in a declining market.

Looking beyond the short term
While it may be tempting to think you know where the market is headed, making changes to your investment strategy can be counterproductive in the long run. Your hunches and other emotional responses to market conditions can lead you astray, whether in good times or bad. Instead, focus on how much you save and keep a long-term perspective on your investments.
How Human Behavior Affects Investment Decisions

Basic emotional responses and mental biases can influence the way we invest.

The field of behavioral finance has outlined theories to explain why investors tend to make irrational decisions. We cover three of these widely known concepts:

**Loss Aversion.** With loss aversion, the pain of losses is more powerful than the pleasure of gains. This aversion to loss can contribute to panicked selling when the market drops or to the adoption of an overly conservative investment strategy to avoid short-term market fluctuations. These decisions may result in a portfolio that doesn’t keep pace with inflation.

**Recency Bias.** Investors tend to place greater weight on what they’ve experienced most recently, using it as a guideline for what might happen next. Known as recency bias, this theory may help explain why millennials who came of age soon after the financial crisis have steered clear of stocks as they have started investing—even though they have exceptionally long time horizons when it comes to saving for retirement.

**Anchoring.** The idea with anchoring is that once you’re exposed to an initial fact or figure, you’ll continue to look back to that information as a reference point. Individuals influenced by anchoring tend to hold on to an investment that has lost value in hopes that the investment will go back up to the original purchase price, rather than focusing on fundamentals.

While there’s a natural human tendency to react emotionally to market swings, investors are encouraged to stick with a consistent, long-term investment strategy. This strategy can include techniques such as portfolio rebalancing, tactical allocation adjustments, or systematic investing—approaches that take market conditions into account without derailing a long-term plan.


**Next Steps**

For more information on T. Rowe Price equity funds, visit [troweprice.com/stockfunds](http://troweprice.com/stockfunds).

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Funds that invest in equities are subject to the volatility inherent in common stock investing, and their share price may fluctuate more than that of a fund investing in income-oriented stocks. Fixed income securities are subject to credit risk, inflation risk, liquidity risk, call risk, and interest rate risk. As interest rates rise, bond prices generally fall. Investments in high yield (junk) bonds involve greater risk of price volatility, illiquidity, and default than higher-rated debt securities.

Returns include reinvestment of dividends and capital gains. Investment fees and account expenses are not included. Investors cannot invest directly in an index. Past performance cannot guarantee future results. All investments involve risk. All charts and tables are shown for illustrative purposes only.
The Power of a Disciplined Approach

A quality asset allocation team, a deep global research platform, and the experience of our portfolio managers have contributed to the success of T. Rowe Price’s target date program.

To demonstrate that T. Rowe Price’s target date investment process historically has created value for our clients, we examined the performance of all of our Retirement Funds (RFs) that had at least 10-year track records as of December 31, 2016. (See "Retirement Funds Included in Our Performance Study" on page A2.) These 11 RFs held virtually all (99.9%) of the RF assets managed by the firm as of that date.¹
Summary
- T. Rowe Price conducted a study to evaluate whether our active approach to target date implementation has added value relative to a purely passive strategy approach. We examined the performance of 11 of our Retirement Funds—those that had at least a 10-year track record.
- Our target date process seeks to enhance retirement outcomes for investors through both dynamic tactical adjustments and active security selection in the underlying strategies. The returns, net of fees, on each RF were compared with their combined passive benchmarks in order to quantify the value added by active implementation, including tactical allocation decisions and excess returns generated by security selection in the underlying T. Rowe Price funds.
- Our study found that all 11 of the RFs studied outperformed their benchmarks in at least 84% of rolling five-year periods and in 100% of rolling 10-year periods (rolled monthly) from inception through December 31, 2016, net of fees.
- We believe the success of T. Rowe Price’s target date program stems from the firm’s core strengths, including the quality of our asset allocation team, the depth of our global research platform, and the experience and disciplined approach of our portfolio managers.

We examined fund performance at three different levels to quantify the following:

1. **The value added by T. Rowe Price’s tactical allocation process.** Returns were calculated based on each fund’s fixed strategic asset allocations and then compared with actual returns, which reflect tactical allocation changes.

2. **The value added by active security selection.** Excess returns—net of fees and other costs—were calculated for the underlying funds in each RF relative to each underlying fund’s asset class, sector, or style benchmark. These fund-level returns were then aggregated to show the total excess returns achieved by each RF.

3. **The total value added by T. Rowe Price’s active implementation.** RF returns were compared with combined passive benchmarks constructed by T. Rowe Price that track the strategic allocations of each fund as it moves along its glide path. (See “Benchmarking Target Date Strategies” on page A4 for an explanation of how the combined benchmarks are constructed.)

Retirement Funds Included in Our Performance Study

<table>
<thead>
<tr>
<th>Fund</th>
<th>Inception Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement 2010 Fund</td>
<td>9/30/2002</td>
</tr>
<tr>
<td>Retirement 2020 Fund</td>
<td>9/30/2002</td>
</tr>
<tr>
<td>Retirement 2025 Fund</td>
<td>2/27/2004</td>
</tr>
<tr>
<td>Retirement 2030 Fund</td>
<td>9/30/2002</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fund</th>
<th>Inception Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement 2035 Fund</td>
<td>2/27/2004</td>
</tr>
<tr>
<td>Retirement 2040 Fund</td>
<td>9/30/2002</td>
</tr>
<tr>
<td>Retirement 2045 Fund</td>
<td>5/31/2005</td>
</tr>
<tr>
<td>Retirement 2050 Fund</td>
<td>12/29/2006</td>
</tr>
<tr>
<td>Retirement 2055 Fund</td>
<td>12/29/2006</td>
</tr>
</tbody>
</table>

Source: T. Rowe Price.
Our target date process seeks to meaningfully enhance retirement outcomes for investors.

For each level of fund performance, two measures were calculated:

**Hit rates**: The percentage of total rolling periods in which the RF added value at the performance level being measured.

**Excess returns**: The value added by each RF at the performance level being measured. Excess returns were calculated for each rolling period and then averaged across all the periods in each time frame.

T. Rowe Price believes strongly that longer time horizons provide the most meaningful measures of target date implementation, as they smooth out the effects of shorter-term factors that can produce a distorted picture of active performance. Our analysis focused primarily on performance over rolling five-year and rolling 10-year periods, rolled monthly.1

To provide a high-level summary of the relative effectiveness of T. Rowe Price’s target date process, we also calculated performance averages for all 11 Retirement Funds across all three levels of our analysis (tactical allocation, active security selection, and total active implementation).

To account for the differing longevity of each RF, these averages were time weighted—that is, the results are based on the percentage of the total performance periods in each time frame provided by each RF.

**Study results**

By and large, the time-weighted averages reflect the same results as for the individual RFs: The total value added by T. Rowe Price’s active process and the contributions made by tactical asset allocation and active security selection...
were all positive and relatively stable across different
time periods.4 (See “Time-Weighted Averages” on page A5.)

Individual performance results for the 11 RFs in our
study also were strongly positive across both 5- and
10-year time frames:

**Tactical asset allocation**: The performance
contribution from tactical allocation was positive in
every 10-year rolling period for every fund (i.e., a 100%
hit rate). Hit rates were overwhelmingly positive across
five-year rolling periods (averaging 99.5%). Value added
was positive and relatively consistent across all time
frames.5 (See “Hit Rates and Value Added by Tactical
Allocation” on page A6.)

**Active security selection**: Excess returns were positive
in every 10-year rolling period for every RF and strongly
positive (averaging 90%) across five-year rolling periods.
Excess returns were positive across all time frames for
all funds. (See “Hit Rates and Value Added by Active
Security Selection” on page A6.)

**Total active implementation**: Hit rates were positive
in every 10-year rolling period for every RF and
averaged 88% across five-year rolling time periods.
Annualized excess returns were consistently positive

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**Benchmarking Target Date Strategies**

T. Rowe Price has combined passive
benchmarks to measure the active
performance of the firm’s Retirement Funds.

These benchmarks are constructed from four
indexes that reflect the broad asset classes in
the underlying RF portfolios:

**U.S. Equity**: The Russell 3000 Index.

**Non-U.S. Equity**: The MSCI All Country World
Index ex USA.

**Fixed Income**: The Bloomberg Barclays
U.S. Aggregate Bond Index.

**Inflation Focused Fixed Income**: The
Bloomberg Barclays U.S. 1–5 Year Treasury
TIPS Index.

The combined benchmarks mirror the
strategic allocations for each fund, isolating
the contributions made by tactical allocation
and active security selection. This means the
weights assigned to different asset classes
in the benchmarks will change over time
as the funds move along their glide paths.
The combined passive benchmarks for the
11 funds included in our analysis can be found in
the full version of the study at troweprice.com/
complete-target-date-study.
Time-Weighted Averages for T. Rowe Price Retirement Funds

The total value added by T. Rowe Price’s active process and the contributions made by tactical asset allocation and active security selection were all positive and relatively stable across all time periods.

**Benefits for investors**

The excess returns historically achieved by T. Rowe Price’s Retirement Funds may seem modest compared with the absolute returns that investors typically have been able to achieve on diversified asset portfolios over longer periods. However, compounded over time, even a small improvement in returns can make a significant difference in ending portfolio values.

Take, for example, the experience of the T. Rowe Price Retirement 2020 Fund. From its inception on September 30, 2002, through December 31, 2016, the 2020 fund outperformed its passive benchmark by roughly 0.4 of a percentage point, annualized. In other words, if an individual had invested $100,000 in the 2020 fund, by the end of 2016 his or her portfolio could have been worth $20,440 more than the same amount invested in a hypothetical portfolio that earned the same return as the fund’s combined passive benchmark. (See “Example of the Benefits of T. Rowe Price’s Target Date Implementation” on page A7.)

A $20,440 difference in ending portfolio values could be significant for some retirement investors. In our example, the individual who invested in the Retirement 2020 Fund would be able to withdraw an additional $1,022 per year over a 20-year retirement time horizon compared with the individual who invested in the hypothetical combined benchmark portfolio—assuming no further portfolio growth after retirement. (See “Potential Postretirement Annual Spending Amounts” on page A7.)

**Fund Inceptions Through December 31, 2016**

Hit Rates

<table>
<thead>
<tr>
<th>Total Active Implementation</th>
<th>Tactical Asset Allocation</th>
<th>Active Security Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Year</td>
<td>88% 100% 88%</td>
<td></td>
</tr>
<tr>
<td>10-Year</td>
<td>100% 100% 100%</td>
<td></td>
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</tbody>
</table>

Annualized Value Added (in Basis Points)

<table>
<thead>
<tr>
<th>5-Year</th>
<th>10-Year</th>
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</thead>
<tbody>
<tr>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>40</td>
<td>35</td>
</tr>
</tbody>
</table>

Sources: Russell, MSCI, Bloomberg Barclays, and T. Rowe Price; data analysis by T. Rowe Price.
**A disciplined long-term approach**

T. Rowe Price’s target date process seeks to improve outcomes for our clients at multiple levels—via glide-path design, strategic diversification, tactical asset allocation, and active management of many of the underlying portfolio strategies.

We strongly believe in the value of skilled, long-term active management, and our target date process seeks to meaningfully enhance retirement outcomes for investors through both tactical asset allocation and active security selection in the underlying strategies.

We attribute our success to T. Rowe Price’s core strengths as a firm, including the quality of our asset allocation team, the depth of our global research platform, and the experience and disciplined approach of our portfolio managers.

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**Our target date process seeks to improve outcomes for our clients at multiple levels.**

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**NEXT STEPS**

Learn more about the T. Rowe Price Retirement Funds at troweprice.com/retirementfunds.

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### Hit Rates and Value Added by Tactical Allocation

<table>
<thead>
<tr>
<th>Fund</th>
<th>5-Year</th>
<th>10-Year</th>
<th>5-Year</th>
<th>10-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF 2005</td>
<td>100%</td>
<td>100%</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>RF 2010</td>
<td>100%</td>
<td>100%</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>RF 2015</td>
<td>100%</td>
<td>100%</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>RF 2020</td>
<td>100%</td>
<td>100%</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>RF 2025</td>
<td>100%</td>
<td>100%</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>RF 2030</td>
<td>100%</td>
<td>100%</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>RF 2035</td>
<td>100%</td>
<td>100%</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>RF 2040</td>
<td>100%</td>
<td>100%</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>RF 2045</td>
<td>95%</td>
<td>100%</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>RF 2050</td>
<td>100%</td>
<td>100%</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>RF 2055</td>
<td>100%</td>
<td>100%</td>
<td>15</td>
<td>11</td>
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Sources: Bloomberg Barclays, MSCI, Russell, and T. Rowe Price; data analysis by T. Rowe Price.

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### Hit Rates and Value Added by Active Security Selection

<table>
<thead>
<tr>
<th>Fund</th>
<th>5-Year</th>
<th>10-Year</th>
<th>5-Year</th>
<th>10-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF 2005</td>
<td>73%</td>
<td>100%</td>
<td>31</td>
<td>22</td>
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<tr>
<td>RF 2010</td>
<td>63%</td>
<td>100%</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>RF 2015</td>
<td>84%</td>
<td>100%</td>
<td>36</td>
<td>28</td>
</tr>
<tr>
<td>RF 2020</td>
<td>86%</td>
<td>100%</td>
<td>34</td>
<td>32</td>
</tr>
<tr>
<td>RF 2025</td>
<td>92%</td>
<td>100%</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>RF 2030</td>
<td>100%</td>
<td>100%</td>
<td>53</td>
<td>46</td>
</tr>
<tr>
<td>RF 2035</td>
<td>93%</td>
<td>100%</td>
<td>45</td>
<td>44</td>
</tr>
<tr>
<td>RF 2040</td>
<td>100%</td>
<td>100%</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td>RF 2045</td>
<td>100%</td>
<td>100%</td>
<td>48</td>
<td>47</td>
</tr>
<tr>
<td>RF 2050</td>
<td>100%</td>
<td>100%</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>RF 2055</td>
<td>100%</td>
<td>100%</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

Sources: Bloomberg Barclays, Credit Suisse, J.P. Morgan, MSCI, Russell, Standard & Poor’s, and T. Rowe Price; data analysis by T. Rowe Price.

---

### Hit Rates and Value Added by Total Active Implementation

<table>
<thead>
<tr>
<th>Fund</th>
<th>5-Year</th>
<th>10-Year</th>
<th>5-Year</th>
<th>10-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF 2005</td>
<td>85%</td>
<td>100%</td>
<td>57</td>
<td>44</td>
</tr>
<tr>
<td>RF 2010</td>
<td>84%</td>
<td>100%</td>
<td>46</td>
<td>45</td>
</tr>
<tr>
<td>RF 2015</td>
<td>86%</td>
<td>100%</td>
<td>53</td>
<td>42</td>
</tr>
<tr>
<td>RF 2020</td>
<td>86%</td>
<td>100%</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>RF 2025</td>
<td>87%</td>
<td>100%</td>
<td>54</td>
<td>44</td>
</tr>
<tr>
<td>RF 2030</td>
<td>88%</td>
<td>100%</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>RF 2035</td>
<td>91%</td>
<td>100%</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>RF 2040</td>
<td>89%</td>
<td>100%</td>
<td>56</td>
<td>41</td>
</tr>
<tr>
<td>RF 2045</td>
<td>89%</td>
<td>100%</td>
<td>51</td>
<td>23</td>
</tr>
<tr>
<td>RF 2050</td>
<td>89%</td>
<td>100%</td>
<td>52</td>
<td>22</td>
</tr>
<tr>
<td>RF 2055</td>
<td>89%</td>
<td>100%</td>
<td>52</td>
<td>22</td>
</tr>
</tbody>
</table>

Sources: Bloomberg Barclays, MSCI, Russell, and T. Rowe Price; data analysis by T. Rowe Price.
Example of the Benefits of T. Rowe Price’s Target Date Implementation


As of 9/30/2017, the fund’s 1-, 5-, and 10-year average annual total returns were 12.03%, 8.81%, and 5.51%, respectively. Current performance may be higher or lower than the quoted past performance, which cannot guarantee future results. Share price, principal value, and return will vary, and you may have a gain or loss when you sell your shares. Average annual total return figures include changes in principal value, reinvested dividends, and capital gain distributions. To obtain the most recent month-end performance, please visit our website at troweprice.com. The fund’s expense ratio is 0.66% as of its most recent fiscal year-end.

Sources: Bloomberg Barclays, MSCI, Russell, and T. Rowe Price; data analysis by T. Rowe Price.

Important Information

The principal value of the Retirement Funds is not guaranteed at any time, including at or after the target date, which is the approximate year an investor plans to retire (assumed to be age 65) and likely stop making new investments in the fund. If an investor plans to retire significantly earlier or later than age 65, the funds may not be an appropriate investment even if the investor is retiring on or near the target date. The funds’ allocations among a broad range of underlying T. Rowe Price stock and bond funds will change over time. The funds emphasize potential capital appreciation during the early phases of retirement asset accumulation, balance the need for appreciation with the need for income as retirement approaches, and focus on supporting an income stream over a long-term postretirement withdrawal horizon. The funds are not designed for a lump-sum redemption at the target date and do not guarantee a particular level of income. The funds maintain a substantial allocation to equities both prior to and after the target date, which can result in greater volatility over shorter time horizons. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed, or produced by MSCI.

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Information contained herein is based upon sources we consider to be reliable; we do not, however, guarantee its accuracy.
Standardized Performance
Annualized total returns for periods ended September 30, 2017.

<table>
<thead>
<tr>
<th>Fund (Inception Date)</th>
<th>Gross Expense Ratio</th>
<th>1-Year</th>
<th>3-Year</th>
<th>5-Year</th>
<th>10-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement 2005 Fund (NAV) (2/27/2004)</td>
<td>0.58%</td>
<td>7.39%</td>
<td>4.97%</td>
<td>5.96%</td>
<td>4.81%</td>
</tr>
<tr>
<td>Retirement 2005 Combined Index Portfolio*</td>
<td></td>
<td>7.15</td>
<td>4.89</td>
<td>5.88</td>
<td>4.39</td>
</tr>
<tr>
<td>Retirement 2010 Fund (NAV) (9/30/2002)</td>
<td>0.57</td>
<td>8.39</td>
<td>5.40</td>
<td>6.68</td>
<td>4.88</td>
</tr>
<tr>
<td>Retirement 2010 Combined Index Portfolio*</td>
<td></td>
<td>8.16</td>
<td>5.29</td>
<td>6.59</td>
<td>4.53</td>
</tr>
<tr>
<td>Retirement 2015 Combined Index Portfolio*</td>
<td></td>
<td>9.72</td>
<td>5.92</td>
<td>7.62</td>
<td>4.88</td>
</tr>
<tr>
<td>Retirement 2020 Fund (NAV) (9/30/2002)</td>
<td>0.63</td>
<td>12.03</td>
<td>6.83</td>
<td>8.81</td>
<td>5.51</td>
</tr>
<tr>
<td>Retirement 2020 Combined Index Portfolio*</td>
<td></td>
<td>11.57</td>
<td>6.63</td>
<td>8.60</td>
<td>5.14</td>
</tr>
<tr>
<td>Retirement 2025 Fund (NAV) (2/27/2004)</td>
<td>0.67</td>
<td>13.73</td>
<td>7.46</td>
<td>9.75</td>
<td>5.73</td>
</tr>
<tr>
<td>Retirement 2025 Combined Index Portfolio*</td>
<td></td>
<td>13.14</td>
<td>7.19</td>
<td>9.47</td>
<td>5.37</td>
</tr>
<tr>
<td>Retirement 2030 Fund (NAV) (9/30/2002)</td>
<td>0.69</td>
<td>15.32</td>
<td>8.03</td>
<td>10.54</td>
<td>5.95</td>
</tr>
<tr>
<td>Retirement 2030 Combined Index Portfolio*</td>
<td></td>
<td>14.62</td>
<td>7.70</td>
<td>10.21</td>
<td>5.56</td>
</tr>
<tr>
<td>Retirement 2035 Fund (NAV) (2/27/2004)</td>
<td>0.72</td>
<td>16.60</td>
<td>8.45</td>
<td>11.12</td>
<td>6.11</td>
</tr>
<tr>
<td>Retirement 2035 Combined Index Portfolio*</td>
<td></td>
<td>15.83</td>
<td>8.09</td>
<td>10.76</td>
<td>5.73</td>
</tr>
<tr>
<td>Retirement 2040 Fund (NAV) (9/30/2002)</td>
<td>0.74</td>
<td>17.62</td>
<td>8.74</td>
<td>11.51</td>
<td>6.30</td>
</tr>
<tr>
<td>Retirement 2040 Combined Index Portfolio*</td>
<td></td>
<td>16.84</td>
<td>8.39</td>
<td>11.14</td>
<td>5.92</td>
</tr>
<tr>
<td>Retirement 2045 Fund (NAV) (5/31/2005)</td>
<td>0.74</td>
<td>17.98</td>
<td>8.86</td>
<td>11.59</td>
<td>6.34</td>
</tr>
<tr>
<td>Retirement 2045 Combined Index Portfolio*</td>
<td></td>
<td>17.18</td>
<td>8.51</td>
<td>11.21</td>
<td>5.95</td>
</tr>
<tr>
<td>Retirement 2050 Fund (NAV) (12/29/2006)</td>
<td>0.74</td>
<td>17.99</td>
<td>8.85</td>
<td>11.58</td>
<td>6.33</td>
</tr>
<tr>
<td>Retirement 2050 Combined Index Portfolio*</td>
<td></td>
<td>17.18</td>
<td>8.51</td>
<td>11.21</td>
<td>5.95</td>
</tr>
<tr>
<td>Retirement 2055 Fund (NAV) (12/29/2006)</td>
<td>0.74</td>
<td>17.95</td>
<td>8.85</td>
<td>11.56</td>
<td>6.32</td>
</tr>
<tr>
<td>Retirement 2055 Combined Index Portfolio*</td>
<td></td>
<td>17.18</td>
<td>8.51</td>
<td>11.21</td>
<td>5.95</td>
</tr>
</tbody>
</table>

*Expense ratios are as of the most recent prospectus.

The combined index portfolio, which is the broad-weighted benchmark for each fund, is an unmanaged portfolio composed of the Russell 3000 Index, MSCI All Country World Index ex USA, Bloomberg Barclays U.S. Aggregate Bond Index, and Bloomberg Barclays U.S. 1–5 Year Treasury TIPS Index.

Source: T. Rowe Price.

Current performance may be higher or lower than the quoted past performance, which cannot guarantee future results.

Share price, principal value, and return will vary, and you may have a gain or loss when you sell your shares. The performance information shown does not reflect the deduction of any redemption fee; if it did, the performance would be lower. To obtain the most recent month-end performance, please visit our website at troweprice.com. The average annual total return figures include changes in principal value, reinvested dividends, and capital gain distributions.

Note that past performance data throughout this material are not reliable indicators of future performance.

One Retirement Fund with a relatively distant target date (2060) was excluded from the study because of its relatively short performance track record. All funds are subject to market risk, including possible loss of principal. For more information on the T. Rowe Price funds used in this study, please visit troweprice.com/complete-target-date-study and troweprice.com.

Performance results over rolling 1- and 3-year periods for the 11 funds included in our analysis can be found in the full version of the study at troweprice.com/complete-target-date-study. Certain types of assets are not represented in the combined passive benchmarks of the Retirement Funds. These out-of-benchmark allocations may include high yield bonds; international bonds; and a “real asset” allocation consisting of natural resource, metals and mining, and real estate stocks. As a result of the returns contributed by RF out-of-benchmark allocations, the value added by tactical allocation and active security selection does not exactly equal the value added by total active implementation shown in “Time-Weighted Averages for T. Rowe Price Retirement Funds: Annualized Value Added (in Basis Points)” on page A5.

The out-of-benchmark allocations in T. Rowe Price’s combined passive benchmarks may materially affect RF excess returns relative to those benchmarks. Retirement 2020 Fund inception date was 9/30/2002 and is composed of 62.0% stocks (43.40% Russell 3000 Index and 18.60% MSCI All Country World Index ex USA) and 38.0% bonds (31.50% Bloomberg Barclays U.S. Aggregate Bond Index and 6.50% Bloomberg Barclays U.S. 1–5 Year Treasury TIPS Index). Benchmark weightings as of 12/31/2016.
T. Rowe Price Blue Chip Growth Fund

A fund that invests in market-leading companies poised for long-term growth.

The T. Rowe Price Blue Chip Growth Fund (TRBCX) provides individuals a low-cost way to invest in blue chip companies that enjoy strong market positions, seasoned management teams, solid fundamentals, and sustainable, above-average earnings growth and profitability.

A solid track record
In addition to its outstanding near-term performance, the fund has posted solid longer-term returns. (See “Strong Long-Term Performance.”) The Blue Chip Growth Fund has received a 5-star Morningstar RatingTM for its Overall Morningstar RatingTM and for the three- and five-year periods and a 4-star Morningstar Rating for the 10-year period ended September 30, 2017.*

As with any stock fund, the Blue Chip Growth Fund is subject to market risk. Growth stocks can be volatile because these companies usually invest a high proportion of earnings in their business, and earnings disappointments often lead to sharply falling prices.

Strong Long-Term Performance
The T. Rowe Price Blue Chip Growth Fund has consistently exceeded its peer group as of 9/30/17.

![Graph showing performance](image)

1 Year: 27.15%
3 Years: 20.13%
5 Years: 14.31%
10 Years: 17.05%
Since Inception: 13.94%
Lipper Large-Cap Growth Funds Average:
1 Year: 10.99%
3 Years: 7.80%
5 Years: 9.57%
10 Years: 10.77%
Since Inception: 8.92%

*Morningstar rated the Blue Chip Growth Fund among 1,259, 1,259, 1,125, and 800 Large Growth funds for the overall rating and the 3-, 5-, and 10-year periods (as applicable) ended 9/30/17, respectively. Ratings are determined monthly and subject to change. Morningstar RatingsTM are based on risk-adjusted returns. The Overall Morningstar RatingTM for a fund is derived from a weighted average of the performance figures associated with its 3-, 5-, and 10-year (if applicable) Morningstar Rating metrics. Of course, past performance cannot guarantee future results. See page 17 for additional disclosure.

SOURCE FOR LIPPER DATA: LIPPER INC.

NEXT STEPS
Learn more about the T. Rowe Price Blue Chip Growth Fund at troweprice.com/bluechip.
3 Smart Steps for Retirement

These guiding principles can help you chart a course for savings success.

When it comes to saving for retirement, it’s easy to feel overwhelmed. Strategies abound, and you may feel uncertain about what plan best suits your needs. Consider the following three guidelines to help keep your retirement savings on track.

1. Invest more early on.
   Nearly two-thirds of people recently surveyed believe that what you invest in (equity, fixed income, and cash) is more important than how much you invest.* While a diversified portfolio with an asset allocation appropriate for your risk tolerance and time horizon does matter, the amount you save actually has the greatest impact on your portfolio value. “If you’re not saving enough, even the best investments won’t help you achieve a successful retirement,” says Judith Ward, CFP®, a senior financial planner with T. Rowe Price.

2. Save 15% for retirement.
   Your retirement most likely will be funded by both Social Security benefits and your personal investments. We recommend saving at least 15% of your salary (including any employer contributions) in order for your assets to support you through a retirement that could last decades.
   You may not be able to save 15% right away, but you can take steps to get there. For instance, if you have access to an employer retirement plan, such as a 401(k), contribute enough to receive any company match, and if no match is available, start by contributing 6% of your salary. Then, increase your contributions by one or two percentage points each year until you reach that 15% target.

3. Maintain exposure to equities.
   Equity investments can lose value in a market downturn, but they also generate the highest growth potential over the long term. Your retirement could last three decades or more, so your time horizon may be longer than you think.
   Having all your assets in cash won’t keep pace with inflation. Fixed

---

* You can make 2017 contributions to an IRA until April 17, 2018.
If you're not saving enough, even the best investments won't help you achieve a successful retirement.

—JUDITH WARD, CFP®, SENIOR FINANCIAL PLANNER

Income investments help to dampen the short-term swings in a portfolio, while equities provide the long-term growth potential needed to keep pace with inflation and help your money last throughout retirement. It’s important to balance the three asset classes to address risks while still providing the growth potential your portfolio needs. (See “Model Asset Allocation by Age.”) Of course, all investments involve risk, including possible loss of principal.

“Saving for retirement does not have to be as complicated as it sounds,” says Ward. “By focusing on what you can control, and by following these three guidelines, you can help keep your retirement savings on track.”

**NEXT STEPS**
To open an IRA or to contribute to your existing IRA, visit troweprice.com/ira.


---

**Model Asset Allocation by Age**

Even older investors can benefit from a large exposure to equities.

<table>
<thead>
<tr>
<th>Age</th>
<th>Equity</th>
<th>Fixed Income</th>
<th>Short Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>20s</td>
<td>90%–100%</td>
<td>0%–10%</td>
<td>0%–10%</td>
</tr>
<tr>
<td>30s</td>
<td>90%–100%</td>
<td>0%–10%</td>
<td>0%–10%</td>
</tr>
<tr>
<td>40s</td>
<td>80%–100%</td>
<td>0%–20%</td>
<td>0%–10%</td>
</tr>
<tr>
<td>50s</td>
<td>60%–80%</td>
<td>20%–30%</td>
<td>0%–10%</td>
</tr>
<tr>
<td>60s</td>
<td>50%–65%</td>
<td>25%–35%</td>
<td>5%–15%</td>
</tr>
<tr>
<td>70s &amp; older</td>
<td>15%–30%</td>
<td>35%–50%</td>
<td></td>
</tr>
</tbody>
</table>

These allocations are age-based only and do not take risk tolerance into account. Our asset allocation models are designed to meet the needs of a hypothetical investor with an assumed retirement age of 65 and a withdrawal horizon of 30 years.

The model asset allocations are based upon analysis that seeks to balance long-term return potential with anticipated short-term volatility. The model reflects our view of appropriate levels of trade-off between potential return and short-term volatility for investors of certain ages or time frames. The longer the time frame for investing, the higher the allocation is to equities (and the higher the volatility) versus fixed income or short-term investments.

**Limitations**
While the asset allocation models have been designed with reasonable assumptions and methods, the chart provides models based on the needs of hypothetical investors only and has certain limitations:

- The models do not take into account individual circumstances or preferences and/or may not align with your accumulation time frame, withdrawal horizon, or view of the appropriate levels of trade-off between potential return and short-term volatility.
- Investing consistent with a model allocation does not protect against losses or guarantee future results.

Please be sure to take other assets, income, and investments into consideration when evaluating model allocations. Other T. Rowe Price educational tools or advice services use different assumptions and methods and may yield different outcomes.
FOCUS ON

PERSONAL FINANCE

Keep Your Savings on Track

A systematic approach to investing can help you reach your goals.

Systematic investing is a powerful financial technique that can help you keep saving for retirement and other financial goals on track. It involves regularly—and automatically—contributing a set amount of money into a savings account, such as a 401(k), a Roth or Traditional individual retirement account (IRA), or taxable accounts.

Setting up a contribution schedule reduces the chances of making impulsive changes. “When you make the decision to set up a savings plan, you’re less likely to stop and start in the future,” says Judith Ward, CFP®, a senior financial planner with T. Rowe Price. “Effective long-term systematic investing is about staying steady, buying assets as prices rise and fall, and benefiting from compounding.”

The benefits of systematic investing

It helps control emotions. Systematic investing mitigates the influence that emotions may have on your financial plan. You contribute consistently every month regardless of global events and sudden shifts in asset prices—times when emotions can drive investment decisions. You will buy more shares when prices are lower, which can increase the growth potential of your portfolio, and fewer shares when prices are higher. This technique helps an investor avoid the temptation of trying to time the market. (See “How Dollar Cost Averaging Works.”)

You pay yourself first. You set up your plan to deposit a certain amount, just as you might set up automatic bill pay. There’s no chance of forgetting to invest or inadvertently using the money for another purpose. “You know for certain you are saving for your financial goals,” says Ward.

You can benefit from the power of compounding. Systematic investing maximizes the potential for compounded returns, especially in tax-advantaged accounts, because you won’t miss making contributions. In a taxable account, you can choose to have interest and dividends automatically reinvested to buy additional fund shares.

TIP: Set up a plan to deposit a certain amount, like you would for automatic bill pay.
How to set up your savings strategy
Here are the steps to setting up a systematic investing plan:

1 Set a target. Ask yourself how much you will need to reach your goal. For example, with retirement, consider aiming to save at least 15% of your gross salary each month (including any employer match) in tax-advantaged accounts, such as a workplace retirement plan or an IRA. You might decide to systematically invest in your IRA to save up to the annual contribution limit ($5,500 in both 2017 and 2018 or $6,500 for individuals age 50 or older).

2 Stick to your plan. The simplest way to take advantage of systematic investing is through a plan that automatically and regularly transfers a preset amount of money from your bank account or paycheck to your investment account, such as your IRA, taxable brokerage account, or other savings account.

3 Set it—but don’t forget it. When you set up your plan, establish an asset allocation—a mix of equity, fixed income, and cash—that will help you reach your goals. You may want to consider an investment that is already allocated for you, such as a target date fund that you select based on your time horizon and risk tolerance.

Effective long-term systematic investing is about staying steady, buying assets as prices rise and fall, and benefiting from compounding.
- JUDITH WARD, CFP®, SENIOR FINANCIAL PLANNER

How Dollar Cost Averaging Works
By purchasing steadily during times of market price fluctuations, you buy more shares when the market is low and fewer when the market is high, potentially decreasing your average cost per share.

<table>
<thead>
<tr>
<th>Month</th>
<th>Amount Invested</th>
<th>Share Price</th>
<th>Shares Bought</th>
<th>Average Cost Per Share</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>$200</td>
<td>$31</td>
<td>6.45</td>
<td>$22.60</td>
<td>Total $1,200</td>
</tr>
<tr>
<td>February</td>
<td>$200</td>
<td>$21</td>
<td>9.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>$200</td>
<td>$14</td>
<td>14.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>$200</td>
<td>$26</td>
<td>7.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>$200</td>
<td>$28</td>
<td>7.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>$200</td>
<td>$25</td>
<td>8.00</td>
<td>Total 53.09</td>
<td></td>
</tr>
</tbody>
</table>

Dollar cost averaging cannot assure a profit or protect against loss in a declining market. Since such a plan involves continuous investment in securities regardless of fluctuating price levels, investors should consider their financial ability to continue purchases through periods of low and high price levels. This is a hypothetical example and is for illustrative purposes only.

NEXT STEPS
To learn more about T. Rowe Price Automatic Asset Builder, log in to your account at troweprice.com/aab.

The T. Rowe Price Retirement Income 2020 Fund (TRLAX) is designed for individuals at or nearing retirement age who are looking for regular monthly payouts from their investments.

You receive:

■ Ongoing monthly dividend income
■ The convenience of an all-in-one fund
■ Ready access to your money when needed

The fund is actively managed according to the same glide path and asset allocation as the T. Rowe Price Retirement 2020 Fund, and a minimum investment of $25,000 is required.

NEXT STEPS
To learn more about this income-generating solution for retiring investors, visit troweprice.com/incomefunds.

The principal value of the Retirement Income 2020 Fund is not guaranteed at any time, including at or after the target date, which is the approximate year an investor plans to retire (assumed to be age 65) and likely stop making new investments in the fund. If an investor plans to retire significantly earlier or later than age 65, the fund may not be an appropriate investment even if the investor is retiring on or near the target date. The fund’s allocations among a broad range of underlying T. Rowe Price stock and bond funds will change over time. Diversification cannot assure a profit or protect against loss in a declining market. The fund emphasizes potential capital appreciation during the early phases of retirement asset accumulation, balances the need for appreciation with the need for income as retirement approaches, and focuses on supporting an income stream over a long-term postretirement withdrawal horizon. The fund is not designed for a lump-sum redemption at the target date and does not guarantee a particular level of income. The fund maintains a substantial allocation to equities both prior to and after the target date, which can result in greater volatility over shorter time horizons. There is no guarantee that the fund will provide adequate income at and through retirement. The fund’s monthly cash distributions will reduce the amount of assets available for investment by the fund. In certain years, achieving the targeted annual payout rate through 12 equal monthly dividend payments may result in a drawdown on investment principal, and some distributions may be treated in part as a return of capital. For all of these reasons, there is no guarantee of principal for investors and no guarantee that the fund will provide a fixed or stable level of cash distributions at any time or over any particular period of time. Any fund redemptions, including redemptions made prior to the target date, will proportionately reduce the amount of future cash distributions to be received from the fund.
Top Ratings From Morningstar

Consider transferring your IRA to a T. Rowe Price mutual fund recognized by Morningstar, a leader in independent investment research. As of September 30, 2017, 72 of 118 of our rated funds (Investor Class only) earned Morningstar’s highest ratings in their respective categories, receiving an Overall Morningstar Rating™ of 4 or 5 stars—5 stars being the highest.* Of course, past performance cannot guarantee future results.

*N: Morningstar gives its best ratings of 4 or 5 stars to the top 32.5% of all funds (of the 32.5%, 22.5% get 4 stars and 10% get 5 stars) based on their risk-adjusted returns. The Overall Morningstar Rating™ is derived from a weighted average of the performance figures associated with a fund’s 3-, 5-, and 10-year (if applicable) Morningstar Rating™ metrics.

The Morningstar Rating™ for funds, or “star rating,” is calculated for funds with at least a 3-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar risk-adjusted return measure that accounts for variation in a managed product’s monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star.

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Make Your IRA Contribution Today

Any time is a good time to invest, but investing earlier can maximize the compounding effect on your money. You can make your 2018 IRA contribution as soon as January 1. And remember that you have until April 17, 2018, to make your IRA contribution for tax year 2017.

<table>
<thead>
<tr>
<th>IRA CONTRIBUTION LIMITS</th>
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<tbody>
<tr>
<td>Tax Year</td>
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<tr>
<td>2017</td>
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<td>2018</td>
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Note: You may not contribute more than your taxable compensation for the year.

NEXT STEPS
To add money to your IRA, visit troweprice.com/contribute.
CLOSING BELL

PERSONAL FINANCE

Money and Your Mind

How our brains can get in the way of sound investment choices.

Can you recall making a decision—good or bad—and later wondering what motivated you to make that choice? Over the years, researchers from the fields of neuroscience, economics, and psychology have identified why our brains sometimes can unwittingly stop us from making sound investment decisions.

If you’ve ever felt nervous watching the price of an investment fall, the part of your brain that responds to fear—your amygdala—may be to blame. The amygdala sends out warning signals, which can create a sense of anxiety when we fear something, such as anticipating or experiencing a financial loss.

On the other hand, positive outcomes can trigger certain neurons in the brain to release dopamine, a neurotransmitter that regulates feelings of pleasure. Simply anticipating making money on an investment could cause your brain to release this chemical.

The prefrontal cortex can help counter the brain’s primal responses and guide our behavior as investors. In effect, the prefrontal cortex can help you concentrate, analyze concepts, and draw logical conclusions instead of simply reacting.

To increase your chances of success as an investor, understand that your brain’s natural responses can influence your decisions regarding money. This knowledge can help your prefrontal cortex step in to help you make decisions based on established investment strategies—not emotions.


NEXT STEPS
To keep yourself educated on the markets, investments, and financial planning topics, visit troweprice.com/insights.
### T. Rowe Price Funds

For detailed information on T. Rowe Price mutual funds, including investment performance, visit [troweprice.com/performance](http://troweprice.com/performance).

#### Domestic
- Blue Chip Growth
- Capital Appreciation
- Capital Opportunity
- Diversified Mid-Cap Growth
- Dividend Growth
- Equity Income
- Equity Index 500
- Extended Equity Market Index
- Financial Services
- Growth & Income
- Growth Stock
- Health Sciences
- Media & Telecommunications
- Mid-Cap Growth
- Mid-Cap Value
- New America Growth
- New Era

- New Horizons
- QM U.S. Small & Mid-Cap Core Equity
- QM U.S. Small-Cap Growth Equity
- QM U.S. Value Equity
- Real Estate
- Science & Technology
- Small-Cap Stock
- Small-Cap Value
- Tax-Efficient Equity
- Total Equity Market Index
- U.S. Large-Cap Core
- Value
- International/Global
- Africa & Middle East
- Asia Opportunities
- Emerging Europe
- Emerging Markets Stock
- Emerging Markets Value Stock

#### Balanced
- Global Allocation
- Personal Strategy Balanced
- Personal Strategy Growth
- Personal Strategy Income
- Real Assets

- Retirement Balanced
- Retirement Income 2020
- Spectrum Growth

#### Taxable
- Corporate Income
- Credit Opportunities
- Dynamic Global Bond
- Emerging Markets Bond
- Emerging Markets Corporate Bond
- Emerging Markets Local Currency Bond
- Floating Rate
- Global High Income Bond
- Global Multi-Sector Bond
- GNMA

- High Yield
- Inflation Protected Bond
- International Bond
- International Bond (USD Hedged)
- Limited Duration Inflation Focused Bond
- New Income
- Short-Term Bond
- Total Return
- U.S. Bond Enhanced Index
- U.S. High Yield
- U.S. Treasury Intermediate

- U.S. Treasury Long-Term
- Ultra Short-Term Bond
- Tax-Free

- CA, GA, ME, NJ, NY, VA Tax-Free Bond
- Intermediate Tax-Free High Yield
- MU Short-Term Tax-Free Bond
- Summit Municipal Income
- Summit Municipal Intermediate
- Tax-Free High Yield
- Tax-Free Income
- Tax-Free Short-Term Intermediate

#### Bond

#### Money Market
- Cash Reserves
- Government Money
- U.S. Treasury Money
- Tax-Free

- Summit Municipal Money Market
- Tax-Exempt Money

- CA, MD, NY Tax-Free Money

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1. Closed to new investors except for a direct rollover from a retirement plan into a T. Rowe Price IRA invested in this fund. Formerly International Growth & Income. $25,000 minimum. Formerly Global Unconstrained Bond. Certain tax-free funds may be inappropriate for tax-deferred investments, including individual retirement accounts (IRAs).

2. Retail Funds: You could lose money by investing in the Fund. Although the Fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. Beginning October 14, 2016, the Fund may impose a fee upon the sale of your shares or may temporarily suspend your ability to sell shares if the Fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the Fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The Fund’s sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

3. Formerly Summit Cash Reserves.

4. Government Funds: You could lose money by investing in the Fund. Although the Fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the Fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The Fund's sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

5. Formerly Prime Reserve.

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