Key Steps to Retirement Success: How to Seek Greater Wealth and Downside Resilience

The key to successful retirement investing has been generating sustainable income while managing risk. In retirement, investors must balance two key risks: longevity risk (the risk of outliving assets) and market risk (volatility). That balancing act has become more difficult due to low bond yields, which have made a meaningful equity exposure even more important in retirement. Because equities have greater total return than bonds but greater volatility, an increase in equity can reduce longevity risk — but at the cost of higher market risk.

In this environment, investors need equity that can generate strong returns to address longevity risk but with downside resilience to address market risk. New research on mutual funds available in the U.S. has identified a group of active equity and allocation funds that have delivered on those goals. While past results aren’t a guarantee of future success, these funds have shared three traits: low expense ratios, high firm-level manager ownership and a history of outpacing indices in market declines (a trait known as low downside capture). These funds have a history of outpacing indices in withdrawal scenarios, while experiencing less volatility and greater risk-adjusted returns.

Research was conducted by Capital Group, a global investment management firm originating in Los Angeles, California in 1931. Capital International Asset Management (Canada), Inc. is part of Capital Group. The information presented in this paper is for illustrative purposes only.
Don’t Settle for Average – in Accumulation or Distribution

Capital Group conducted research in 2014 based on mutual funds available in the U.S. and found that select active managers have developed a track record of outperforming indices. This finding was important because equity investments in core accumulation portfolios have been trending passive in recent years, based on a belief that large-cap developed equity markets were so efficient that active management could not add value.

Although it’s true that the average active manager has lagged indices over long periods, not all managers are average.

We studied a variety of manager traits that could potentially be used to identify equity funds that have added value over indices. Although we found that many factors were relevant, we identified two traits – low expense ratios and high firm-level manager ownership – that were historically associated with a strong track record versus indices. This paper focuses on the distribution phase of the saving cycle, when investors take withdrawals. We found that adding a third trait – low downside capture – to the investment selection process enhanced results during withdrawal scenarios.

Look for Two Manager Traits in Core Portfolios …

Although many metrics were relevant, expense ratio and manager ownership stood out in our study.

- Expense ratio
- Turnover
- Manager tenure
- Manager ownership
- Incentive structure

… And an Additional Trait in Distribution Portfolios

In retirement withdrawal scenarios, look for low downside capture in addition to low expense ratios and high ownership.

- Low Downside Capture
  Look for funds that historically have outpaced indices during market downturns.
The Math of Investing Changes in Retirement

The problem of sequence-of-returns risk is familiar to investors. Although volatility can be beneficial during working years, when participants are making regular contributions, volatility (at least on the downside) tends to be harmful once income stops coming in and participants must regularly draw down savings.

To illustrate these differences, we took the stream of annual returns of the S&P 500 Index from 1965 to 2014. We assumed in one case that an investor experienced the returns in chronological order. Another investor experienced the same set of returns but in reverse order (backward). In a scenario in which an initial lump sum is invested and no withdrawals are taken, the order of returns is irrelevant - both return streams generate the same ending balance in the bottom left chart. Once withdrawals are taken, the picture changes. As can be seen in the bottom right chart, the investor who experienced the returns in chronological order ran out of funds within 30 years. In contrast, the reverse-order investor finished with more than US$600,000.

Without any salary to make up for losses, downturns in retirement can create serious setbacks. But given their increased lifespans, retirees still need to build assets, making continued exposure to equity important. The key is to seek out equity investments that have been more resilient in down periods.

A Tale of Two Different Return Streams

Annual returns of the S&P 500 Index from 1965 through 2014 in chronological and reverse order

Returns Based on a Lump Sum US$10,000 Investment

Returns Based on a US$50,000 Initial Investment, Including Withdrawals (6% Initial Withdrawal Rate, Increasing by 3% Annually Thereafter)

Source: Capital Group. Returns shown in reverse order are hypothetical and are shown for illustrative purposes only.
The Key to Retirement Investing: Do Better in Bad Times

To quantify the benefit of downside resilience, we looked at 12 bear markets or corrections in the S&P 500 since 1973. We analyzed the downside capture ratios of U.S. large-cap equity funds. We found that in 11 of those 12 markets, funds that had the lowest three-year downside capture ratios just prior to the start of the bear market or correction outpaced indices over the course of the downturn. For example, the funds with the best three-year downside capture ratios just prior to the 1980-1982 bear market collectively lost 4.7% over that period, compared with a loss of 16.5% for the index. To get a sense of that difference, the index investor would need to earn a 19.8% return following the downturn to be made whole again, compared to a 4.9% return for the investor in the lowest downside capture portfolio. Although past results are not predictive of results in future periods, this stark comparison illustrates the importance of “having shallower losses” in down markets. The tech bubble bear market of the early 2000s proved to be the exception. That’s possibly because funds that overweighted technology had better upside and downside capture in the three years prior to that downturn. Although those funds’ overweight tech stance lowered their downside capture figures in the years prior to the downturn, the position obviously hurt after the bubble burst.

U.S. Large-Cap Funds With the Best Down Capture Outpaced in Bear Markets and Corrections

Funds that had the best three-year downside capture ratios immediately prior to the start of a bear market or correction outpaced during the downturns.

Source: Capital Group. See Appendix for methodology. Funds include those from the Morningstar Open-End Large Growth, Large Value and Large Blend categories (U.S. large cap). Index is S&P 500. Standard & Poor’s 500 Composite IndexSM and S&P 500® are service/trademarks owned by The McGraw-Hill Companies, Inc. Fund groupings determined by each fund’s three-year downside capture just prior to a bear market or correction. Results based on an equally weighted portfolio of funds in each grouping. Past results are not predictive of results in future periods. There have been periods when funds have lagged the index. For definitions of bear market and correction, see the Appendix for methodology. “Best down capture” indicates the group of funds with the lowest downside capture. “Worst down capture” indicates the group of funds with the highest downside capture.
One Secret of Lower Downside Equity: a Focus on Income

Downside capture is a commonly used metric. But what generally is driving a fund’s favourable downside capture figure? Although there are many factors behind low downside capture, we found that many lower downside capture funds tended to be more dividend oriented, as seen in the below chart showing rolling 12-month yields of low-downside U.S. large-cap equity funds.

This finding makes sense as dividend payers (and especially dividend growers) have tended to be less volatile. Because a greater part of their total return comes in the form of cash, they have tended to be less affected by gyrations in broader equity market prices than companies that pay little or no dividends. This finding confirmed our longstanding belief that investors should gradually shift their equity exposure to income-oriented funds as they approach and enter retirement.

Funds With Lower Downside Capture Tended to Be Higher Yielding

Rolling 12-month yield of U.S. large-cap equity funds grouped by downside capture (1995-2014)

Source: Capital Group, based on data from Morningstar. As of December 31, 2014. Funds include those from the Morningstar Open-End Large Growth, Large Value and Large Blend categories (U.S. large cap). For explanation of the methodology used to group funds by downside capture, see the Appendix. The 12-month yield is the sum of a fund’s total trailing 12-month interest and dividend payments divided by the last month’s ending unit price (NAV) plus any capital gains distributed over the same period.
Select Active Advantage
Key Steps to Retirement Success

Look for Funds That Meet Three Key Criteria

New research shows that investors could benefit if they could identify equity funds that have outpaced indices over time while delivering downside resilience and less volatility in retirement, when investors are taking withdrawals. We analyzed a variety of manager and fund traits as part of our research to answer that question. We found three that stood out. Select active funds sharing all three of these characteristics tended to outpace in withdrawal scenarios.

**Low downside capture:** Funds that were most frequently in the best quartiles of downside capture in the period under review tended to outpace indices more often in withdrawal scenarios.

**Low expense ratios:** Mirroring our earlier findings, funds that had the lowest expense ratios tended to outpace indices in withdrawal scenarios. This tendency makes sense, as funds with lower expense ratios have a lower bar to clear to beat indices.

**High manager ownership at the firm level:** This trait also was relevant in distribution. Investment firms whose managers had invested more dollars into their funds also tended to outpace more often. If managers are invested in their own funds, their interests are better aligned with an investor’s.

In our study, we first screened the Morningstar universe of mutual funds available in the U.S. by downside capture. We then screened that subset of funds for expense ratios and manager ownership. We studied 20 years of monthly returns, from January 1995 to December 2014. Importantly, we included “dead” funds in our study in order to reduce survivorship bias.

Funds That Met Three Criteria Outpaced Indices and Active Peers in Our Research

Each trait added value on its own for our study, but the combination was particularly powerful in boosting results versus indices.
The Three Traits Boosted Success Rates in Retirement

We screened four Morningstar category groupings: U.S. large-cap funds, foreign large-cap funds, Moderate Allocation funds (consisting of a mix of U.S. stocks and bonds) and World Allocation funds (composed of a mix of global stocks and bonds). Our goal: Find out how often the funds identified by our screen in each category beat indices in a withdrawal scenario over rolling 10-year periods.

First, we screened for downside capture. We studied three-year downside capture ratios on a rolling monthly basis for all periods ended 1995 to 2014. Funds that spent the most periods in the top two quartiles of downside capture cleared our screen.

As seen in the chart, portfolios of the select active equity funds that met the downside capture screen had higher success rates in a withdrawal scenario, outpacing indices at least 49% of the time. That’s certainly an improvement, but we found that additional screens were needed to significantly boost success rates. So we also screened for expense ratios and manager ownership.

Funds that met the downside capture and expense ratio screens experienced higher success rates, as did the funds meeting both the downside capture and manager ownership screens. Finally, the funds that met all three screens – downside capture, expense ratios and ownership – experienced even higher success rates.

Select Active Funds Outpaced Indices More Often in a Withdrawal Scenario

Percentage of monthly rolling 10-year periods in which fund groupings outpaced indices, assuming a US$500,000 initial investment with an initial 4% withdrawal rate, increasing by 3% annually thereafter (1995-2014)

### U.S. Large Cap

<table>
<thead>
<tr>
<th>All Active Managers (2,508 funds)</th>
<th>Best Down Capture (867 funds)</th>
<th>Best in All Three Traits (52 funds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.79%</td>
<td>49.59%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Moderate Allocation

<table>
<thead>
<tr>
<th>All Active Managers (341 funds)</th>
<th>Best Down Capture (108 funds)</th>
<th>Best in All Three Traits (23 funds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.88%</td>
<td>66.94%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Foreign Large Cap

<table>
<thead>
<tr>
<th>All Active Managers (600 funds)</th>
<th>Best Down Capture (214 funds)</th>
<th>Best in All Three Traits (47 funds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.97%</td>
<td>51.24%</td>
<td>69.42%</td>
</tr>
</tbody>
</table>

### World Allocation

<table>
<thead>
<tr>
<th>All Active Managers (128 funds)</th>
<th>Best Down Capture (31 funds)</th>
<th>Best in All Three Traits (7 funds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>57.02%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Capital Group, based on Morningstar data. Based on monthly returns. Average annualized returns are at net asset value and include withdrawals. See Appendix for methodology. U.S. funds are those in the Morningstar Open-End Large Value, Large Blend and Large Growth categories. International funds are those in the Morningstar Open-End Foreign Large Value, Foreign Large Blend and Foreign Large Growth categories. Moderate Allocation and World Allocation funds drawn from Morningstar categories of the same name. Moderate Allocation index is 60% S&P 500 and 40% Barclays U.S. Aggregate indices. World Allocation index is 60% MSCI All Country World Index and 40% Barclays Global Aggregate Index. U.S. index is S&P 500. Foreign index is MSCI All Country World ex USA. The indices are unmanaged and, therefore, have no expenses. Investors cannot invest directly in an index.
Select Active Funds Generated Greater Ending Wealth

To translate these success rates into dollars, we tested two hypothetical portfolios of these select active funds over a 20-year withdrawal scenario. We assumed a US$500,000 initial investment, along with a 4% initial withdrawal rate (growing by 3% annually thereafter).

The first portfolio, designed to represent an investor’s typical large-cap equity bucket, consisted of a 50% allocation to the select U.S. large-cap funds and a 50% allocation to the select foreign large-cap funds. We compared the select funds’ results against an index blend consisting of an equal allocation to the S&P 500 and MSCI All Country World ex USA indices. The second portfolio consisted of a half-and-half allocation to the select Moderate Allocation and World Allocation funds; to assess the results of these funds, we compared those results to an index blend that closely mirrored the portfolio’s allocation: a 60%/40% index of the MSCI All Country World Index and Barclays Global Aggregate Index. Our research question: How would an equally weighted portfolio of the select active funds have done relative to the index blend and the active universe as a whole?

As seen in the below chart, for the 50%/50% U.S. and foreign large-cap portfolio, the select active equity funds collectively generated 44% greater ending wealth than the index blend after accounting for withdrawals. For the 50%/50% Moderate and World Allocation portfolio, the select active funds collectively generated 85% greater ending wealth than the index blend after withdrawals.

Select Active Portfolios Delivered Greater Wealth in Distribution

Return of a hypothetical US$500,000 initial investment, with a 4% initial percentage withdrawal rate, increasing by 3% each year thereafter for the 20-year period ended December 31, 2014

<table>
<thead>
<tr>
<th>50% U.S. Large-Cap / 50% Foreign Large-Cap Portfolio</th>
<th>50% Moderate Allocation / 50% World Allocation Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index Blend</td>
<td>Index Blend</td>
</tr>
<tr>
<td>$1,187,510</td>
<td>$908,220</td>
</tr>
<tr>
<td>Select Active</td>
<td>Select Active</td>
</tr>
<tr>
<td>$1,707,486</td>
<td>$1,678,683</td>
</tr>
<tr>
<td>+44% greater ending wealth than index</td>
<td>+85% greater ending wealth than index</td>
</tr>
<tr>
<td>With-Drawals $537,407</td>
<td>With-Drawals $537,407</td>
</tr>
<tr>
<td>$500,000 initial investment</td>
<td>$500,000 initial investment</td>
</tr>
</tbody>
</table>

Avg. Annual Returns

8.13% 9.57% 7.15% 9.50%

Source: Capital Group, based on Morningstar data. Hypothetical results are based on monthly returns at net asset value of portfolios from January 1995 to December 2014. The components of each allocation can be found in the Methodology section of the Appendix. The U.S./Foreign Large-Cap index blend portfolio consists of 50% S&P 500 Index and 50% MSCI All Country World Index ex USA. The Moderate Allocation/World Allocation index blend portfolio consists of 60% MSCI All Country World Index and 40% Barclays Global Aggregate Index. Past results are not predictive of results in future periods. Portfolios were rebalanced monthly. The indices are unmanaged and, therefore, have no expenses. Investors cannot invest directly in an index.
When it comes to retirement, the “ride” is as important as the destination.

Select Active Funds Had Strong Risk-Adjusted Returns

Greater ending wealth is the main goal for retirement investing. However, when it comes to retirement, the “ride” is as important as the destination. Given their concern for downside risk, many retirees would prefer a “smoother ride” to reach greater ending wealth — one that would experience less volatility and greater risk-adjusted returns.

In other words, many retirees may be willing to sacrifice some upside potential in exchange for more downside resilience. In addition to achieving greater ending wealth over the periods we studied, the two portfolios of select active funds also delivered some desirable return characteristics for the distribution phase.

These funds collectively registered a lower standard deviation, greater Sharpe ratios (a measure of risk-adjusted returns) and greater alpha. They did so over the entire 20-year time frame we studied, as well as on an average rolling five-year basis over that same period.

The select active funds also had meaningfully lower beta, which is a relative measure of a fund’s sensitivity to market movements. A beta of less than one indicates that the investments moved less than the index, which is an important consideration in the distribution phase, when investors are looking to de-risk.

Select Active Funds Had Greater Risk-Adjusted Returns and Less Volatility

Portfolio characteristics for the 20 years ended December 31, 2014

<table>
<thead>
<tr>
<th>50% Moderate Allocation / 50% World Allocation Portfolio</th>
<th>20-Year Period</th>
<th>Average Rolling 5-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard deviation</td>
<td>Index Blend 10.17%</td>
<td>Select Active 9.06%</td>
</tr>
<tr>
<td>Sharpe ratio</td>
<td>0.43</td>
<td>0.71</td>
</tr>
<tr>
<td>Alpha</td>
<td>0.00%</td>
<td>2.74%</td>
</tr>
<tr>
<td>Beta</td>
<td>1.00</td>
<td>0.84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>50% U.S. Large-Cap / 50% Foreign Large-Cap Portfolio</th>
<th>20-Year Period</th>
<th>Average Rolling 5-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard deviation</td>
<td>Index Blend 15.46%</td>
<td>Select Active 14.31%</td>
</tr>
<tr>
<td>Sharpe ratio</td>
<td>0.39</td>
<td>0.49</td>
</tr>
<tr>
<td>Alpha</td>
<td>0.00%</td>
<td>1.57%</td>
</tr>
<tr>
<td>Beta</td>
<td>1.00</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Source: Capital Group, based on Morningstar data. Hypothetical results are based on monthly returns of portfolios from January 1995 to December 2014. The components of each allocation can be found in the Methodology section of the Appendix. The index for the U.S. and foreign large-cap portfolio consists of 50% S&P 500 Index and 50% MSCI All Country World Index ex USA. The index portfolio for the Moderate Allocation and World Allocation portfolio consists of 60% MSCI All Country World Index and 40% Barclays Global Aggregate Index. Portfolios were rebalanced monthly. Past results are not predictive of results in future periods. The indices are unmanaged and, therefore, have no expenses. Investors cannot invest directly in an index. For definitions of standard deviation, Sharpe ratio, beta and alpha, please consult the Appendix.
Select Active Advantage
Key Steps to Retirement Success

Select Active Funds Outpaced With Higher Withdrawals

Selecting a sustainable withdrawal rate is a complicated issue that depends much on an investor’s financial circumstances and goals; as such, it should be determined through the close collaboration of an investor with a financial advisor. Although there may be no hard-and-fast rule on withdrawal rates, we believe it’s important to stress-test portfolios to see how they may fare under different withdrawal rate assumptions. A 4% rate is a rule of thumb in the industry. However, we wanted to see how the select active funds would fare under greater withdrawal rates.

We looked at the 50%/50% World and Moderate Allocation portfolio under 4%, 5% and 6% withdrawal rates. The ending wealth of the select active funds portfolio outpaced the index in all scenarios.

Interestingly, the select active funds collectively bested the index by a greater percentage under the 6% scenario than under the 4% scenario. The select active funds collectively generated 152% greater ending wealth than the index in the 6% withdrawal scenario, versus 85% more wealth in the 4% scenario.

We believe it’s important to stress test portfolios to see how they may fare under different withdrawal assumptions.

The Select Active Portfolios Held Up Better in Stress Tests

Return of a hypothetical US$500,000 initial investment, in a 50% Moderate Allocation / 50% World Allocation portfolio, assuming an initial percentage withdrawal rate, increasing by 3% each year thereafter for the 20-year period ended December 31, 2014

<table>
<thead>
<tr>
<th>Withdrawal Scenario</th>
<th>Index Blend</th>
<th>Select Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>4% Withdrawal</td>
<td>$908,220</td>
<td>$1,678,683 +85% greater ending wealth than index</td>
</tr>
<tr>
<td>5% Withdrawal</td>
<td>$670,185</td>
<td>$1,384,682 +107% greater ending wealth than index</td>
</tr>
<tr>
<td>6% Withdrawal</td>
<td>$432,150</td>
<td>$1,090,680 +152% greater ending wealth than index</td>
</tr>
</tbody>
</table>

Avg. Annual Returns

| 4% Withdrawal       | 7.15%      | 9.50%      |
| 5% Withdrawal       | 7.29%      | 9.64%      |
| 6% Withdrawal       | 7.46%      | 9.81%      |

Source: Capital Group, based on Morningstar data. Hypothetical results are based on monthly returns of portfolios from January 1995 to December 2014. Average annualized returns include withdrawals. The components of each allocation can be found in the Methodology section of the Appendix. Past results are not predictive of results in future periods. The index portfolio for the 50% Moderate Allocation / 50% World Allocation portfolio consists of 60% MSCI All Country World Index and 40% Barclays Global Aggregate Index. Portfolios were rebalanced monthly. The indices are unmanaged and, therefore, have no expenses. Investors cannot invest directly in an index.
Conclusion

Equities have been a major source of appreciation; they also have been a major source of volatility. Therefore, investing in equity with a history of downside resilience can be valuable in retirement. Our research shows that equity funds sharing three traits – low downside capture, low expense ratio and high firm-level manager ownership – historically have generated strong results in withdrawal scenarios with greater risk-adjusted returns and a lower standard deviation than indices. Historically, investing in these select active funds would have resulted in greater ending wealth in withdrawal scenarios.

The Capital Advantage

Since 1931, Capital Group has been singularly focused on delivering superior, consistent results for long-term investors using high-conviction portfolios, rigorous research and individual accountability.

Aligned with investor success

We base our decisions on a long-term perspective, which we believe aligns our goals with the interests of our clients. Achieving superior, long-term returns is our only goal, so managers are rewarded for their results, not the level of assets they manage. Collectively, Capital Group associates are significant investors in the company’s investment offerings.

The Capital System™

Our investment process, The Capital System, is designed to enable individual investment professionals to act on their highest convictions, while limiting the risk associated with isolated decision-making. Each portfolio is divided into portions that are managed independently by investment professionals with diverse backgrounds, ages and investment approaches. A disciplined, multilayered governance structure oversees the system’s operation.

Built to last

As a private firm with an independent charter and robust balance sheet, we invest in improving our capabilities through good markets and bad. With one of the highest retention rates in the industry,* we have some of the most experienced investment professionals, a deep bench and a commitment to sustaining our investment process over generations.

*Per Morningstar, for the American Funds, as of December 31, 2014. Based on the percentage of portfolio managers who have stayed with the firm during the past five calendar years. American Funds are not available in Canada.
Methodology

Compiling the fund universe

The universe of both large-cap domestic and large-cap foreign funds drew from Morningstar’s Open-End U.S. and Foreign Large Value, Large Blend and Large Growth categories. The universe of Moderate Allocation and World Allocation funds drew from Morningstar categories of the same name. Both live and dead funds were included in each universe in order to eliminate survivorship bias. For live funds, only the oldest unit class was used. For dead funds with multiple unit classes, the median monthly returns were used. Results are at net asset value. If a sales charge had been deducted results would have been lower. For fee-related illustrations that include dead funds with multiple unit classes, the median expense ratios were used. Due to the dynamic nature of the Morningstar database, results for the Morningstar universe may change.

Screening process

Relying on Morningstar Direct data analysis software, we performed screens for one or more of the following criteria: downside capture ratio, expense ratio and manager ownership at the firm level.

To screen for downside capture ratio, we analyzed statistics for all rolling three-year periods in the years under study. Three-year periods were chosen because many funds that “died” did so in the first five years of their lives; therefore, using rolling periods of greater than three years would have excluded many dead funds from our study. For each rolling three-year period, we ranked all funds into quartiles by downside capture, then classified each fund based on which quartile it most frequently belonged to for all those periods.

To screen for expense ratio, we calculated quartiles based on averages of annual report Net Expense Ratios (NER) for all observed Morningstar categories for the 20-year period indicated. For funds with missing expense ratios, we filled in gaps between two available data points using linear interpolation, a statistical method used to estimate the values between two known data points in a time series.

To screen for manager ownership, we calculated quartiles using weighted averages of the midpoints of Morningstar ranges of manager holdings at the firm level. Each fund was assigned the weighted average of its firm manager holding. Funds without values were excluded from the quartile rankings.

Which screens we used and how we implemented them depended on which investment phase we were examining and how many funds qualified overall.

We used a two-step screening process, beginning with the downside capture ratio. Across each fund category, we sought the top two quartile grouping of funds with low downside capture ratio. Using this subset, we then screened for low NER and high manager ownership – the intersection of those two groups – seeking the top quartile for large-cap domestic funds and the top two quartiles (50%) for large-cap foreign, Moderate Allocation and World Allocation funds. (The number of quartiles used depended on the number of qualifying funds. Using the top quartile alone for some Morningstar categories would have yielded an insufficient number of funds for our study to be meaningful.) We created an equally weighted portfolio of qualifying funds.

For the illustrations on pages 4 and 5: We examined bear markets and corrections of the S&P 500 Composite Index from 1973 to 2014. (We defined a bear market as an index decline of more than 20%; we defined a correction as an index decline of more than 10%, then we chose the nearest month-end prior to those dates.) All results were based on monthly returns of the S&P 500 Index or mutual funds in the Morningstar Open-End Large Value, Large Blend and Large Growth categories (reflecting U.S. large-cap funds). For each bear market/correction, we divided all funds into quartiles based on the fund’s downside capture ratio in the three years (36 months) prior to the month in which the bear market/correction began. Cumulative returns for each quartile were calculated using equally weighted portfolios of funds for the down period. “Best down capture” quartile indicates the quartile of funds with the lowest downside capture ratio.

Information about indices

Market indices referenced in this material are defined as follows:

Barclays Global Aggregate Index represents the global investment-grade fixed-income markets. Barclays U.S. Aggregate Index represents the U.S. investment-grade fixed-rate bond market. MSCI All Country World Index is a free float-adjusted, market capitalization-weighted index that is designed to measure results of more than 40 developed and emerging equity markets. Results reflect dividends gross of withholding taxes through December 31, 2000, and dividends net of withholding taxes thereafter. MSCI All Country World ex USA Index is a free float-adjusted, market capitalization-weighted index that is designed to measure results of more than 40 developed and emerging equity markets, excluding the United States. Results reflect dividends gross of withholding taxes through December 31, 2000, and dividends net of withholding taxes thereafter. Standard & Poor’s 500 Index is a market capitalization-weighted index based on the average weighted results of 500 widely held common stocks.

The market indices are unmanaged and, therefore, have no expenses. Investors cannot invest directly in an index. There have been periods when the funds have lagged the index. Past results are not predictive of results in future periods.
Glossary

**Active success rate** is the percentage of time a fund (or a group of funds) has outpaced its relevant index (or peer group) over rolling periods.

**Alpha** is a measure of the difference between a portfolio’s actual returns and its expected results, given its level of risk as measured by beta. A positive alpha figure indicates the portfolio has generated results better than its beta would predict. In contrast, a negative alpha indicates the portfolio has lagged, given the expectations established by beta.

**Beta** is a relative measure of a fund’s sensitivity to market movements over a specified period of time. The beta of the market (represented by the benchmark index) is equal to 1; a beta higher than 1 implies that a fund’s return was more volatile than the market. A beta lower than 1 suggests that the fund was less volatile than the market.

**Downside capture ratio** reflects the ratio of annualized fund-versus-index returns for all months in which the index had a negative return.

**Sharpe ratio** uses standard deviation and excess return (relative to a risk-free rate) to determine reward per unit of risk. The higher the number, the better the portfolio’s historical risk-adjusted performance.

**Standard deviation** (annualized, based on monthly returns) is a common measure of absolute volatility that tells how returns over time have varied from the mean. A lower number signifies lower volatility.

Commissions, trailing commissions, management fees and expenses all may be associated with mutual fund investments. Please read the prospectus before investing. Mutual funds are not guaranteed, their values change frequently and past performance may not be repeated.

Views expressed regarding a particular company, security, industry or market sector should not be considered an indication of trading intent of any investment funds. These views should not be considered as investment advice or as a recommendation to buy or sell.

For informational purposes only; not intended to provide tax, legal or financial advice. We assume no liability for any inaccurate, delayed or incomplete information, nor for any actions taken in reliance thereon. The information contained herein has been supplied without verification and may be subject to change. Capital Group funds are available in Canada through registered dealers. For your individual situation, please consult your financial and tax advisors.

Forward-looking statements are not guarantees of future performance, and actual events and results could differ materially from those expressed or implied in any forward-looking statements made herein. We encourage you to consider these and other factors carefully before making any investment decisions and we urge you to avoid placing undue reliance on forward-looking statements.

The MSCI information may only be used for your internal use, may not be reproduced or redisseminated in any form and may not be used as a basis for or a component of any financial instruments or products or indices. None of the MSCI information is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Historical data and analysis should not be taken as an indication or guarantee of any future performance analysis, forecast or prediction. The MSCI information is provided on an “as is” basis and the user of this information assumes the entire risk of any use made of this information. MSCI, each of its affiliates and each other person involved in or related to compiling, computing or creating any MSCI information (collectively, the “MSCI Parties”) expressly disclaims all warranties (including, without limitation, any warranties of originality, accuracy, completeness, timeliness, non-infringement, merchantability and fitness for a particular purpose) with respect to this information. Without limiting any of the foregoing, in no event shall any MSCI Party have any liability for any direct, indirect, special, incidental, punitive, consequential (including, without limitation, lost profits) or any other damages. (www.msci.com)

Capital International Asset Management (Canada), Inc. is part of Capital Group, a global investment management firm originating in Los Angeles, California in 1931. Capital Group manages equity assets through three investment groups. These groups make investment and proxy voting decisions independently. Fixed-income investment professionals provide fixed-income research and investment management across the Capital organization; however, for securities with equity characteristics, they act solely on behalf of one of the three equity investment groups.