WEALTH MANAGEMENT

Morgan Stanley

# Client Conversations & Primers

## Intro to Investing

# Investing Can Be Complicated and Overwhelming: We're Here to Help

As of March 4, 2019

When formulating an investment strategy, it's important to have a strong understanding of three key fundamentals:

- **Major Asset Classes**
  - The four major asset classes we focus on are Cash & Cash Alternatives, Fixed Income, Equities and Alternative Investments
  - We also provide a description on major investment vehicles such as Mutual Funds and ETFs
- **Basic Tenets of Investing**
  - These include the benefits of compounding interest, the importance of staying invested, and how market timing can impact your portfolio
- **Asset Allocation and Diversification**
  - The importance of asset allocation and diversification within a portfolio to mitigate risk

We recommend that investors formulate a plan for their investments based on their goals. This requires an understanding of both time horizon and risk tolerance.

Source: Morgan Stanley Wealth Management GIC

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Major Asset Classes

Basic Tenets of Investing

Asset Allocation & Diversification

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# Asset Class Map

## Cash

- Cash Alternatives
  - CDs
  - Money Market
  - US T-Bill
- US Cash Deposits
- Non-USD Deposits

## Fixed Income

- Investment Grade
  - Treasuries
  - Agencies
  - Corporates
  - Inflation Protected
  - Non-Us
  - Mortgages
  - Municipals
  - Floating Rates
- Non Investment Grade
  - US High Yield
  - Emerging Markets Debt
  - Municipal High Yield
- Convertible Bonds

## Equities

- US
  - Large Cap
  - Mid Cap
  - Small Cap
- Developed Market
  - Large Cap
  - Mid Cap
  - Small Cap
- Emerging Markets
  - BRIC
  - Beyond BRIC
  - Frontier
- Preferred Stocks

## Alternatives

- Real Assets
- Absolute Return Assets
- Equity Hedge Assets
- Equity Return Assets
- Private Investments

Source: Bloomberg, Morgan Stanley Wealth Management GIC . Beyond BRIC- emerging market countries besides Brazil, Russia, India, and China. Frontier - frontier countries are typically less developed than EM nations. MSCI currently defines 33 nations as frontier markets. These markets tend to be the riskiest markets in the world.

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# Cash Alternatives for Liquidity and Capital Preservation

| Cash | | | | |
|---|---|---|---|---|
| Cash Alternatives | | | US Cash Deposits | Non-USD Deposits |
| CDs | Money Market | US T-Bill | | |

## Certificate of Deposit (CD)

- A CD is a document issued by the bank to an investor who agrees to deposit their money for a set period of time for an interest rate typically higher than their savings account

## Money Market Funds

- Money market funds are mutual funds that invest in short-term debt securities and act like savings accounts but provide higher yield

## US Treasury Bills

- Treasury Bills are securities issued by the United States Department of Treasury. When issued to companies, such companies are essentially lending the government money

Source: Morgan Stanley Wealth Management Investment Resources

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# Fixed Income for Stable Income Stream

| Fixed Income | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Investment Grade | | | | | | | | Non Investment Grade | | | Convertible Bonds |
| Treasuries | Agencies | Corporates | Inflation Protected | Non-Us | Mortgages | Municipals | Floating Rates | US High Yield | Emerging Markets Debt | Municipal High Yield | |

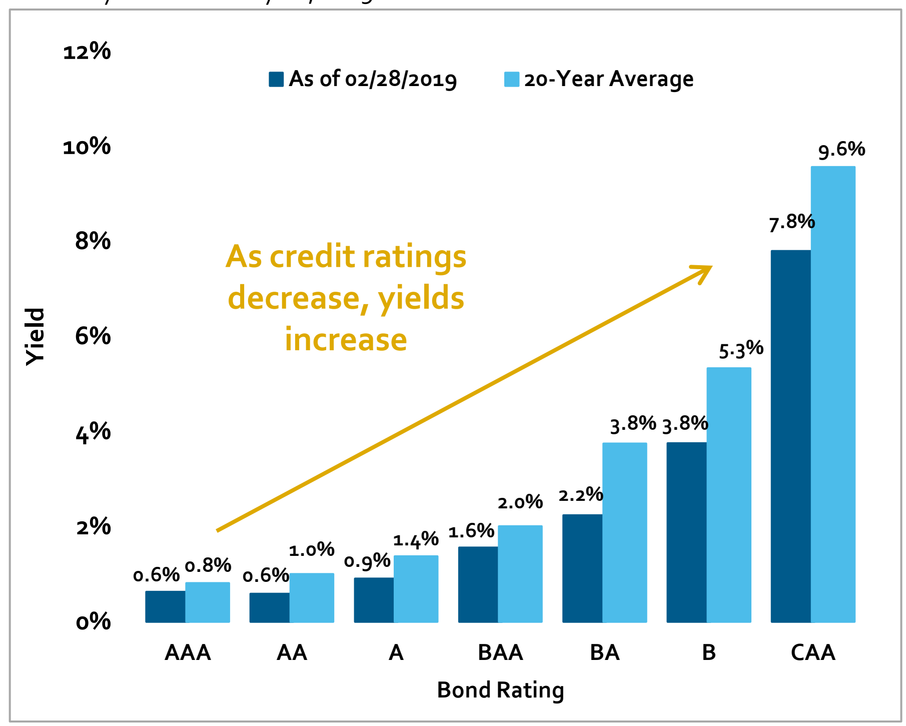
CONSERVATIVE → AGGRESSIVE

## Fixed Income Coupon

- Coupons or interest payments are the yield collected by the investor at a fixed interval, typically semi-annually
- The amount of the coupon is determined by the coupon rate or interest rate
- Coupons make up a large portion of the total return of fixed income securities

Corporate Spreads[1] Vs. Average

Monthly as of February 28, 2019




Source: Morgan Stanley Wealth Management Investment Resources. (1) Option-Adjusted Spread is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is adjusted to take into account an embedded option. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

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# Equity for Capital Appreciation

| Equities | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| US | | | Developed Market | | | Emerging Markets | | | Preferred Stocks |
| Large Cap | Mid Cap | Small Cap | Large Cap | Mid Cap | Small Cap | BRIC | Beyond BRIC | Frontier | |

## Dividend

- An equity security that pays regular dividends, often because the firm is past the point of needing to reinvest profits
- Most have lower levels of volatility than overall stock market and offer higher-than-average market dividend yields

## Value

- A value stock is a security that has fallen out of favor in the market place and is typically priced lower than stocks of similar companies
- Investing in a value stock attempts to capitalize on inefficiencies in the market price

## Growth

- A growth stock is a security whose earnings are expected to grow at a higher-than-market rate
- Growth stocks typically do not pay dividends and are chosen for their potential capital gains

Source: Morgan Stanley Wealth Management Investment Resources

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# Alternatives for Diversification From Traditional Markets

| Alternatives | | | | |
|---|---|---|---|---|
| Real Assets | Absolute Return Assets | Equity Hedge Assets | Equity Return Assets | Private Investments |

## Real Assets

- Real Assets are tangible assets that derive their value from their own intrinsic and inherent qualities

## Absolute Return Assets

- Absolute Return assets seek to achieve a targeted return independent of any benchmark or other standard

## Equity Hedge Assets

- Equity Hedge assets seek to hedge the equity exposure and are usually negatively correlated with equities

## Equity Return Assets

- Equity Return assets seek to return above-average equity returns through more complex strategies, i.e., equity long/short and event driven/ credit strategies

## Private Investments

- Investments in private companies, or investment vehicles that aim to provide higher-than-market returns through a longer-term, illiquid investment strategy

Source: Morgan Stanley Wealth Management Investment Resources

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# One of the Most Important Parts of Investing Is Selecting Appropriate Asset Classes for Your Goals

## Major Asset Classes

| Asset Class | Description | Uses |
| --- | --- | --- |
| Cash & Cash Alternatives | • Matures <1 year<br>• Highly liquid securities | • Capital Preservation |
| Fixed Income | • Potential periodic income at regular intervals<br>• Varied maturity | • Capital Preservation<br>• Stable Income Stream |
| Equity | • Company ownership | • Capital Appreciation<br>• Income |
| Alternatives | • Lower correlation to the market/other asset classes | • Capital Appreciation<br>• Diversification |

Source: Morgan Stanley Wealth Management Investment Resources

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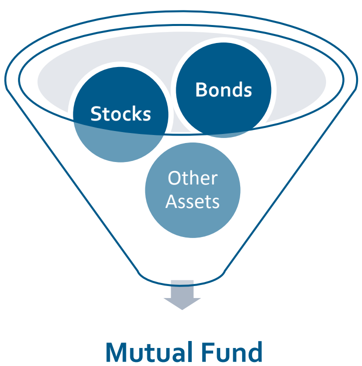
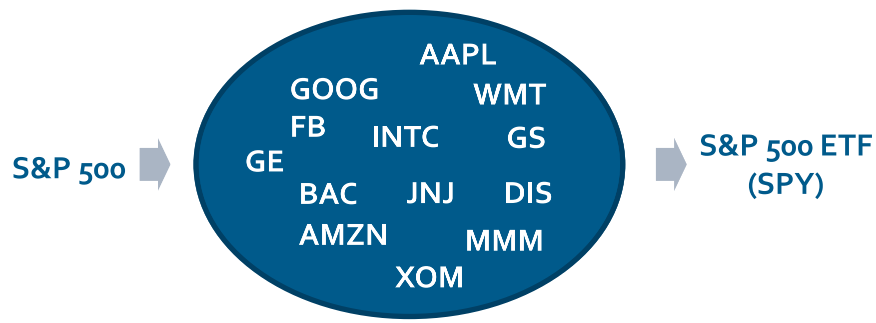
# Mutual Funds (MFs) and Exchange Traded Funds (ETFs) Basics

- A **Mutual Fund** is an investment vehicle funded by shareholders for the purpose of investing in stocks, bonds, money market instruments and other assets
- Mutual Funds are typically actively managed by professional money managers who make security selection decisions that can lead to higher fees than ETFs
- Mutual Funds enable investment across asset classes that might otherwise be out of reach due to minimum account sizes or high cost




- An **ETF** is an investment vehicle designed to mimic the daily movement of a market index or other benchmark
- ETFs are typically passively managed and do not involve security selection. This tracking of the market may not offer the same level of potential dividend returns as owning the stock
- ETFs enable you to gain market exposure at a lower cost, and with more transparency than comparable investment products




Source: Morgan Stanley Wealth Management GIC. Equity securities shown as constituents of the S&P 500 as well as the S&P 500 ETF are for illustrative purposes only.

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Major Asset Classes

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Asset Allocation & Diversification

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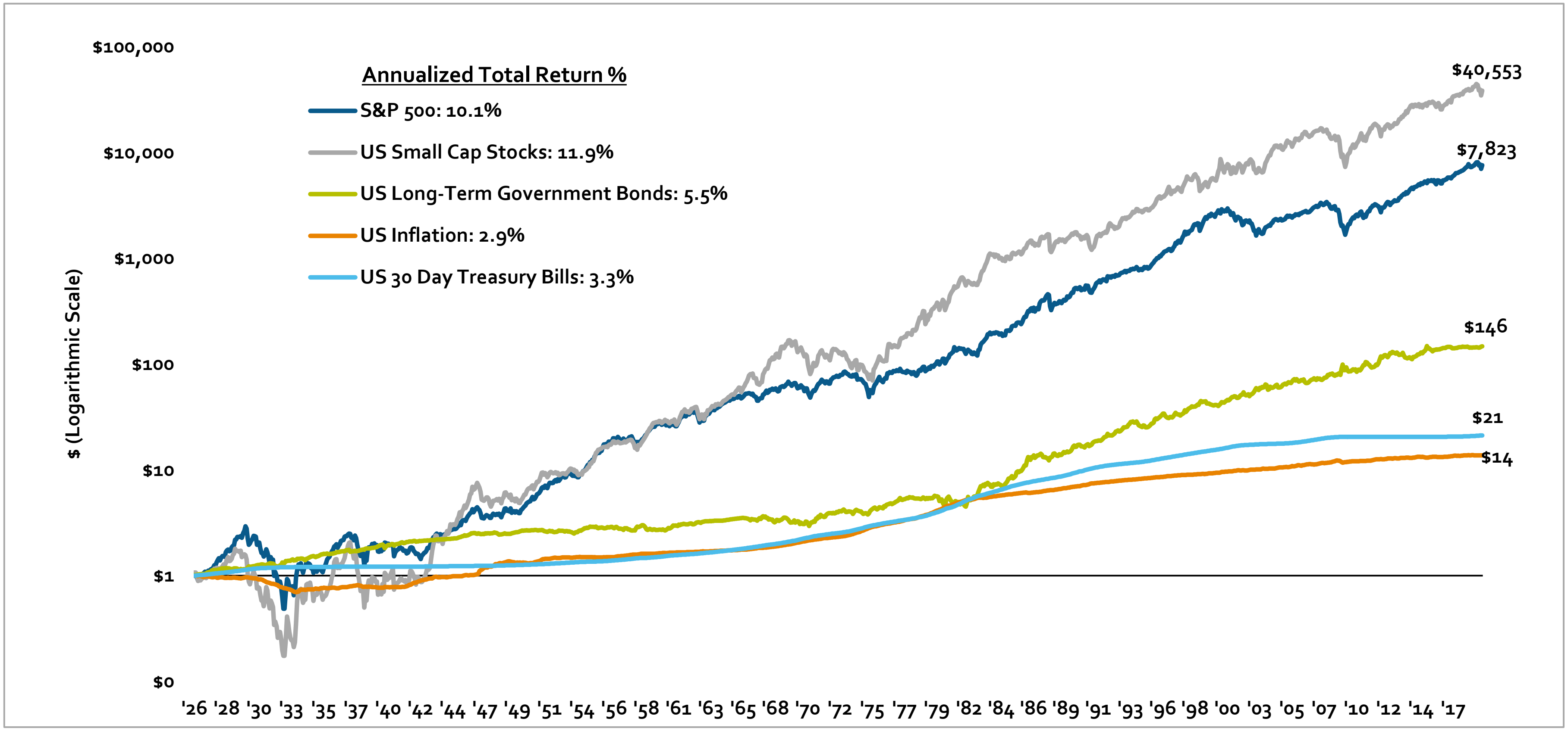
# Successful Investing Involves Patience and Fortitude

Cumulative Total Return of $1 January 31, 1926 – February 28, 2019




Source: Calculated by Morgan Stanley Wealth Management GIC using data provided by Morningstar. (c) 2019 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (i) is proprietary to Morningstar and/or its content providers; (ii) may not be copied or distributed; and (iii) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Aside from the S&P 500, all indices shown above are Ibbotson indices. The hypothetical $1 investment is for illustrative purposes only. It does not represent the performance of any specific investment. For more information about the risks to hypothetical performance please refer to the Risk Considerations section at the end of this material.

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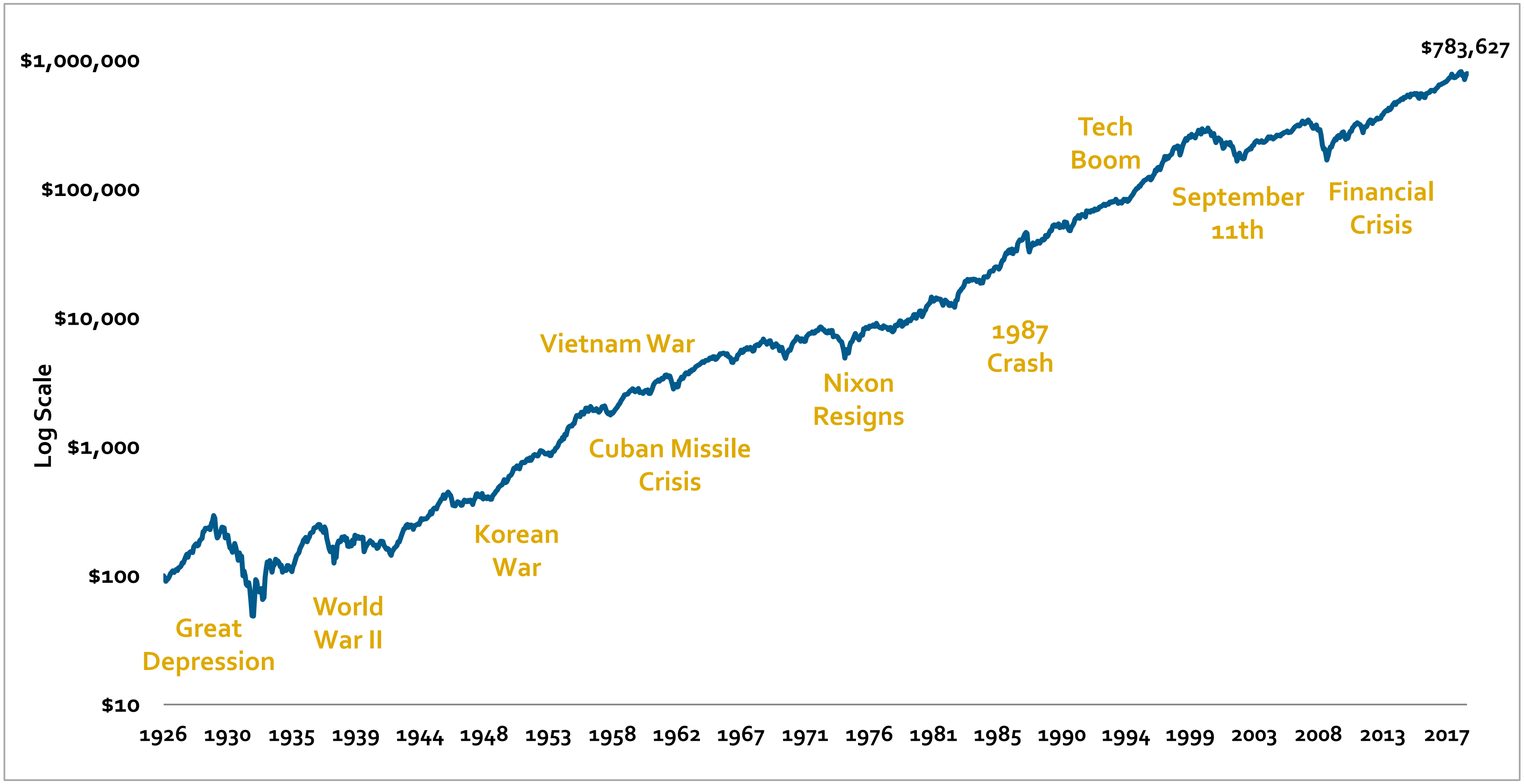
# Over the Long Term, S&P 500 Has Grown Despite Negative Events

S&P 500: Growth of $100

January 1926 – February 2019




Source: FactSet, Ibbotson, Calculated by Morgan Stanley Wealth Management GIC using data provided by Morningstar. (c) 2019 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (i) is proprietary to Morningstar and/or its content providers; (ii) may not be copied or distributed; and (iii) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

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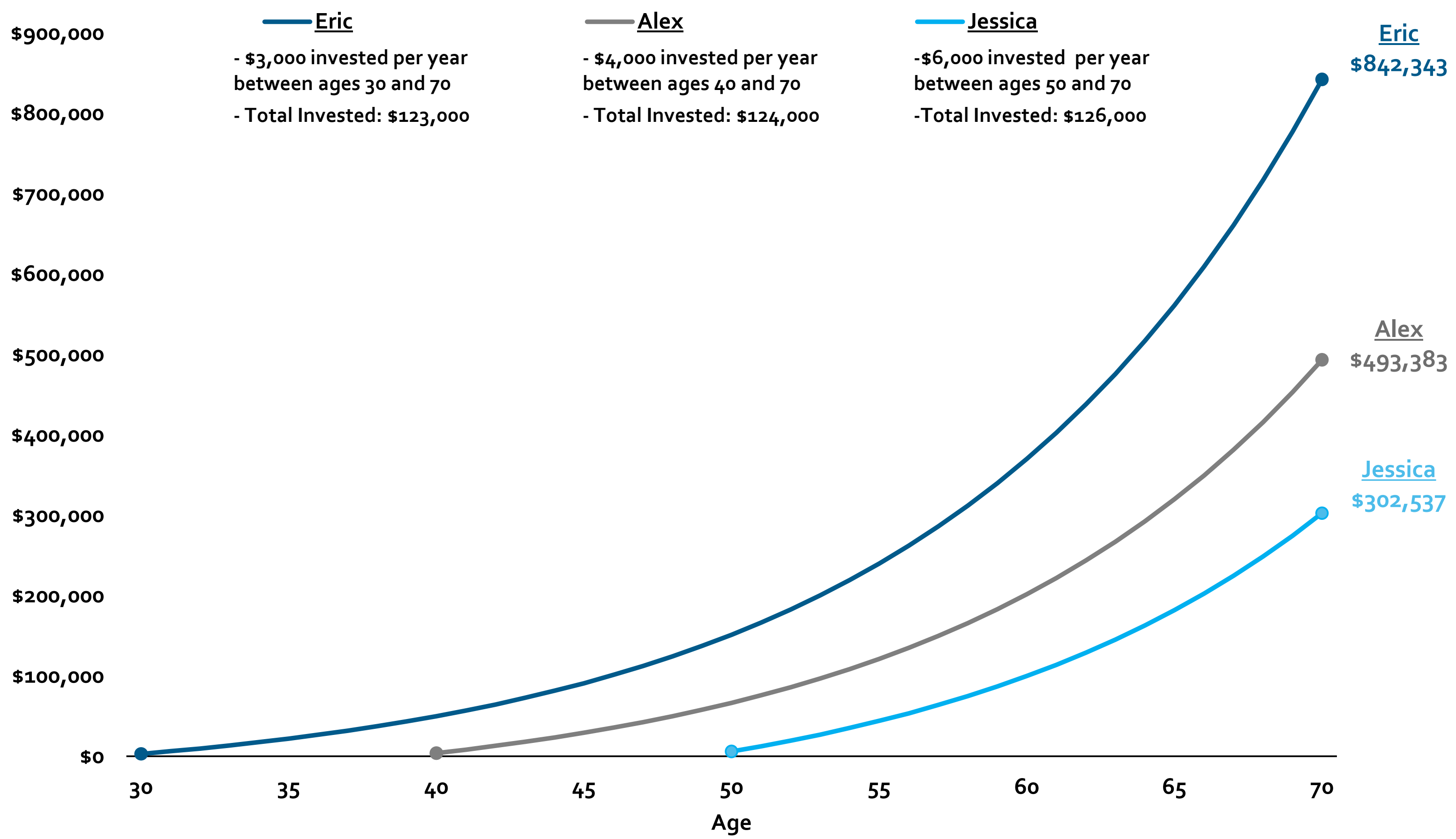
# Need to Save Early: Time Is Money

## Hypothetical Illustration of the Power of Compounding and Investing Time Horizon[1]




All three investors contribute about the same total amount. Eric ends up with more than $300,000 over the other two investors due to compounding interest.

Source: Morgan Stanley Wealth Management GIC. (1) Assumes 8% annual return. For more information about the risks to hypothetical performance please refer to the Risk Considerations section at the end of this material.
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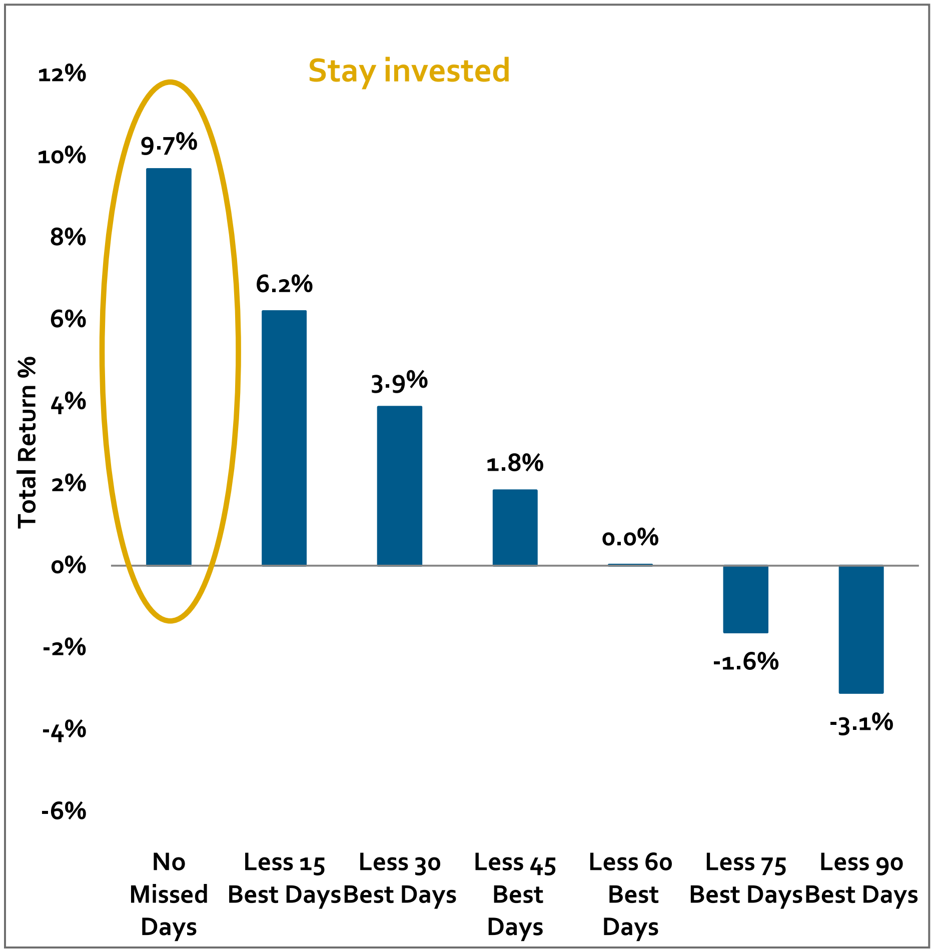
# Market Timing Is a Flawed and Costly Strategy

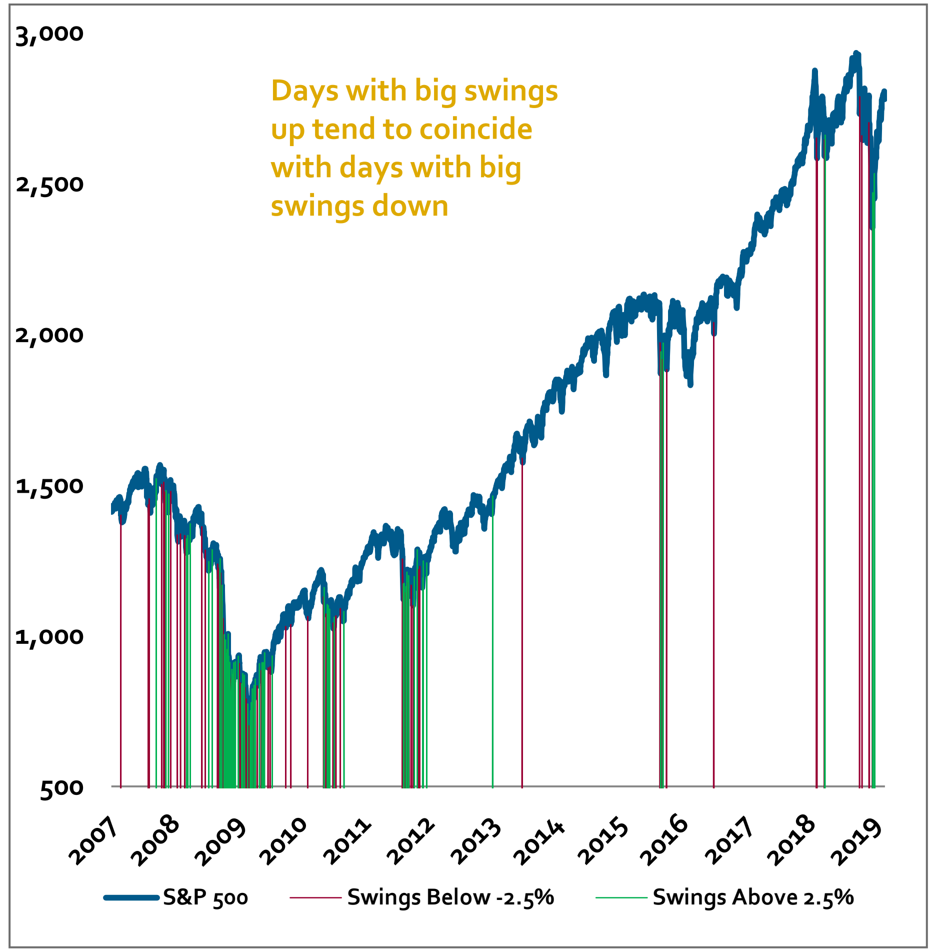
## Annualized Total Returns of S&P 500 (1990-2019)

Daily as of March 4, 2019




## Days with Large Price Changes Tend to Cluster Together

Daily as of March 4, 2019




Source: FactSet, Morgan Stanley Wealth Management GIC. Note: Best days are defined as the days with the highest single-day returns in the S&P 500, Bloomberg.

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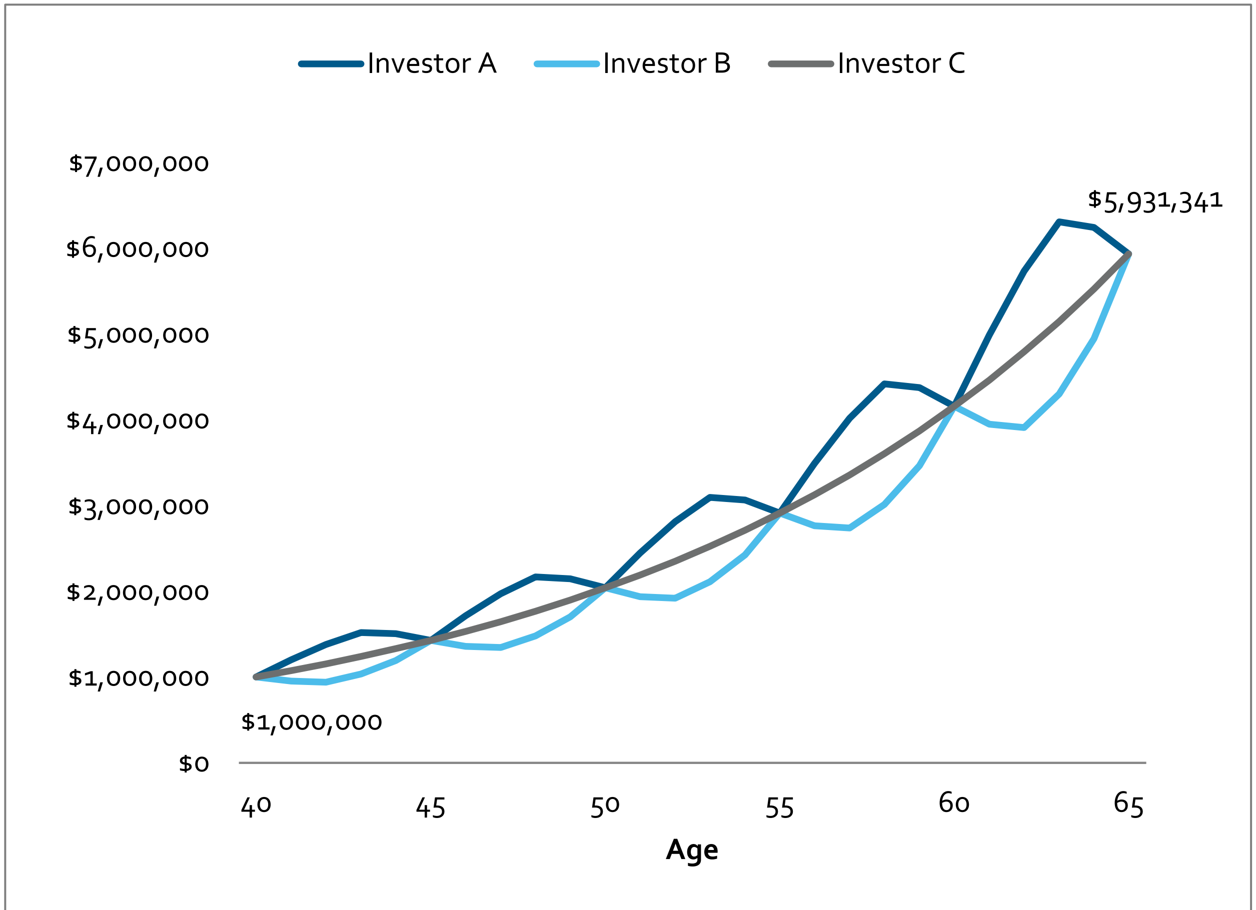
# Sequence of Returns Has No Impact While Saving…

If three investors each start with $1,000,000 and make no deposits or withdrawals, their ending totals will all be roughly the same if they have similar average returns, despite each person having a different sequence of returns:

## Portfolio Value Over Time




## Sequence of Returns: Average ~7% per Year

| | Yearly Return % | | |
|---|---|---|---|
| Age | Investor A | Investor B | Investor C |
| 40 | 20.0% | -5.0% | 7.4% |
| 41 | 15.0% | -1.0% | 7.4% |
| 42 | 10.0% | 10.0% | 7.4% |
| 43 | -1.0% | 15.0% | 7.4% |
| 44 | -5.0% | 20.0% | 7.4% |
| 45 | 20.0% | -5.0% | 7.4% |
| 46 | 15.0% | -1.0% | 7.4% |
| 47 | 10.0% | 10.0% | 7.4% |
| 48 | -1.0% | 15.0% | 7.4% |
| 49 | -5.0% | 20.0% | 7.4% |
| 50 | 20.0% | -5.0% | 7.4% |
| 51 | 15.0% | -1.0% | 7.4% |
| 52 | 10.0% | 10.0% | 7.4% |
| 53 | -1.0% | 15.0% | 7.4% |
| 54 | -5.0% | 20.0% | 7.4% |
| 55 | 20.0% | -5.0% | 7.4% |
| 56 | 15.0% | -1.0% | 7.4% |
| 57 | 10.0% | 10.0% | 7.4% |
| 58 | -1.0% | 15.0% | 7.4% |
| 59 | -5.0% | 20.0% | 7.4% |
| 60 | 20.0% | -5.0% | 7.4% |
| 61 | 15.0% | -1.0% | 7.4% |
| 62 | 10.0% | 10.0% | 7.4% |
| 63 | -1.0% | 15.0% | 7.4% |
| 64 | -5.0% | 20.0% | 7.4% |

Source: FactSet, Morgan Stanley Wealth Management GIC. The hypothetical $1 million investment is for illustrative purposes only. It does not represent the performance of any specific investment. For more information about the risks to hypothetical performance please refer to the Risk Considerations section at the end of this material.

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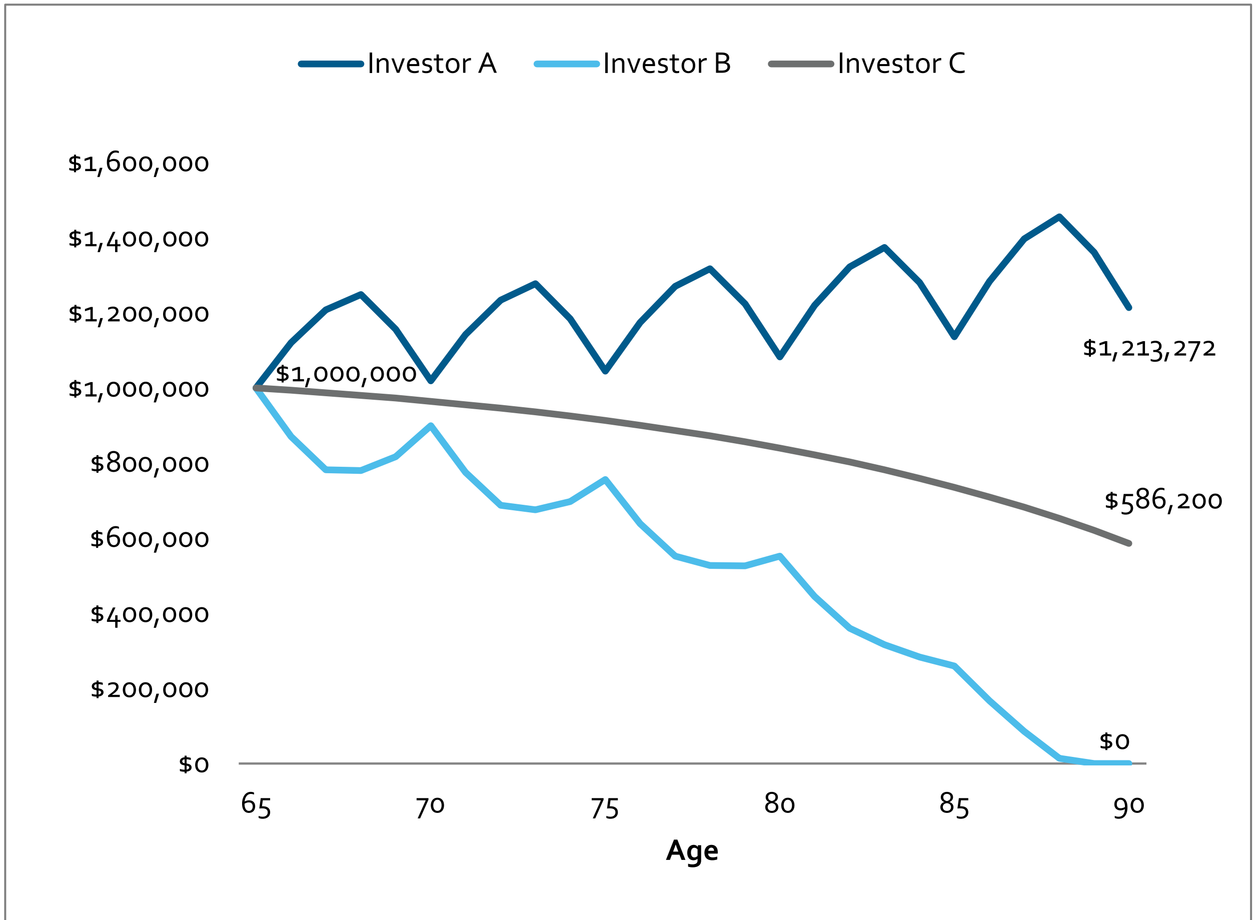
# … But Significantly Impacts the Withdrawal Period

If three investors each begin with $1,000,000 and have the same return expectations as the previous example but have outflows of $80,000 per year, the sequence of returns affects ending values dramatically:

## Portfolio Value Over Time with Yearly $80,000 Withdrawals




## Sequence of Returns: Average ~7% per Year

| | Yearly Return % | | |
|---|---|---|---|
| Age | Investor A | Investor B | Investor C |
| 65 | 20.0% | -5.0% | 7.4% |
| 66 | 15.0% | -1.0% | 7.4% |
| 67 | 10.0% | 10.0% | 7.4% |
| 68 | -1.0% | 15.0% | 7.4% |
| 69 | -5.0% | 20.0% | 7.4% |
| 70 | 20.0% | -5.0% | 7.4% |
| 71 | 15.0% | -1.0% | 7.4% |
| 72 | 10.0% | 10.0% | 7.4% |
| 73 | -1.0% | 15.0% | 7.4% |
| 74 | -5.0% | 20.0% | 7.4% |
| 75 | 20.0% | -5.0% | 7.4% |
| 76 | 15.0% | -1.0% | 7.4% |
| 77 | 10.0% | 10.0% | 7.4% |
| 78 | -1.0% | 15.0% | 7.4% |
| 79 | -5.0% | 20.0% | 7.4% |
| 80 | 20.0% | -5.0% | 7.4% |
| 81 | 15.0% | -1.0% | 7.4% |
| 82 | 10.0% | 10.0% | 7.4% |
| 83 | -1.0% | 15.0% | 7.4% |
| 84 | -5.0% | 20.0% | 7.4% |
| 85 | 20.0% | -5.0% | 7.4% |
| 86 | 15.0% | -1.0% | 7.4% |
| 87 | 10.0% | 10.0% | 7.4% |
| 88 | -1.0% | 15.0% | 7.4% |
| 89 | -5.0% | 20.0% | 7.4% |

Source: FactSet, Morgan Stanley Wealth Management GIC. The hypothetical $1 million investment is for illustrative purposes only. It does not represent the performance of any specific investment. For more information about the risks to hypothetical performance please refer to the Risk Considerations section at the end of this material.

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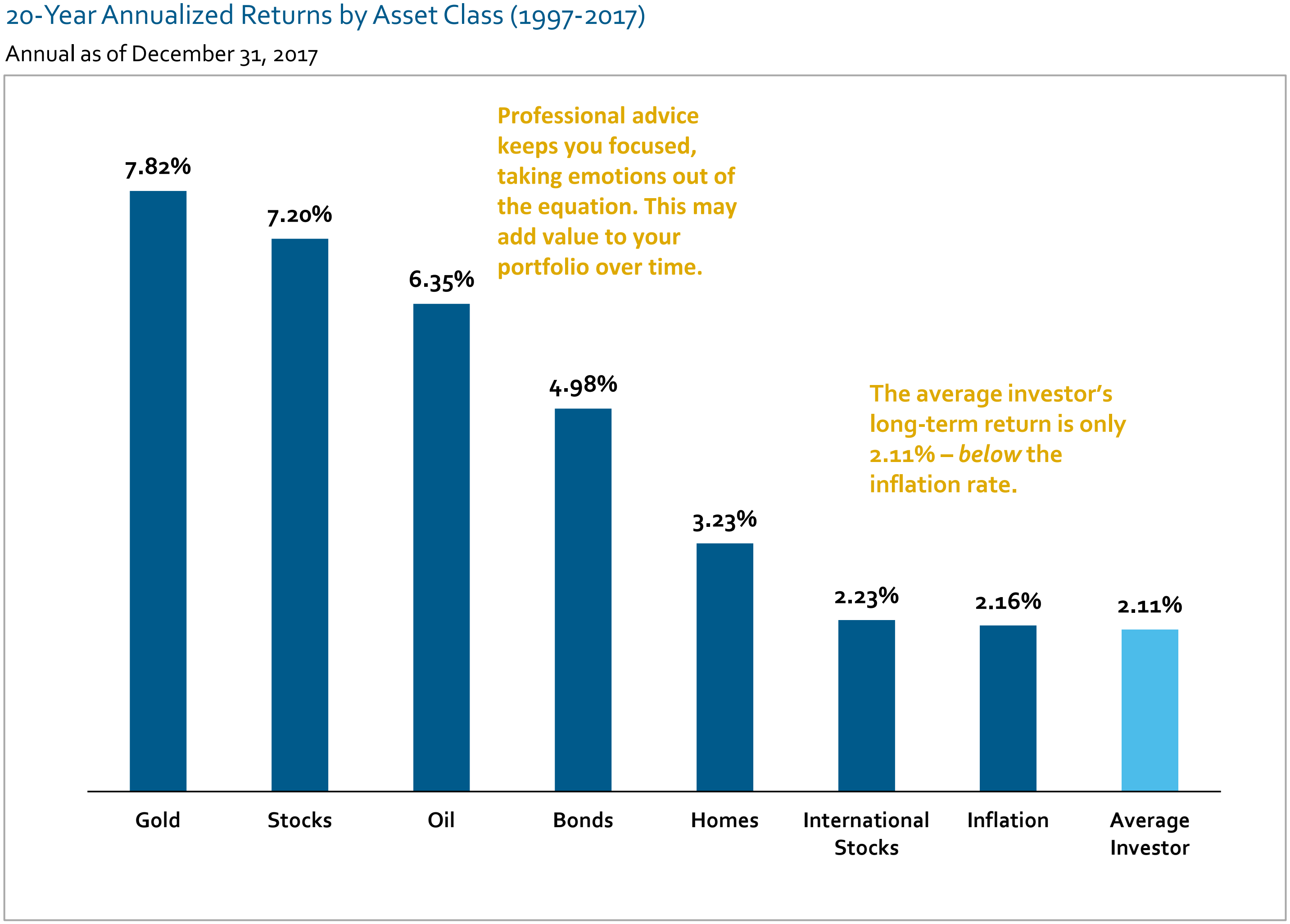
# Going It Alone – Without a Plan – Can Be Costly




Source: Morgan Stanley Wealth Management GIC; Bloomberg; Dalbar. Past performance is no guarantee of future results. It is not possible to directly invest in an index. Oil is represented by the change in price of the NYMEX Light Sweet Crude Future contract. Contract size is 1,000 barrels with a contract price quoted in US Dollars and Cents per barrel. Delivery dates take place every month of the year. Gold is represented by the change in the spot price of gold in USD per ounce. Homes are represented by the National Association of Realtors' (NAR) Existing One Family Home Sales Median Price Index. Stocks are represented by the S&P 500 Index, an unmanaged index that consists of the common stocks of 500 large-capitalization companies, within various industrial sectors, most of which are listed on the New York Stock Exchange. Bonds are represented by the Bloomberg Barclays US Aggregate Bond Index, an unmanaged market-weighted index that consists of investment-grade corporate bonds (rated BBB or better), mortgages and US Treasury and government agency issues with at least 1 year to maturity. International stocks are represented by the MSCI EAFE Index, a broad-based measure of international stock performance. Inflation is represented by the Consumer Price Index. Average Investor is represented by Dalbar's average asset allocation investor return, which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/14 to match Dalbar's most recent analysis.

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# It's Easy to Let Emotions Get in the Way

Having a plan and sticking to it can help you avoid common mistakes such as buying and selling at the wrong time out of panic or exuberance.


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Major Asset Classes

Basic Tenets of Investing

Asset Allocation & Diversification

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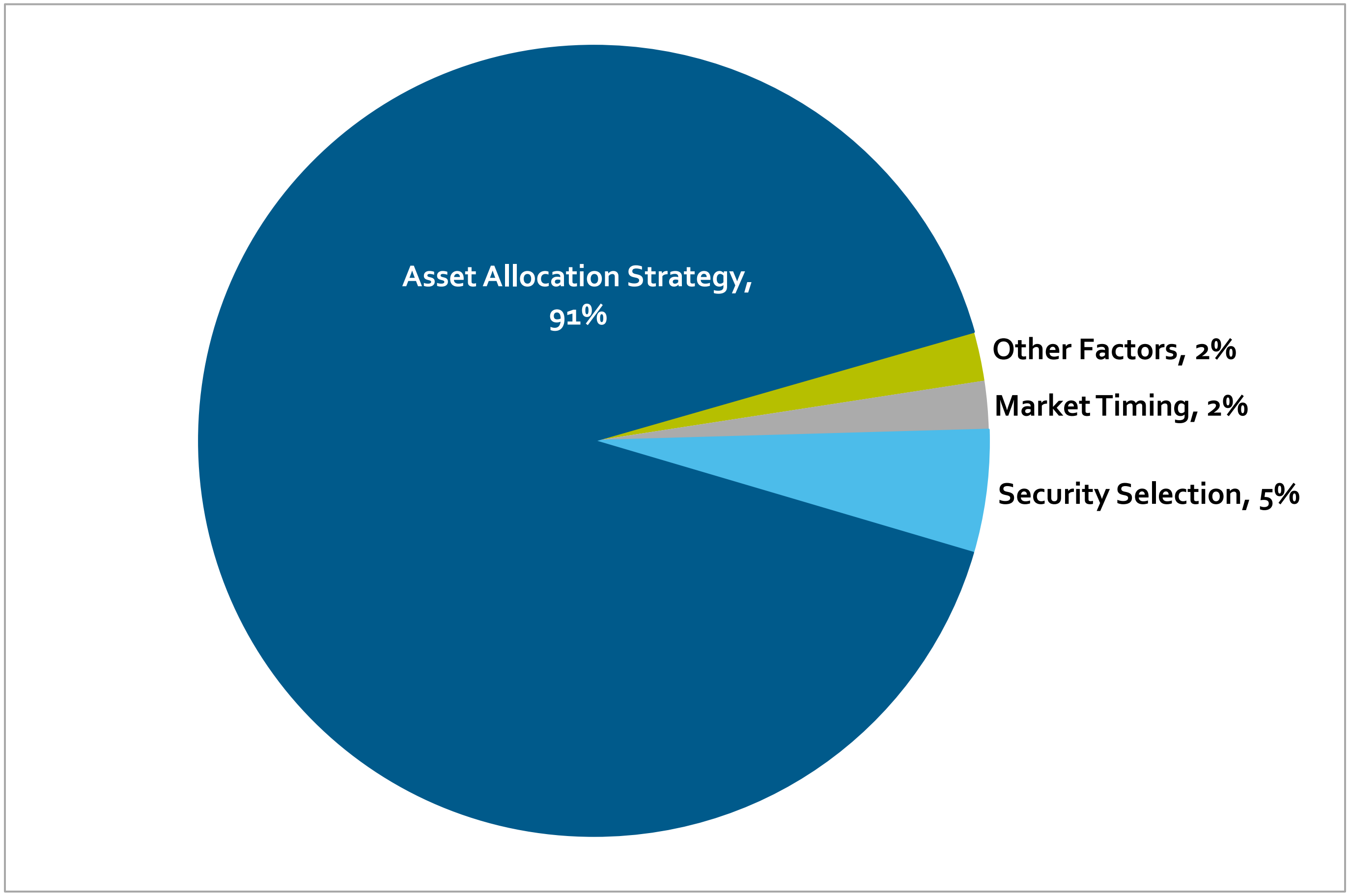
# Asset Allocation – The Most Important Determinant of Risk Exposures and Investment Outcomes

Sources of Return Variation




Source: Roger G. Ibbotson. *Does Asset Allocation Policy Explain 10, 90 or 100 Percent of Performance?* Financial Analyst Journal, January/February 2000; Brinson, Singer and Beebower. *Determination of Performance II: An Update*, Financial Analyst Journal, May/June 1991. Based on US pension-fund data from 1977 to 1987.

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# Effective Asset Allocation Depends on Understanding Both Risk and Return

Various asset classes tend to have different risk and return characteristics

Typically, the higher the potential risk, the higher the potential return for an asset class, and the lower the risk, the lower the potential return.

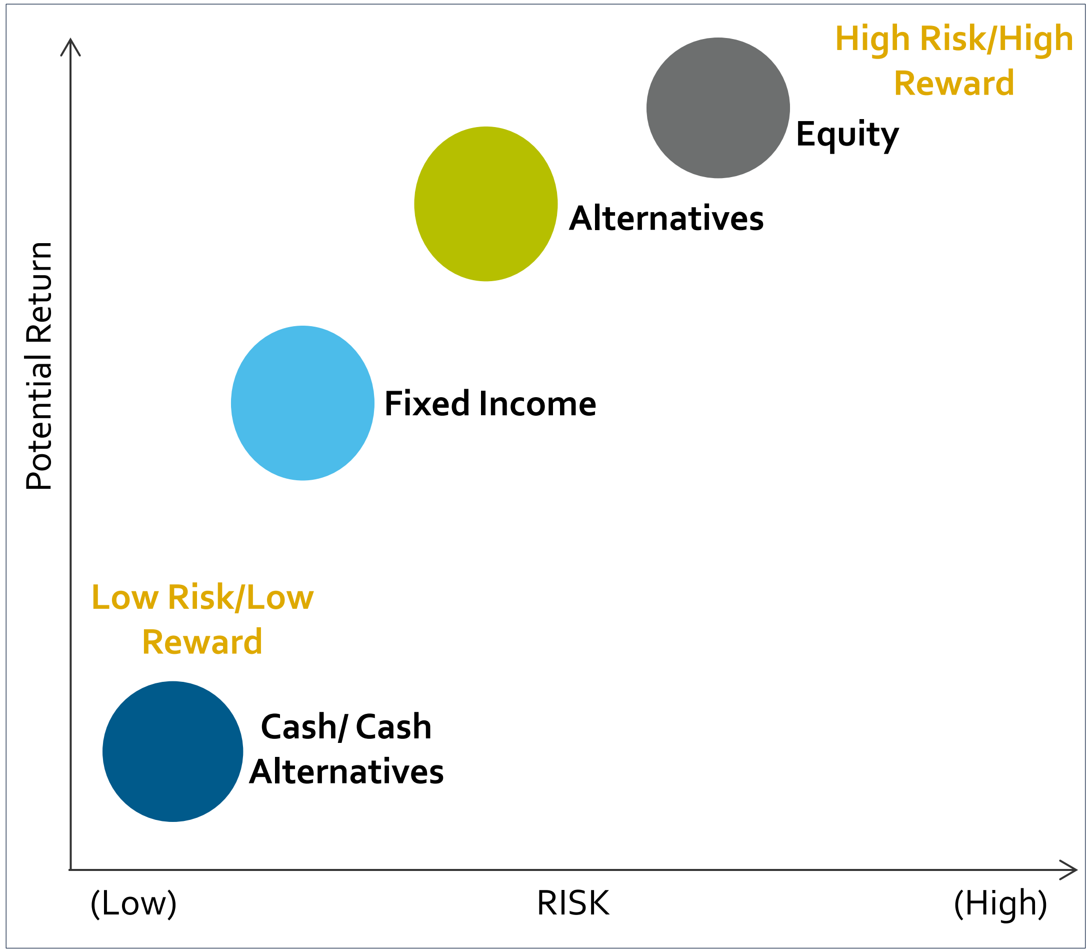
## 20-Year Annualized Risk and Return

Monthly as of February 28, 2019

| Asset Class | Annualized Return | Annualized Volatility |
|---|---|---|
| Cash | 1.8% | 0.6% |
| Fixed Income | 4.5% | 3.4% |
| Alternatives | 6.3% | 6.3% |
| Equity | 5.9% | 14.6% |

## Annualized Risk and Return of Asset Classes

Example for Illustrative Purposes Only




Source: FactSet, Bloomberg, Morgan Stanley Wealth Management GIC. Cash is represented by 90-Day T-bills: Citigroup 3M T-Bill Index; Equity by US Large Cap Equities: S&P 500 Index; Fixed Income by US Investment Grade Bonds: Barclays US Aggregate Index; Alternatives by HFRI Fund Weighted Composite Index.

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# Diversified Portfolios Built With Uncorrelated Asset Classes

## Asset Class Correlations[1]

Monthly Data as of February 28, 2019; Managed Futures as of January 31, 2019 and Hedged Strategies as of January 31, 2019

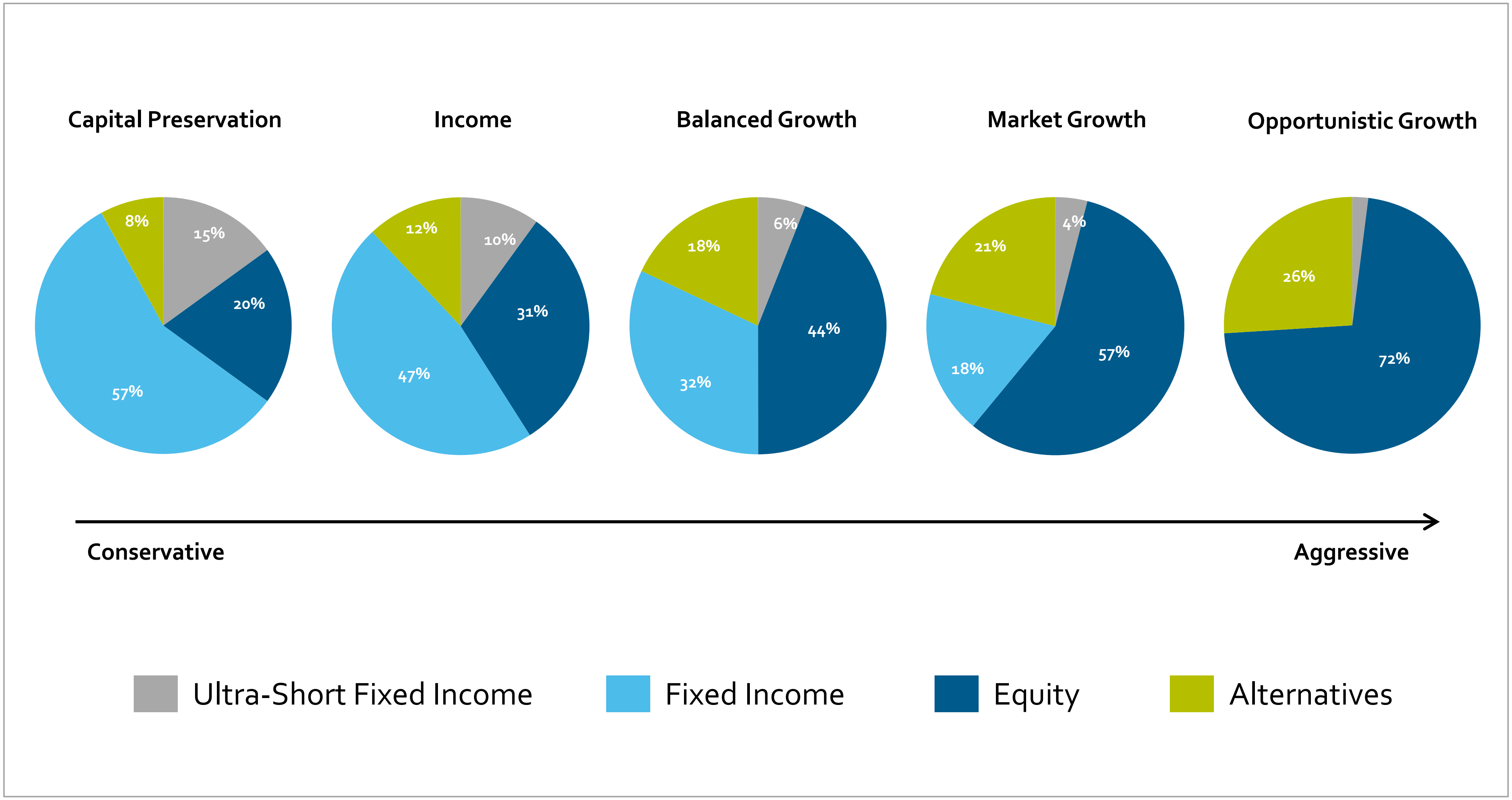
| | Cash | US Investment Grade Bonds | High Yield Bonds (USD) | Int'l Investment Grade Bonds (Hedged to USD) | Large Cap Stocks | Developed Non-US Stocks | Emerging Market Stocks | Managed Futures | Hedged Strategies | Commodities |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash | 1.00 | | | | | | | | | |
| US Investment Grade Bonds | 0.16 | 1.00 | | | | | | | | |
| High Yield Bonds (USD) | -0.04 | 0.25 | 1.00 | | | | | | | |
| Int'l Investment Grade Bonds (Hedged to USD) | 0.18 | 0.72 | 0.16 | 1.00 | | | | | | |
| Large Cap Stocks | 0.01 | 0.10 | 0.64 | 0.07 | 1.00 | | | | | |
| Developed Non-US Stocks | -0.05 | 0.09 | 0.60 | 0.08 | 0.75 | 1.00 | | | | |
| Emerging Market Stocks | -0.04 | 0.03 | 0.71 | 0.02 | 0.68 | 0.73 | 1.00 | | | |
| Managed Futures | 0.10 | 0.26 | -0.10 | 0.25 | -0.09 | -0.03 | -0.06 | 1.00 | | |
| Hedged Strategies | 0.15 | 0.07 | 0.56 | 0.05 | 0.55 | 0.56 | 0.66 | 0.19 | 1.00 | |
| Commodities | 0.04 | 0.03 | 0.36 | -0.09 | 0.31 | 0.39 | 0.42 | 0.10 | 0.40 | 1.00 |

**Investing in uncorrelated asset classes is key to risk and return management**

Source: FactSet, Bloomberg, Morgan Stanley Wealth Management GIC. (1) Based on monthly returns. Correlation is a statistical method of measuring the strength of a linear relationship between two variables. The correlation between two variables can assume any value from -1.00 to +1.00, inclusive. Hedged strategies consist of hedge funds and managed futures. Indices used for this analysis include: 90-Day T-bills for Cash, Bloomberg Barclays US Aggregate for US Investment Grade, Bloomberg Barclays Global High Yield for High Yield, Bloomberg Barclays Global Aggregate ex US for Intl Investment Grade, S&P 500 for US Large-Cap Equities, MSCI EAFE for International Equities, MSCI EM IMI for EM, BarclayHedge BTOP 50 for Managed Futures, HFRI Fund of Funds for Hedged Strategies, Bloomberg Commodity Index for Commodities.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Allocate Assets Based on Your Goals




Source: Morgan Stanley Wealth Management GIC

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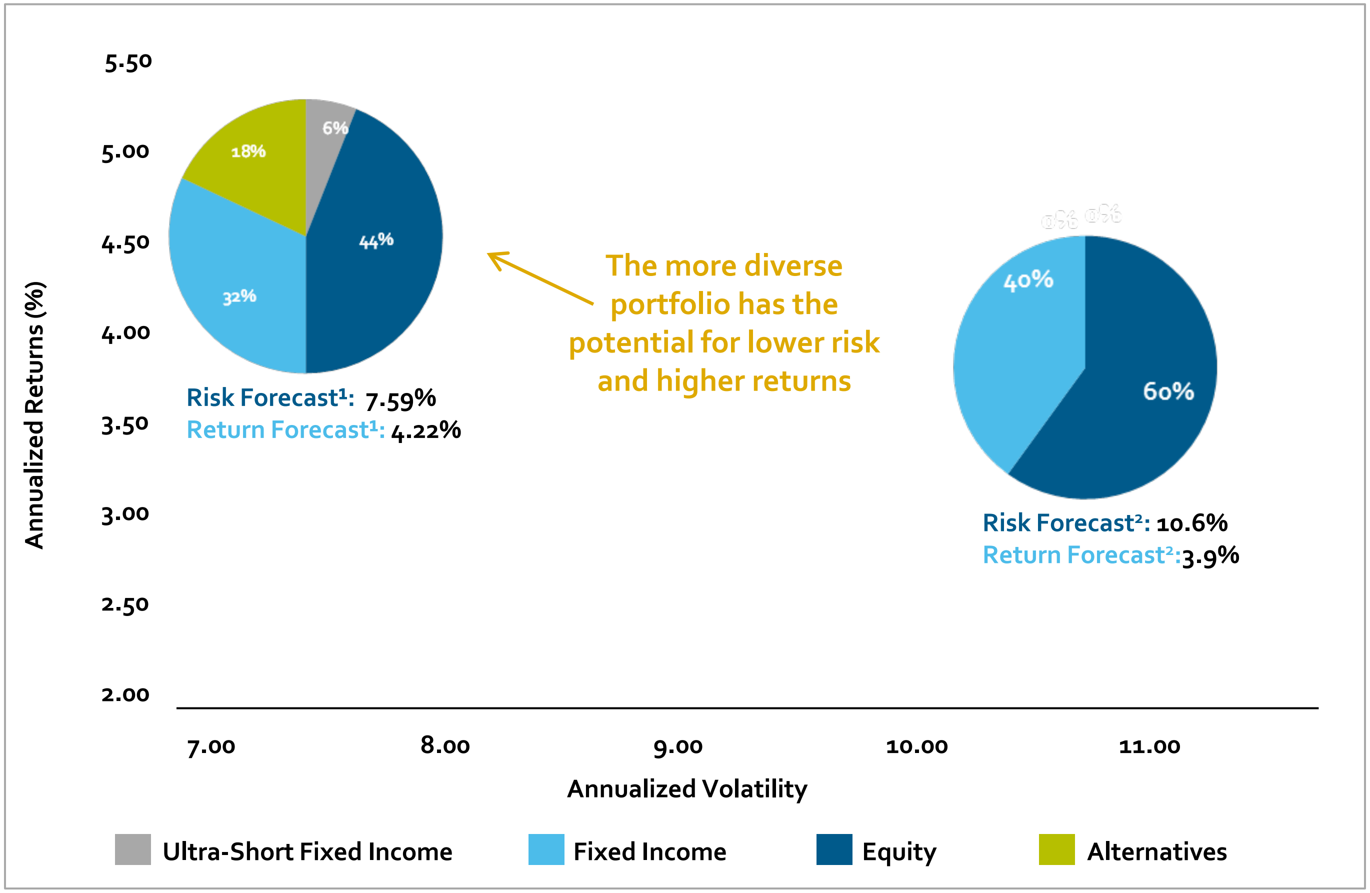
# Diversification Can Positively Impact Portfolios

## Diversified Portfolios Can Provide Better Risk and Return Opportunities

Example for Illustrative Purposes Only




Source: Bloomberg, FactSet, Morgan Stanley Wealth Management GIC. Global Equities: MSCI AC World Index. US Bonds: Bloomberg Barclays US Aggregate Index. Ultrashort Fixed Income: Citigroup 3-Month Treasury Bill Index. Alternatives consist of REITs, MLPs, Absolute Return Assets and Equity Hedge Assets as found in GIC Model 3. (1)Forecasts are based on capital market assumptions as published in the *GIC's Inputs for GIC Asset Allocation: Annual Update of Capital Market Assumptions,* March 31,2018. (2) Morgan Stanley Wealth Management GIC. Returns and Volatility are annualized numbers; GIC Forecast is a 7-year forecast based on strategic return assumptions in the *Inputs for GIC Asset Allocation: Annual Update of Capital Market Assumptions*, March 2018; equities represented by the Russell 1000 Index and bonds by the Bloomberg Barclays Capital US Aggregate Index.

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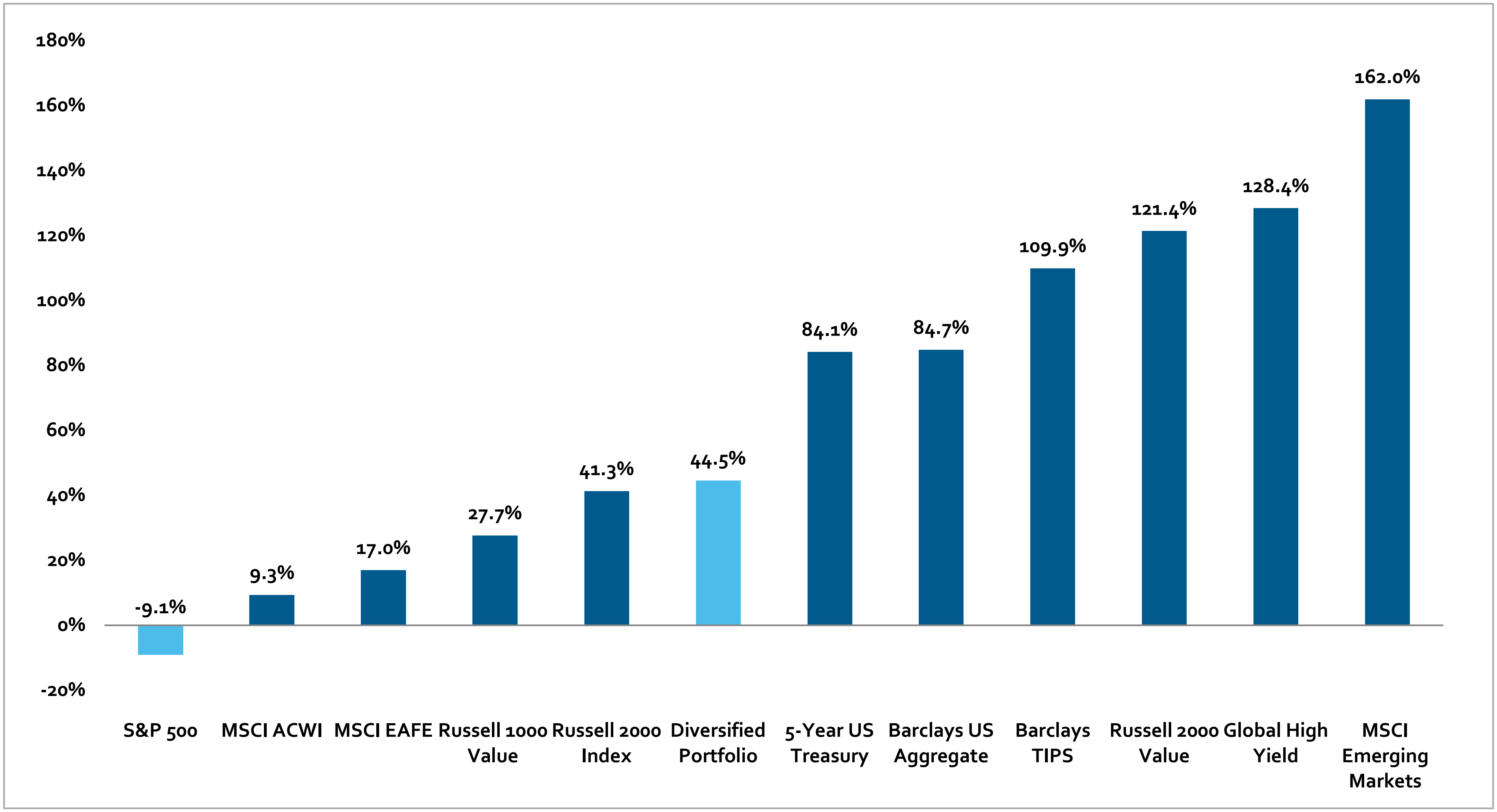
# "Lost Decade" (2000-2010) Demonstrates the Importance of Global Diversification and Asset Allocation

Total Returns

January 2000-December 2009




Source: FactSet, Bloomberg, Morgan Stanley Wealth Management GIC, The Yield Book® Software and Services. © 2018 FTSE Index LLC. All rights reserved. Note: Diversified Portfolio is comprised of 50% MSCI All Country World Index/45% Bloomberg Barclays US Aggregate Bond Index/5% Citigroup 3-Month T-Bill Index.

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# The Right Asset Allocation Will Ensure a Diversified Portfolio

Monthly as of February 28, 2019

| 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 YTD | 10-Yrs ('09-'18) Ann. Return | 10-Yrs ('09-'18) Volatility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EM Equities 40.2% | Managed Futures 13.6% | EM Equities 82.9% | MLPs[1] 35.9% | MLPs[1] 13.9% | REITs 29.8% | US Equities 32.4% | REITs 14.7% | US Equities 1.4% | MLPs[1] 18.3% | EM Equities 37.3% | US Debt 0.0% | MLPs1 12.9% | US Equities 13.1% | MLPs[1] 18.1% |
| Commod. 16.2% | DM Int'l Debt 11.7% | MLPs[1] 76.4% | EM Equities 20.2% | Inflation-Linked 13.6% | High Yield 19.6% | MLPs[1] 27.6% | US Equities 13.7% | DM Int'l Equities 0.9% | High Yield 14.3% | DM Int'l Equities 26.7% | DM Int'l Debt -0.8% | US Equities 11.5% | High Yield 11.1% | US Equities 15.0% |
| MLPs[1] 12.7% | US Debt 5.2% | High Yield 59.4% | REITs 20.0% | US Debt 7.8% | EM Equities 19.1% | DM Int'l Equities 24.0% | Managed Futures 12.3% | US Debt 0.5% | US Equities 12.0% | US Equities 21.8% | Inflation-Linked -1.3% | REITs 10.5% | REITs 10.4% | REITs 14.9% |
| Inflation-Linked 11.6% | Inflation-Linked -2.4% | REITs 41.3% | Commod. 16.8% | DM Int'l Debt 6.0% | DM Int'l Equities 18.2% | Diversified Portfolio 15.1% | US Debt 6.0% | REITs -0.4% | Commod. 11.8% | EMD 15.2% | Managed Futures -3.2% | DM Int'l Equities 9.5% | MLPs[1] 9.6% | Commod. 14.3% |
| DM Int'l Debt 11.2% | EMD -5.2% | DM Int'l Equities 33.9% | EMD 15.7% | High Yield 3.1% | EMD 16.8% | Hedged Strategies 8.8% | MLPs[1] 4.8% | Inflation-Linked -1.4% | EM Equities 10.3% | REITs 15.0% | High Yield -4.1% | EM Equities 8.8% | EM Equities 8.6% | EM Equities 13.6% |
| DM Int'l Equities 10.8% | Hedged Strategies -21.4% | US Equities 26.5% | US Equities 15.1% | US Equities 2.1% | US Equities 16.0% | High Yield 7.3% | Diversified Portfolio 4.7% | Diversified Portfolio -1.9% | EMD 9.9% | Diversified Portfolio 14.9% | US Equities -4.4% | Diversified Portfolio 7.7% | Diversified Portfolio 7.7% | DM Int'l Equities 12.6% |
| Hedged Strategies 10.3% | Diversified Portfolio -25.7% | Diversified Portfolio 23.6% | High Yield 14.8% | EMD -1.8% | Diversified Portfolio 12.0% | REITs 2.2% | Inflation-Linked 3.6% | Managed Futures -2.0% | Diversified Portfolio 7.5% | High Yield 10.4% | REITs -5.5% | Commod. 6.5% | DM Int'l Equities 7.3% | High Yield 8.4% |
| Diversified Portfolio 7.9% | High Yield -26.9% | EMD 22.0% | Diversified Portfolio 12.7% | Diversified Portfolio -2.1% | Inflation-Linked 7.0% | Managed Futures 0.7% | Hedged Strategies 3.4% | High Yield -2.7% | Inflation-Linked 4.7% | DM Int'l Debt 8.8% | Diversified Portfolio -6.1% | High Yield 5.8% | US Debt 4.0% | DM Int'l Debt 7.6% |
| Managed Futures 7.6% | Commod. -35.6% | Commod. 18.9% | DM Int'l Equities 9.8% | Managed Futures -4.3% | MLPs[2] 4.8% | EM Equities -1.9% | High Yield 0.0% | Hedged Strategies -3.6% | REITs 4.6% | Hedged Strategies 6.0% | EMD -6.2% | EMD 4.3% | Inflation-Linked 3.6% | Diversified Portfolio 6.6% |
| US Debt 7.0% | MLPs[1] -36.9% | Hedged Strategies 11.5% | DM Int'l Debt 7.0% | Hedged Strategies -5.7% | Hedged Strategies 4.8% | US Debt -2.0% | EM Equities -1.4% | DM Int'l Debt -4.4% | US Debt 2.6% | US Debt 3.5% | Hedged Strategies -7.0% | Hedged Strategies 2.8% | EMD 3.5% | Inflation-Linked 4.9% |
| EMD 6.5% | US Equities -37.0% | Inflation-Linked 11.4% | US Debt 6.5% | REITs -8.1% | US Debt 4.2% | DM Int'l Debt -5.6% | DM Int'l Debt -3.0% | EM Equities -13.5% | Hedged Strategies 2.5% | Inflation-Linked 3.0% | Commod. -11.2% | Inflation-Linked 1.3% | Hedged Strategies 1.5% | Managed Futures 4.5% |
| US Equities 5.5% | DM Int'l Equities -43.4% | US Debt 5.9% | Managed Futures 6.4% | DM Int'l Equities -12.2% | DM Int'l Debt 0.5% | Inflation-Linked -8.6% | DM Int'l Equities -4.5% | EMD -14.9% | DM Int'l Debt 2.1% | Managed Futures 2.5% | MLPs1 -12.4% | US Debt 1.0% | DM Int'l Debt 1.3% | Hedged Strategies 4.1% |
| High Yield 3.2% | REITs -48.9% | DM Int'l Debt 3.7% | Inflation-Linked 6.3% | Commod. -13.3% | Commod. -1.1% | EMD -9.0% | EMD -5.7% | Commod. -24.7% | DM Int'l Equities 1.6% | Commod. 1.7% | DM Int'l Equities -14.0% | DM Int'l Debt 0.3% | Managed Futures -1.9% | EMD 3.9% |
| REITs -4.7% | EM Equities -53.6% | Managed Futures -4.8% | Hedged Strategies 4.2% | EM Equities -19.2% | Managed Futures -1.8% | Commod. -9.5% | Commod. -17.0% | MLPs[1] -32.6% | Managed Futures -3.1% | MLPs[1] -6.5% | EM Equities -14.7% | Managed Futures -3.2% | Commod. -3.8% | US Debt 2.8% |

**Diversified Portfolio 7.7%**

Source: FactSet, Morgan Stanley Wealth Management GIC; Indices used: Barclays Capital US Aggregate for US Bonds. Citi 3M Treasury Bill for cash, Bloomberg Barclays US Aggregate for US Bonds, Barclays Global Majors ex US for DM Int'l Bonds, Barclays US TIPS for Inflation-linked securities, Barclays Global High Yield for global high yield, JP Morgan EMBI for EM Bonds, S&P 500 for US Stocks, MSCI EAFE IMI for Int'l Stocks, MSCI EM IMI for Emerging Market Stocks, FTSE EPRA/NAREIT Global for REITs, Bloomberg Commodity Index for commodities, HFRX Macro/CTA Index for Managed Futures, Alerian MLP Index for MLPs , and HFRX Global Hedge Funds for hedged strategies. Diversified portfolio is comprised of 25% S&P 500, 10% Russell 2000, 15% MSCI EAFE, 5% MSCI EME, 25% Barclays US Aggregate, 5% 3 mo. T-Bills, 5% HFRX Global Hedge Funds, 5% Bloomberg Commodity Index, and 5% FTSE EPRA/NAREIT Global Index. MLP data begins on January 1, 2007.

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It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias.

**Hedge Funds of Funds** and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor's goals by the pre-established year or "target date." A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are suitable only for the risk capital portion of an investor's portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors. **Rebalancing** does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy.

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***For index, indicator and survey definitions referenced in this report please visit the following: http://www.morganstanleyfa.com/public/projectfiles/id.pdf***

**GLOBAL INVESTMENT COMMITTEE (GIC) ASSET ALLOCATION MODELS:** The Asset Allocation Models are created by Morgan Stanley Wealth Management's GIC.

**HYPOTHETICAL MODEL PERFORMANCE (GROSS):** Hypothetical model performance results do not reflect the investment or performance of an actual portfolio following a GIC Strategy, but simply reflect actual historical performance of selected indices on a real-time basis over the specified period of time representing the GIC's strategic and tactical allocations as of the date of this report. The past performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation or trading strategy. Hypothetical performance results do not represent actual trading and are generally designed with the benefit of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specific factors (such as investment vehicle selection, timing of contributions and withdrawals, restrictions and rebalancing schedules). Clients would not necessarily have obtained the performance results shown here if they had invested in accordance with any GIC Asset Allocation Model for the periods indicated. Despite the limitations of hypothetical performance, these hypothetical performance results allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs. The hypothetical performance results in this report are calculated using the returns of benchmark indices for the asset classes, and not the returns of securities, fund or other investment products. Models may contain allocations to Hedge Funds, Private Equity and Private Real Estate. The benchmark indices for these asset classes are not issued on a daily basis. When calculating model performance on a day for which no benchmark index data is issued, we have assumed straight line growth between the index levels issued before and after that date.

**FEES REDUCE THE PERFORMANCE OF ACTUAL ACCOUNTS:** None of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, fees) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley's standard advisory fees is available in the Form ADV Part 2, which is available at www.morganstanley.com/adv. The following hypothetical illustrates the compound effect fees have on investment returns: For example, if a portfolio's annual rate of return is 15% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.1% and the five-year return net of fees would be 96.8%. Fees and/or expenses would apply to clients who invest in investments in an account based on these asset allocations, and would reduce clients' returns. The impact of fees and/or expenses can be material.

**Variable annuities** are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

**Equity securities** may fluctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fixed income** asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

**Master Limited Partnerships (MLPs)** are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

**Investing in commodities** entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be suitable for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

**REITs** investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

**Yields** are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision. **Credit ratings** are subject to change. **Duration**, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some $25 or $1000 **par preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Companies paying **dividends** can reduce or cut payouts at any time.

**Nondiversification:** For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

**Growth investing** does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.
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