Introduction to Investing & Financial Planning

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The Sweeney Group

The Sweeney Group at Morgan Stanley
120 Albany Street, Suite 400, New Brunswick NJ 08901
April 20th, 2021

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What's the Hardest Thing to Talk About?

44% of Americans claim that personal finance is the hardest thing to discuss\(^{(a)}\), but silence can be harmful—ignoring these difficult conversations can have detrimental outcomes.

PASSING ON BAD HABITS
Let's face it, we learn from our parents and our children, in turn, learn from us.

LOST OPPORTUNITY
You could be sacrificing the chance to help secure your retirement or the possibility of providing a quality education for your children.

PROCRASTINATION
Since when has ignoring something ever made it better?

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Retirement: A Journey that Triggers Lots of Questions

- Is my investment portfolio beating the market?
- The market's down – should I buy? The market's up – should I sell?
- Am I taking too much risk... or maybe not enough?
- The market's down – should I sell?
- Am I saving enough in my 401(k)?
- Do I have the right mix of stocks, bonds, and other investments?
- Interest rates are so low – how can I earn higher yields? Should I be saving more?
Setting Goals According to Your Needs

As your life stage changes, so do your goals – our platform allows you to look across your assets and liabilities to help you adapt your strategy to meet those changing demands.

**EARLY / MID-CAREER**
- Goals
  - Buy a home
  - Have a child
  - Build an emergency fund
  - Protect family
  - Manage budgets

**LATE CAREER**
- Goals
  - Buy a larger home
  - Send children to college
  - Assist aging parents
  - Plan for future healthcare
  - Plan for retirement

**RETIRED**
- Goals
  - Maintain lifestyle and sufficient income
  - Meet healthcare and other unforeseen expenses
  - Buy a vacation home
  - Legacy planning
Leverage the Power of Compound Interest

If you haven’t started saving already, it’s never too late. However, the earlier you start saving, the better off you may be.

Nate, the Late Saver: Starts saving at age 40 and stops at age 65

<table>
<thead>
<tr>
<th>Amount Saved</th>
<th>Account Balance at 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>$250,000</td>
<td>$581,563</td>
</tr>
</tbody>
</table>

Pearlie, the Early Saver: Starts saving at age 25 and stops at age 50

<table>
<thead>
<tr>
<th>Amount Saved</th>
<th>Account Balance at 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>$250,000</td>
<td>$1,393,751</td>
</tr>
</tbody>
</table>

Compound Interest

While both saved $250,000 over 25 years, the early saver has $812,188 more at retirement.

To have something to compound, you will need to focus on saving; compounding cannot work on its own.

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Assumptions: Both save $10,000/year for 25 years with 6% average return on investment.
Need to Save Early: Time Is Money

Hypothetical Illustration of the Power of Compounding and Investing Time Horizon

- Alex: $3,000 invested per year between ages 30 and 70, Total Invested: $123,000
- Jordan: $4,000 invested per year between ages 40 and 70, Total Invested: $124,000
- Taylor: $6,000 invested per year between ages 50 and 70, Total Invested: $126,000

All three investors contribute about the same total amount. Alex ends up with more than $150,000 over the other two investors due to compounding interest.
## 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
- **Non Investment Grade**
  - Floating Rates
  - 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**

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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 32 nations as frontier markets. These markets tend to be the riskiest markets in the world.

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

Major Asset Classes

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

Source: Morgan Stanley Wealth Management Global Investment Office

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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. Equity securities shown as constituents of the S&P 500 as well as the S&P 500 ETF are for illustrative purposes only. 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 an 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.

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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 2021

Source: Bloomberg
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Intra-Year Declines

S&P 500 Annual Returns and Intra-Year Declines

As of March 3, 2021

Source: Bloomberg, Morgan Stanley Wealth Management GIC. Intra-year declines are defined as the peak-to-trough decline during the year based on price return.

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## How to Manage Taxes

### Tax Implication for Retirement Savings by Account Type

**Contribution, Growth, Distribution**

<table>
<thead>
<tr>
<th></th>
<th>Tax-Deductible Contributions/Investments</th>
<th>Tax-Deferred Account Growth</th>
<th>Tax-Free Withdrawals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Tax 401(k) / Traditional IRA</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Taxable (income tax)</td>
</tr>
<tr>
<td>Roth 401(k) / IRA</td>
<td>![No Checkmark]</td>
<td>![Checkmark]</td>
<td>For qualified withdrawals</td>
</tr>
<tr>
<td>After-tax 401(k) / Non-deductible Traditional IRA</td>
<td>![No Checkmark]</td>
<td>![Checkmark]</td>
<td>Taxable Investment returns (income tax)</td>
</tr>
<tr>
<td>Health Savings Account (HSAs)</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>For qualified health care expenses</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Wealth Management GIC

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Which IRA Is Right for You?

PERSONAL IRAs

Traditional and Roth IRAs have various (and differing) contribution eligibility requirements such as earned income limits, modified adjusted gross income (MAGI) limits (based on filing status) for Roth IRA contributions, and Traditional IRA contribution tax deduction limits (based on filing status and MAGI) if IRA owner or spouse is a participant in an employer plan.

SMALL BUSINESS IRAs

SEP, SIMPLE or SAR-SEP IRAs are plans established by an employer. The employer sets the eligibility requirements and annual contribution limits according to the IRA plan rules. These plans may be appropriate for small businesses such as a sole proprietor.

1. A SAR-SEP IRA is a type of SEP IRA that employers established before December 31, 1996. The Internal Revenue Service (IRS) no longer allows establishment of new SAR-SEP plans. However, Morgan Stanley opens accounts for clients who are participants in an existing SAR-SEP plans that was adopted by the employer plan sponsor prior to January 1, 1997.

Personal IRAs and Small Business IRAs are subject to IRS rules and regulations.

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Key Features of a Traditional IRA

Contributions, earnings and any rollovers have the potential to reach considerable amounts over time through tax-deferred growth.

A contribution to a Traditional IRA may be deductible on your tax return, but your deduction may be reduced or phased out if you or your spouse is a participant in an employer sponsored retirement plan and your modified adjusted gross income exceeds certain thresholds based on your tax return filing status.

Savings can grow tax-deferred. If converted to a Roth IRA, you won’t owe taxes on the original nondeductible contributions, although the earnings on those contributions, along with any other pre-tax amounts (e.g., deductible contributions) will be taxable as ordinary income. Further, if you have an existing balance in any Traditional IRAs that you hold as owner, those balances must be taken into account when performing the calculation to determine the taxable portion of your conversion, using the pro-rata rule. Under the pro-rata rule, your distributions (including conversions) are treated as including a pro-rated portion of the taxable (i.e., pre-tax amounts) and nontaxable (i.e., after-tax amounts, such as non-deductible contributions) amount in all your non-Roth IRAs. See your tax advisor for more information.

Starting at age 59½, you can begin taking money out of your retirement accounts without penalty tax. Keep in mind that you’ll have to pay any federal and state taxes that might be due.

1. Deductible contributions may also be converted to a Roth IRA as well as the earnings on those contributions. They will be taxed as ordinary income.

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Key Features of a Roth IRA

After-tax contributions have the potential to grow tax-deferred¹, and withdrawals are typically income tax-free if minimum holding periods² and certain conditions are met³.

Holding a potentially tax-free account like a Roth IRA, in addition to a taxable and tax-deferred account (e.g., Traditional IRA), provides flexibility to take income from different sources to potentially keep taxes low in retirement.

There are no required minimum distributions from a Roth IRA for the owner, i.e., no rule that you must begin tapping your account at age 72. (Note, however, the post-death required minimum distribution rules generally apply.)

In general, contributions may be withdrawn tax-free at any time. Earnings are tax-free if withdrawn after the five-tax-year holding period² and certain conditions are met.

¹ Traditional IRA assets may also be converted to a Roth IRA, but the pre-tax contributions and tax deferred earnings will be taxed as ordinary income upon conversion. Note, however, a Roth IRA conversion isn't right for everyone. Before converting to a Roth IRA, you should consult with your own independent legal and tax advisor.
² The 5-tax-year holding period begins the first day of the first year for which a regular contribution (or in which a rollover or conversion; contribution(s) made to any Roth IRA established for the individual owner.
³ Note, however, the state and local income tax treatment of your Roth IRA and the distributions from it may vary based on your state of residence. You should consult with and rely on your own independent tax advisor with respect to such.
Let’s Get Started: Choose Your Target Retirement Year

1. Select the Pathway Target Date Portfolio based on your preferred retirement date.

   ![Pathway Target Date Portfolio Chart]

   **EARLY-TO MID-CAREER**
   - 2060: 100% Equity
   - 2055: 100% Equity
   - 2050: 100% Equity
   - 2045: 100% Equity

   **LATE CAREER**
   - 2040: 75% Equity
   - 2035: 59% Equity
   - 2030: 49% Equity
   - 2025: 42% Equity
   - 2020: 40% Equity

   **RETIRED**
   - 2015: 40% Equity

2. Continue the retirement conversation by discussing additional products and services that can help you reach your goals:

   - Income protection (annuities)
   - Social Security maximization
   - Budgeting: spending and saving
   - Goals-Planning
   - Legacy
   - Long-term care insurance
   - Liability protection (insurance)
Prioritizing Long-Term Retirement Savings

Where to put your savings is almost as important as how much you save. The hierarchy below is a good rule of thumb to set your saving priorities.

1. Emergency Reserve (2-6 months of living expenses)
2. Health Savings Account (HSA) if eligible for match
3. Defined Contribution savings to maximize employer match (if available)
4. Additional payments on revolving debt
5. Additional Defined Contribution/Health Savings Account savings (up to max contribution)
6. Individual Retirement Accounts (IRA)
7. Taxable Account

Source: Morgan Stanley Wealth Management GIC
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How to Save

Retirement Saving Checkpoint by Age and Income

The checkpoint table below can help determine the ideal level of accumulated savings by age and household income (assumes a pre-retirement investment return of 5.9% and a post-retirement investment return of 4%, with inflation of 1.9%).

### Savings Amount Today by Age and Household Income <$100,000 Assuming a 5% Annual Savings Rate

For illustrative purposes only

<table>
<thead>
<tr>
<th>HH Income</th>
<th>30,000</th>
<th>40,000</th>
<th>50,000</th>
<th>60,000</th>
<th>70,000</th>
<th>80,000</th>
<th>90,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 25</td>
<td></td>
<td>14,960</td>
<td>28,805</td>
<td>44,300</td>
<td>55,717</td>
<td>70,397</td>
<td>82,222</td>
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<tr>
<td>30</td>
<td>6,035</td>
<td>18,836</td>
<td>42,362</td>
<td>67,943</td>
<td>83,418</td>
<td>102,760</td>
<td>123,451</td>
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<tr>
<td>35</td>
<td>15,932</td>
<td>47,344</td>
<td>75,840</td>
<td>99,428</td>
<td>119,623</td>
<td>145,526</td>
<td>166,704</td>
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<tr>
<td>40</td>
<td>32,528</td>
<td>71,966</td>
<td>104,784</td>
<td>134,360</td>
<td>168,346</td>
<td>203,032</td>
<td>230,074</td>
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<tr>
<td>45</td>
<td>58,430</td>
<td>104,829</td>
<td>144,662</td>
<td>187,228</td>
<td>233,161</td>
<td>279,360</td>
<td>316,977</td>
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<tr>
<td>50</td>
<td>76,727</td>
<td>148,562</td>
<td>206,667</td>
<td>271,630</td>
<td>319,690</td>
<td>385,024</td>
<td>430,593</td>
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<tr>
<td>55</td>
<td>111,991</td>
<td>206,830</td>
<td>284,725</td>
<td>370,722</td>
<td>434,473</td>
<td>516,432</td>
<td>582,654</td>
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<tr>
<td>60</td>
<td>157,035</td>
<td>284,392</td>
<td>387,690</td>
<td>502,717</td>
<td>587,622</td>
<td>696,785</td>
<td>784,722</td>
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<tr>
<td>65</td>
<td>218,095</td>
<td>397,225</td>
<td>522,044</td>
<td>679,510</td>
<td>791,605</td>
<td>937,002</td>
<td>1,054,128</td>
</tr>
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</table>

### Savings Amount Today by Age and Household Income ≥$100,000 Assuming a 10% Annual Savings Rate

For illustrative purposes only

<table>
<thead>
<tr>
<th>HH Income</th>
<th>100,000</th>
<th>125,000</th>
<th>150,000</th>
<th>175,000</th>
<th>200,000</th>
<th>250,000</th>
<th>300,000</th>
</tr>
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<tbody>
<tr>
<td>Age 25</td>
<td>65,764</td>
<td>109,600</td>
<td>147,318</td>
<td>187,076</td>
<td>237,027</td>
<td>287,078</td>
<td>349,164</td>
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<td>30</td>
<td>105,647</td>
<td>163,852</td>
<td>214,090</td>
<td>267,044</td>
<td>333,576</td>
<td>402,834</td>
<td>489,044</td>
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<tr>
<td>35</td>
<td>150,367</td>
<td>230,112</td>
<td>303,025</td>
<td>373,550</td>
<td>462,172</td>
<td>566,105</td>
<td>670,309</td>
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<td>218,780</td>
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<td>427,881</td>
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<td>633,452</td>
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<td>322,991</td>
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<td>576,254</td>
<td>701,377</td>
<td>861,583</td>
<td>1,074,495</td>
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<td>447,560</td>
<td>631,388</td>
<td>785,096</td>
<td>959,952</td>
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<td>1,297,495</td>
<td>1,525,253</td>
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<tr>
<td>55</td>
<td>613,683</td>
<td>858,705</td>
<td>1,062,299</td>
<td>1,295,263</td>
<td>1,570,240</td>
<td>1,826,223</td>
<td>2,198,662</td>
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<tr>
<td>60</td>
<td>835,620</td>
<td>1,163,699</td>
<td>1,442,807</td>
<td>1,732,737</td>
<td>2,109,394</td>
<td>2,493,070</td>
<td>2,899,223</td>
</tr>
<tr>
<td>65</td>
<td>1,139,065</td>
<td>1,567,066</td>
<td>1,983,625</td>
<td>2,332,609</td>
<td>2,827,162</td>
<td>3,337,833</td>
<td>3,833,220</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Wealth Management GIC
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The Global Investment Committee is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis commentary, portfolio positioning suggestions and other reports and broadcasts.

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Adverse Active Alpha SM® is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management’s qualitative and quantitative investment manager due diligence process is equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be
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An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the fund seeks to preserve the value of your investment at at.

The type of mutual funds and ETFs discussed in this presentation utilize nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below listed investment strategies or categories or which seek exposure to the following markets: (1) commodities (e.g., agricultural, energy and metals), currency, precious metals; (2) managed futures; (3) leveraged; inverse or inverse leveraged; (4) bear market; hedging, long-short equity, market neutral; (5) real estate; (6) volatility (seeking exposure to the CBOE VIX Index). Investors should keep in mind that while mutual funds and ETFs may, at times, utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods that prevent them from pursuing investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional Investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unexpected risks, particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage." The Morgan Stanley Mobile App is currently available for iPhone® and iPad® from the App Store® and Android™ on Google Play™. Standard messaging and data rates from your provider may apply. Subject to device connectivity.

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KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent international securities, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be heightened in emerging markets and frontier markets. Small- and mid-capitalization companies may lack the financial resources, product diversification and competitive strengths of larger companies. In addition, the securities of small- and mid-capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies. The value of fixed income securities will fluctuate and, upon a sale, may be worth more or less than their original cost or maturity value. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. High-yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issuers. In the case of municipal bonds, income is generally exempt from federal income taxes. Some income may be subject to state and local taxes and to the federal alternative minimum tax. Capital gains, if any, are subject to tax. Treasury Inflation Protection Securities® (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a lower return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform conventional U.S. Treasuries in times of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The returns on a portfolio consisting primarily of environmental, social, and governance-aware investments ("ESG") may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client’s account will be managed as described herein. Options and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, closed-end funds may have additional risks related to declining market prices relative to net asset values (NAV), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors risk of loss. The risk of loss to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund’s net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases shares of a closed-end fund, shares may have a market price that is above or below NAV. Positions that invest a large percentage of assets in only one industry sector (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for long-term, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices, Lack of an active market in that there is no secondary market for a fund, Difficulty in calculating NAV, Restrictions on transacting interests in a fund, Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized, Absence of information regarding valuation and pricing, Complex tax structures and delays in tax reporting, Late registration and higher fees than mutual funds, Risks associated with the operations, personnel, and processes of the manager; and Risks associated with cybersecurity. As a diversified global financial services firm,
Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management’s interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management does not make any warranties or guarantees that conflicts of interest will not arise in favor of its clients or any such fund. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. 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These limitations include survivorship bias (the returns of the indices may not represent all of the hedge funds in the universe because of the tendency of lower performing funds to leave the index), heterogeneity (not all hedge funds are similar or comparable to one another), and the index may not accurately reflect the performance of a diversified portfolio. Limited data (many hedge funds do not report to indices, and the index may omit funds, the issuers of which may not significantly affect the performance shown. The HFRI indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFRI Asset Management, LLC. Results for our funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe and, in some cases, may be biased. However, the indices are used by investors and index-related products and indices are investment risk, including possible loss of principal. Morgan Stanley Wealth Management is a registered broker-dealer, not a bank. This material is not to be reproduced or distributed to any other persons (other than professional advisors of the investors or prospective investors, as applicable, receiving this material and intended solely for the use of the persons to whom it has been delivered. This material is not for distribution to the general public. Past performance is no guarantee of future results. Actual results may vary. SIPC insurance does not apply to precious metals, other commodities, or traditional alternative investments. In consulting group's advisory programs, alternative investments are limited to US-registered mutual funds, separate account strategies and exchange-traded funds (ETFs) that seek to pursue alternative investment strategies or returns utilizing publicly traded securities. Investment products in this category may employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. Alternative investments are not appropriate for all investors. As a diversified global financial services firm, Morgan Stanley financial advisors may engage in a broad range of activities, including advising and managing private investment funds, investing in hedge funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management’s interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management cannot give assurance that conflicts of interest will be resolved in favor of its clients or any such fund. Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual investors may have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or its affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

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 Indexes only have certain biases that are not present in traditional indexes. Some of these biases include index performance, which may influence 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 as much as 26 basis points or more annually depending on the type of index included and the time period studied. Although there are a number of potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias refers 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.

Sun worship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow up," 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. 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 leveraging and other speculative practices that may increase volatility and the risk of loss, and may be subject to long investment minimums and initial lock-ups. They involve complex tax structures, tax-efficient 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 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 security 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 a Consulting Group Capital Market Funds. A target date portfolio is geared toward investors who will retire and 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 asset 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 appropriate 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 component in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors. Rebalancing does not protect against losses in declining financial markets. There may be a potential tax implication with a rebalancing strategy.

Asset allocation and diversification do not assure or provide no guarantee of protection against or losses in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

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Annuities and insurance products are offered in conjunction with Morgan Stanley Smith Barney LLC's licensed insurance agency affiliates.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

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We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act to your best interest. We may be paid both by you and by others who compensate us based on what you buy. Our compensation, including that of your Private Wealth Advisor, may vary by product and over time.

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For index, indicator and survey definitions referenced in this report, please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/emi-definition

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

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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. When a client uses 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 25% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.5% and the five-year net return 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 are 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 not get an 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 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 investments in the energy and natural resources sectors, including commodity pricing, market 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 rating 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 the 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
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 rates, (v) trading activities in commodities and related contracts, (vi) past, present and anticipated economic data, (vii) the price of energy and other commodities, and (viii) 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-registered 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 are not appropriate 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 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 repayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and CMBS. Asset-backed securities generally do not decline in value as a result of interest rate increases, but may be 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 $15 and $200 par preferred securities are "callable" meaning the issuer may redeem the securities at specific prices and dates prior to maturity. Interest and 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 were not received. Price quoted is per $15 or $200 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 will fluctuate and after purchase may not 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 $15 or $200 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" preferred securities (traditionally 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 30-day window period, beginning 90 days before the ex-dividend date. Companies paying dividends can reduce or cut payout 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 of 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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Morgan Stanley Pathway Program Asset Allocation Models There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 4 is the least aggressive portfolio and consists mostly of bonds. As model numbers increase, the models have higher allocations to equities and become more aggressive. Pathways is a mutual fund asset allocation program. In contrast to model portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Stanley Wealth Management’s Global Investment Committee (the “GIC”). The Pathway Model Portfolios are specific to the Pathway program (based on program features and parameters), and any other requirements of Morgan Stanley Wealth Management’s Consulting Group. The Pathway Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models produced by the Global Investment Committee.

529 Plans - Investors should carefully read the Program Disclosure statement, which contains more information on investment options, risk factors, fees and expenses, and possible tax consequences before purchasing a 529 plan. You can obtain a copy of the Program Disclosure Statement from the 529 plan sponsor or your Financial Advisor. Assets can accumulate and be withdrawn federal tax-free only if they are used to pay for qualified expenses. Earnings on nonqualified distributions will be subject to federal income tax and a 10% federal income tax penalty. Contributions limits vary by state. Refer to the individual plan for specific contribution guidelines. Before investing, investors should consider whether tax or other benefits are only available for investments in the investor’s home state 529 college savings plan. If an account owner or the beneficiary resides in or pays income taxes to a state that offers its own 529 college savings plan (an “In-State Plan”), that state may offer state or local tax benefits. These tax benefits may include deductibility of contributions, deferral of taxes on earnings, and/or tax-free withdrawals. In addition, some states waive or discount fees or offer other benefits for state residents or taxpayers who participate in the In-State Plan. An account owner may be desired any or all state or local tax benefits or expense reductions by investing in another state’s plan (an “Out-of-State Plan”). In addition, an account owner’s state or locality may seek to recover the value of tax benefits (by assessing income or penalty taxes) should an account owner rollover or transfer assets from an In-State Plan to an Out-of-State Plan. While state and local tax consequences and plan expenses are not the only factors to consider when investing in a 529 plan, they are important to an account owner’s investment return and should be taken into account when selecting a 529 plan.

Lifestyle Advisory Services: Products and services are provided by third party service providers, not Morgan Stanley Smith Barney LLC (“Morgan Stanley”). Morgan Stanley may not receive a referral fee or have any input concerning such products or services. There may be additional service providers for comparative purposes. Please perform a thorough due diligence and make your own independent decision.

To obtain Tax Management Services, a client must complete the Tax Management Form, and deliver the signed form to Morgan Stanley. For more information on Tax Management Services, including its features and limitations, please ask your Financial Advisor for the Tax Management Form. Review the form carefully with your tax advisor. Tax Management Services (a) apply only to equity investments in separate account structures of client accounts; (b) are not available for all accounts or clients; and (c) may adversely impact account performance. Tax management services do not constitute tax advice or a complete tax sensitive investment management program. There is no guarantee that tax management services will produce the desired tax results.

Morgan Stanley Smith Barney LLC does not accept appointments nor will it act as a trustee, but it will provide access to trust services through an appropriate third party corporate trustee.

A LifeView Financial Goal Analysis or LifeView Financial Plan ("Financial Plan") is based on the methodology, estimates, and assumptions, as described in your report, as well as personal data provided by you. It should be considered a working document that can assist you with your objectives. Morgan Stanley Smith Barney LLC ("Morgan Stanley") makes no guarantee as to future results or that an individual's investment objectives will be met. The responsibility for implementing, monitoring, and adjusting your financial goal analysis or financial plan rests with you. After your Financial Advisor delivers your report to you, if you so desire, your Financial Advisor can help you implement any part that you choose, however, you are not obligated to work with your Financial Advisor or Morgan Stanley.

Since life and long-term care insurance are medically underwritten, you should not cancel your current policy until your new policy is in force. A change to your current policy may incur charges, fees...
and costs. A new policy will require a medical exam. Surrender charges may be imposed and the period of time for which the surrender charges apply may increase with a new policy. You should consult with your own tax advisors regarding your potential tax liability on surrenders.

The Morgan Stanley Global Impact Funding Trust, Inc. ("MS GIFT, Inc.") is an organization described in section 501(c)(3) of the Internal Revenue Code of 1986, as amended. MS Global Impact Funding Trust ("MS GIFT") is a demand-advised fund. Morgan Stanley Smith Barney LLC provides investment management and administrative services to MS GIFT. Back office administration provided by RenPSG, an unaffiliated charitable gift administrator.

**Important Risk Information for Securities Based Loans:** You need to understand that: (a) Sufficient collateral must be maintained to support your loan(s) and to take future advances; (b) You may have to deposit additional cash or eligible securities on short notice; (c) Some or all of your securities may be sold without prior notice in order to maintain account equity at required maintenance levels; (d) You may not be entitled to choose the securities that will be sold. These actions may prevent you from implementing your long-term investment strategy and may result in adverse tax consequences or in additional fees being assessed; (e) Morgan Stanley Bank, N.A., Morgan Stanley Private Bank, National Association or Morgan Stanley Smith Barney LLC (collectively referred to as "Morgan Stanley") reserves the right not to fund any advance request due to insufficient collateral or for any other reason except for any portion of a securities based loan that is identified as a committed facility; (f) Morgan Stanley reserves the right to increase your collateral maintenance requirements at any time without notice; and (g) Morgan Stanley reserves the right to call securities based loans at any time and for any reason.

With the exception of a margin loan, the proceeds from securities based loan products may not be used to purchase, trade, or carry margin stock (or securities, with respect to Express CreditLine), repay margin debt that was used to purchase, trade or carry margin stock (or securities, with respect to Express CreditLine), and cannot be deposited into a Morgan Stanley Smith Barney LLC or other brokerage account.

To be eligible for a securities based loan, a client must have a brokerage account at Morgan Stanley Smith Barney LLC that contains eligible securities, which shall serve as collateral for the securities based loan.

Securities based loans are provided by Morgan Stanley Smith Barney LLC, Morgan Stanley Private Bank, National Association or Morgan Stanley Smith Barney, N.A., as applicable.

Liquidity Access Line ("LAL") is a securities based loan line of credit product, the lender of which is either Morgan Stanley Private Bank, National Association or Morgan Stanley Smith Barney, N.A., as applicable, each an affiliate of Morgan Stanley Smith Barney LLC. All LAL loan lines of credit are subject to the underwriting standards and independent approval of Morgan Stanley Private Bank, National Association or Morgan Stanley Bank, N.A., as applicable. LAL loan lines of credit may not be available in all locations. Rates, terms and conditions are subject to change without notice. To be eligible for an LAL loan line of credit, a client must have a brokerage account with Morgan Stanley Smith Barney LLC that contains eligible securities which shall serve as collateral for the LAL. In conjunction with establishing an LAL loan line of credit, an LAL facilitation account will also be opened in the client’s name at Morgan Stanley Smith Barney LLC at no charge. Other restrictions may apply. The information contained herein should not be construed as a commitment to lend. Morgan Stanley Private Bank, National Association and Morgan Stanley Bank, N.A. are Members FDIC that are primarily regulated by the Office of the Comptroller of the Currency. The proceeds from a non-purpose LAL loan line of credit (including draws and other advances) may not be used to purchase, trade, or carry margin stock; repay margin debt that was used to purchase, trade, or carry margin stock; and cannot be deposited into a Morgan Stanley Smith Barney LLC or other brokerage account.

Residential mortgage loans/home equity lines of credit are offered by Morgan Stanley Private Bank, National Association, an affiliate of Morgan Stanley Smith Barney LLC. With the exception of the pledged-asset feature, an investment relationship with Morgan Stanley Smith Barney LLC does not have to be established or maintained to obtain the residential mortgage products offered by Morgan Stanley Private Bank, National Association. All residential mortgage loan/home equity lines of credit are subject to the underwriting standards and independent approval of Morgan Stanley Private Bank, National Association. Rates, terms, and programs are subject to change without notice. Residential mortgage loans/home equity lines of credit may not be available in all states, not available in Guam, Puerto Rico and the U.S. Virgin Islands. Other restrictions may apply. The information contained herein should not be construed as a commitment to lend. Morgan Stanley Private Bank, National Association is an Equal Housing Lender and Member FDIC that is primarily regulated by the Office of the Comptroller of the Currency. Nationwide Mortgage Licensing System Unique Identifiable #653538. The proceeds from a residential mortgage loan (including draws and advances from a home equity line of credit) are not permitted to be used to purchase, trade, or carry eligible margin stock; repay margin debt that was used to purchase, trade, or carry margin stock; or to make payments on any amounts owed under the note, loan agreement, or loan security agreement; and cannot be deposited into a Morgan Stanley Smith Barney LLC or other brokerage account.

Through the pledged-asset feature offered by Morgan Stanley Private Bank, National Association, the applicant(s) or third party pledgor (collectively "Client") may be able to pledge eligible securities.
in lieu of a full or partial cash down payment or in connection with a refinance mortgage loan. To be eligible for the pledged asset feature a Client must have a brokerage account at Morgan Stanley Smith Barney LLC. If the value of the pledged securities in the account drops below the agreed upon level stated in the loan documents, a Client may be required to deposit additional securities or other collateral (such as cash) to stay in compliance with the terms of the mortgage loan. If a Client does not deposit additional securities or other collateral, the Client’s pledged securities may be sold to satisfy the Client’s obligation, and the Client will not be entitled to choose which assets will be sold. Borrowing against securities may not be appropriate for everyone. In deciding whether the pledged-asset feature is appropriate, a Client should consider, among other things, the degree to which he or she is comfortable subjecting his or her investment in a home to the fluctuations of the securities market. The pledged-asset feature is not available in all states. Other restrictions may apply.

Interest-only loans enable borrowers to make monthly payments of only the accrued monthly interest on the loan during the introductory interest-only period. Once that period ends, borrowers must make monthly payments of principal and interest for the remaining loan term, and payments will be substantially higher than the interest-only payments. During the interest-only period, the total interest payable by the borrower during the interest-only period will be greater than the total interest that a borrower would be obligated to pay on a traditional loan of the same interest rate having principal-and-interest payments. In making comparisons between an interest-only loan and a traditional loan, borrowers should carefully review the terms and conditions of the various loan products available and weigh the relative merits of each type of loan product appropriately.

3/0, 5/1, 7/1, 10/1 adjustable rate mortgage ("ARM") loans are based on the 1-Year London Interbank Offered Rate ("LIBOR") with various loan term options.

Relationship-based pricing offered by Morgan Stanley Private Bank, National Association is based on the value of clients’, or their immediate family members’ (i.e., grandparents, parents, and children) eligible assets (collectively "Household Assets") held within accounts at Morgan Stanley Smith Barney LLC. To be eligible for relationship-based pricing, Household Assets must be maintained within appropriate eligible accounts prior to the closing date of the residential mortgage loan. Relationship-based pricing is not available on conforming loans.

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