WEALTH MANAGEMENT

Investing for Education

529 Plans at Morgan Stanley

Education Funding: An Important Part of Your Plan

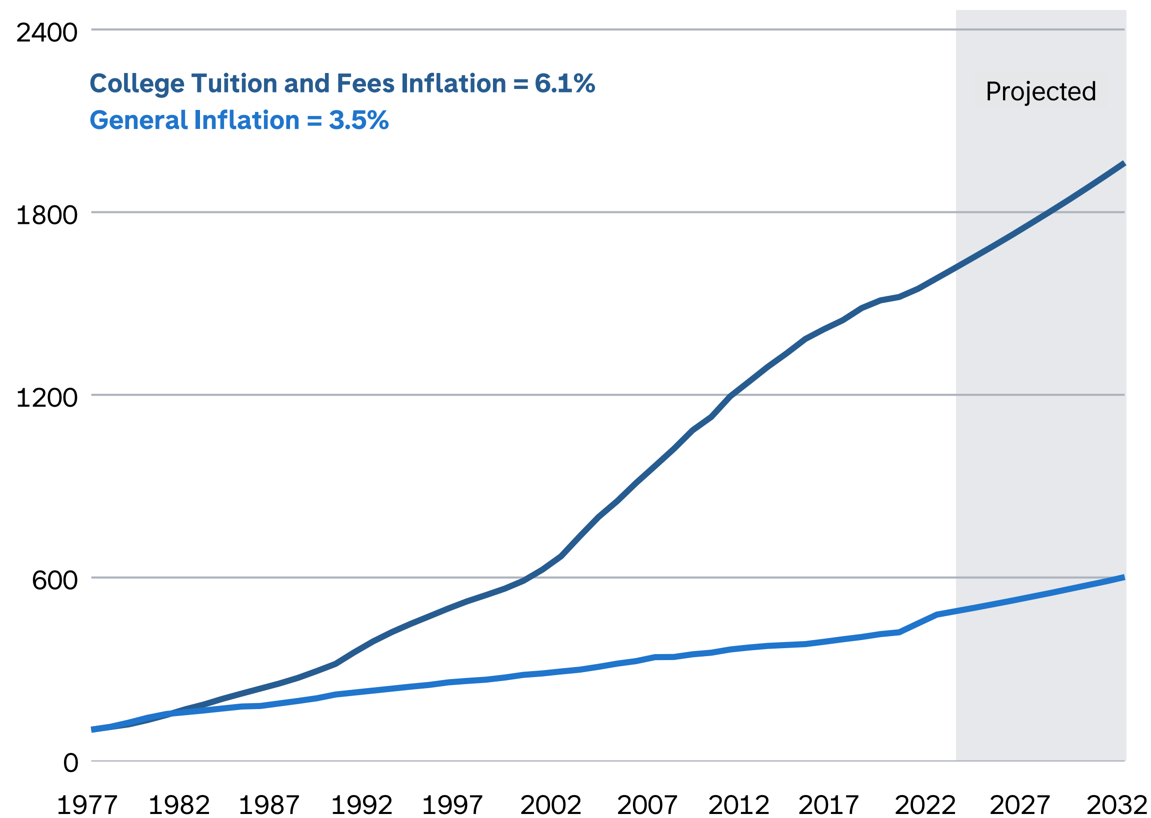
Education Opens Career Doors, Improves Living Standards and Plays a Critical Role in Helping Children Reach their Full Potential, but Education has Become Expensive.

THE POWER OF KNOWLEDGE

- Education is a critical factor in determining standard of living, as wages for highly educated workers continue to increase at a much faster pace than for those without college degrees
- Between 1977 and 2024, college tuition grew at 6.1% per year, nearly doubling the pace of general inflation [1]
- Investing in advance for college can mean significantly less in out-of-pocket funds than borrowing and paying back a college loan
- Tax-advantaged investment accounts such as "529 plans" provide significant benefits for investments that will ultimately be spent on education expenses
- Results show that 529 plans can be significantly beneficial relative to saving in standard brokerage accounts, especially when an investor starts early, taking full advantage of the long-time horizon between birth and college level education.

EDUCATION COSTS ARE RISING FASTER

Consumer Price Index



Source: Bureau of Labor Statistics, Morgan Stanley Wealth Management Global Investment Committee as of January 2025

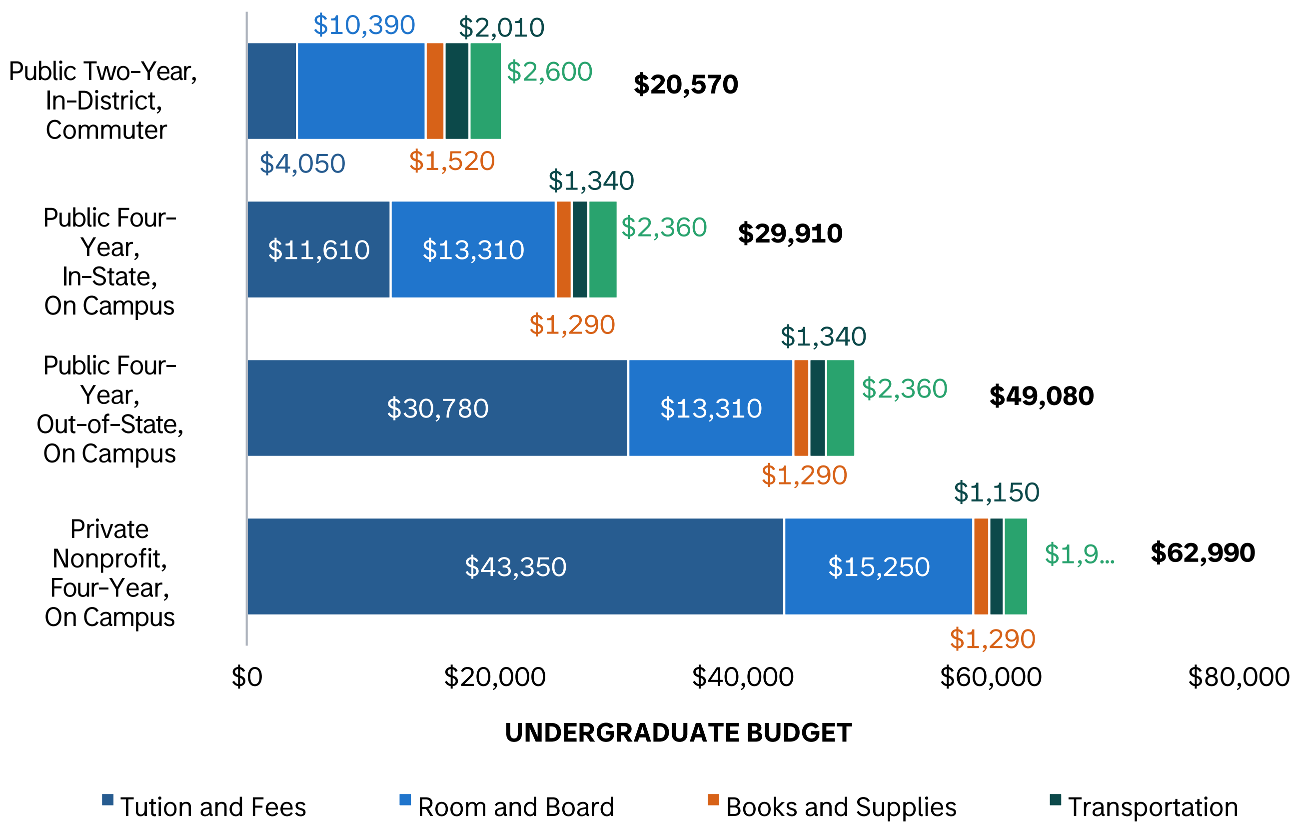
1. Assumptions: Long-term inflation rates are average rates from 1977 to 2024. Projections are based on past 10-year average inflation.

Education is a Major Expense for Most Americans

Paying for College is a Top-tier Life Expense that can Benefit from Smart Multi-generational Planning.

AVERAGE ESTIMATED COSTS FOR FULL-TIME UNDERGRADUATES[1]

Estimates for the 2024–2025 School Year



- For 2024-2025, costs for a four-year private college averaged $62,990 per year
- Assuming a college-cost inflation rate of 6%, a parent may need $425,500 come college time in 2032 to pay expenses for today's 9-year-old child [2]
- And that's for just one child
- Furthermore, in the 2024-2025 academic year, students pursuing a Doctorate or Master's degree at a private college faced costs exceeding $100,000.[1]

Source: College Board, Annual Survey of Colleges: NCES, IPEDS Fall 2024 Enrollment data.

1. The costs in 2031 include 6% annual tuition inflation rate: https://bigfuture.collegeboard.org/pay-for-college/college-costs/college-costs-calculator

Paying for Education: What are the Options?

With both the benefits and costs of a good education growing sharply, the biggest distinction is between those who plan ahead for future education expenses and those who do not. There is a significant cost to not planning.

- **CASH FLOW**
- **STUDENT LOANS** — **PERSONAL LOANS**
- **TAXABLE INVESTMENTS**
- **FINANCIAL AID SCHOLARSHIPS**
- **TAX-ADVANTAGED INVESTMENTS**
  Such as a 529 plan
- **REFINANCING, HOME EQUITY LOANS**

What is a 529 Plan?

Named for Section 529 of the Internal Revenue Code, a 529 Plan is a State- Sponsored, Tax-advantaged Investment Vehicle for Qualified Education Expenses.

A combination of tax-free growth and withdrawal potential, flexible provisions, accelerated gifting advantages, estate tax benefits, continuous control features, and versatility to address changing circumstances make 529 plans an attractive investment vehicle:

TAX BENEFITS

- Income tax
- Estate tax
- Gift tax
- State tax (state dependent)

FLEXIBILITY

- Anyone can participate
- High contribution limits
- Can be used for qualified education expenses (e.g., curriculum materials / tools, tutoring, test prep, fees) [1]
- Choice of many different plans

CONTROL

- You retain control
- You can change the beneficiary
- You can withdraw money or liquidate the account[2]

1. Assets in a 529 plan potentially grow on a tax deferred basis and can generally be withdrawn federal income tax-free only if they are used to pay for qualified education expenses. Qualified expenses include tuition, fees, room and board, books and supplies at virtually any accredited post-secondary school. Effective for distributions made on or after January 1, 2018, the definition of qualified education expenses for federal income tax purposes expanded to include tuition for K-12 schools, as a result of the 2017 Tax Cuts and Jobs Act. The tax law limits qualified 529 withdrawals for eligible K-12 tuition to $10,000 per beneficiary per year. Effective for distributions made on or after January 1, 2019, the definition of qualified higher education expenses for federal income tax purposes was expanded to include certain costs associated with qualifying apprenticeship programs and up to $10,000 (lifetime limit per individual) in amounts paid towards qualified student loans of the 529 plan designated beneficiary (or such beneficiary's sibling). Note, however, using 529 plan distributions to repay qualified student loans may impact the deductibility of student loan interest. The state tax treatment of 529 plans (including the state tax treatment of distributions) may be different from the federal tax treatment and may vary based on the particular 529 plan in which you participate and your state of residence. If the applicable state tax law does not conform with the federal tax law, 529 plan distributions used to pay certain expenses, such as K-12 tuition expenses, principal and interest on qualified student loans and/or qualifying apprenticeship costs, may not be considered qualified expenses for state tax purposes and may result in adverse state tax consequences to the account owner or designated beneficiary. Non-qualified distributions of earnings will be subject to ordinary income tax and may be subject to a 10% federal income tax penalty. Many states allow a partial or full state income tax deduction or credit for 529 plan contributions to a 529 plan but may limit the availability of such credit or deduction to only those contributions made to that state's sponsored 529 plan. As a result of the One Big Beautiful Bill Act (OBBBA) K-12 qualified expenses have expanded to include curriculum materials, books, online educational materials, and supplemental learning tools, tutoring and test prep, standardized test fees, dual enrollment fees, educational therapies and services for students with disabilities. In addition, career credentialing and job training programs are also now qualified expenses, with ongoing costs for maintaining professional credentials eligible.
2. Nonqualified withdrawals are subject to ordinary income tax and a 10% penalty tax.

Tax and Estate Planning Advantages of 529 Plans

The appeal of 529 plans is largely their tax benefits. Once you open a 529 account and contribute funds, any growth of those funds is generally federal and state income tax-free. If used for qualified education expenses, your withdrawals are generally federal and state income tax-free, as well.

529 PLANS OFFER A VARIETY OF FEDERAL AND STATE TAX ADVANTAGES

FEDERAL INCOME TAX

- Accounts grow free of annual taxation.
- Qualified [1] withdrawals including earnings on investments, are free from federal income tax.

STATE TAX

- Accounts grow free of annual taxation.
- Qualified withdrawals [1] may also be free from state income tax.
- Many states offer tax benefits to account owners who contribute to their home state 529 plan. Some states offer tax benefits regardless of which plan is chosen.

FEDERAL GIFT TAX [2]

- Contributions are treated as gifts and qualify for the annual per-beneficiary gift tax exclusion (up to $19,000, or $38,000 for married couples).
- Investors can contribute up to **five times the annual gift amount** in a single year (up to $95,000, or $190,000 for married couples) without incurring federal gift taxes. This **"accelerated gift"** is generally excluded from the donor's estate.
- Beyond the annual gift tax exclusion, any part of the Unified Lifetime Gift Tax Exemption, currently at $13.99 million per individual, can be used toward funding a 529 plan.

ESTATE TAX

- Since contributions are deemed to be a gift to the beneficiary, they are generally removed from the account owner's taxable estate, yet the account owner always retains complete control.[3] For this reason, many use this feature to achieve the goal of **wealth transfer**, particularly in light of recent and anticipated tax law changes.

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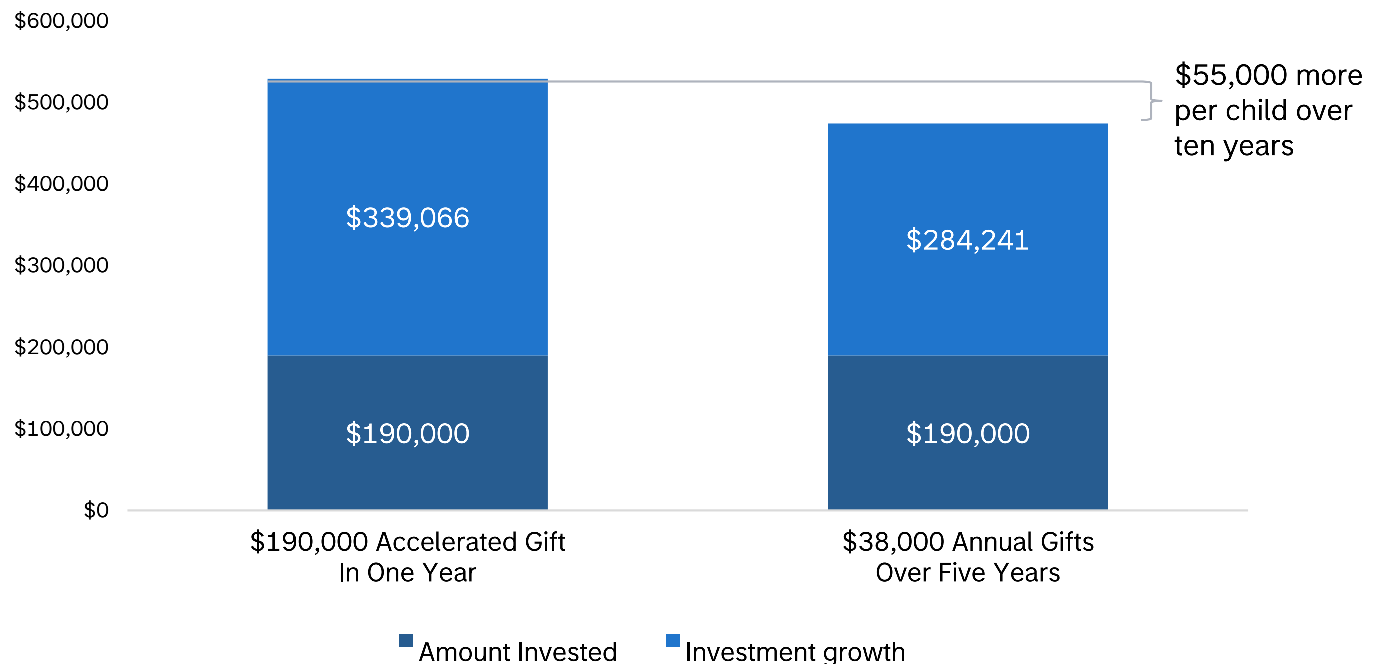
2. No further annual exclusion gifts and/or generation-skipping transfers to the same beneficiary may be made over the same five-year period, and an election to do so must be made on a gift tax return for the year of the gift If the donor dies within the five-year period, a portion of the transferred amount will be included in the donor's estate for estate tax purposes.
3. Contributions to a 529 plan are generally excluded from a donor's gross estate calculation, unless you name yourself as beneficiary.

Accelerated Gifting Fuels Compound Growth

529 Plans offer significant tax advantages that can fuel compound growth and help build robust family legacies. By utilizing features like accelerated gifting, individuals can maximize the potential of their investments. The absence of taxes on growth within a 529 Plan leads to more funds being available to address education costs and other goals.

CASE STUDY: THE VALUE OF ACCELERATED GIFTING

- Through five-year gift tax averaging, 529 plans allow investments up to$95,000 for individuals (or $190,000 for married couples) per beneficiary to be front-loaded during a single year gift tax-free [1]
- This increases the amount of time assets can grow tax-free in the 529 account
- Which in turn helps compound returns



Source: Morgan Stanley Wealth Management Global Investment Committee as of January 2025

Assumptions: Accelerated gift scenario invests a lump sum $190,000 at the beginning. Annual gifts scenario contributes $38,000 annually for five years. Both scenarios assume annualized portfolio return of GIC model 3, with an annual growth rate of 5.79% in first 7 years and 5.90% from year 8 onwards.

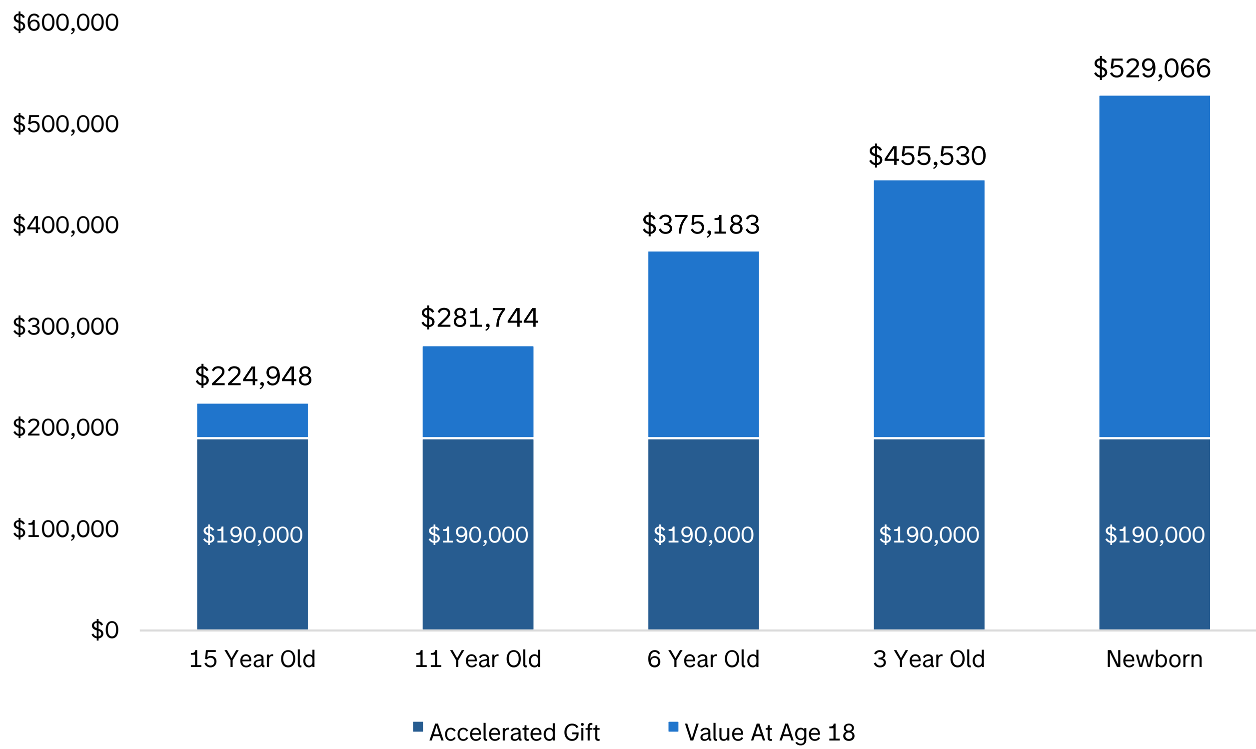
1. As of 2025, the annual gift tax exclusion is $19,000 for individuals, and double for married couples at $38,000 annually. Generally, individuals may be able to make a front-loaded 529 contribution in one year of up to five times the annual gift tax exclusion – as much as $95,000 per beneficiary ($190,000 for married couples) for 2025. An election to do so must be made on a gift tax return for the year of the gift. This assumes there are no front- loaded 529 contributions made by the gift giver for the benefit of the same individual during the prior four years. Any front-loaded 529 contributions made for the benefit of the same individual during the four years prior to the year of the front-loaded contribution may result in a taxable gift. Additionally, any gifts to the same individual during the year of the front-loaded 529 contribution or the four years after the front-loaded 529 contribution is made may result in a taxable gift. If the donor dies within five years of making the front-loaded 529 contribution, the estate will generally recapture a portion of the assets for federal estate tax purposes.

529 Plans as Smart Estate Planning

With high contribution limits, the ability to fund an account by leveraging five-year gift tax averaging, and the option to apply a portion of one's current $13.99 million Unified Lifetime Gift Tax Exemption, 529 plans offer the account owner an opportunity to gift significant amounts out of their taxable estate while retaining control of the assets.

CASE STUDY: REMOVE ASSETS FROM TAXABLE ESTATE WITH ACCELERATED GIFTING AND RETENTION OF CONTROL

- A married couple wants to fund the education of their five grandchildren
- By leveraging five-year gift tax averaging,[1] they may be able to **make up to five years of contributions in one gift;** they transfer $190,000 into a 529 account for each of the 5 grandchildren
- For gift-tax purposes, the assets are considered completed gifts; **they incur no gift taxes**, and the contributions do not count toward their Lifetime Gift Tax Exemption
- The grandparents successfully **remove over $1.8MM from their taxable estate**, representing $950,000 of their original funding plus all investment gains over time, while retaining control of the assets and any withdrawals, as the account owners



Source: Morgan Stanley Wealth Management Global Investment Committee as of January 2025

Assumptions: This illustration assumes $190,000 initial contribution and annualized portfolio return of GIC Model 3, with an annual growth rate of 5.79% in first 7 years and 5.90% from year 8 onwards. This is a hypothetical illustration; actual results may vary.

1. Some plans may have age, residency or other restrictions and may charge a fee for beneficiary changes, and beneficiary changes may result in an immediate tax liability if the new beneficiary is not a member of the previous beneficiary's family.
2. Contributions to a 529 plan are generally excluded from a donor's gross estate calculation, unless you name yourself as beneficiary.

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Tax-free Transfer Unused 529 Assets Into a Roth IRA

With the passage of the SECURE 2.0 act, 529 account owners may be able to transfer their leftover assets into a roth IRA—for a designated beneficiary—making 529 plans an even more robust solution for long-term financial planning.[1]

ANOTHER ANSWER FOR "OVERFUNDED" ACCOUNTS

Two common questions about 529 plans are

- "What if my child doesn't go to college?"
- "What if I my account has more than I need?"

With the passage of the SECURE 2.0 Act, 529 account owners now have **four** potential options for leftover funds in each of their accounts:

1. Change the designated beneficiary to another family member
2. Take a non-qualified withdrawal
3. Remain invested, given that 529 plans do not have required minimum distributions
4. Effective January 2024, transfer up to $35,000 of unused 529 funds into a Roth IRA free of any federal income or penalty taxes, subject to certain requirements under SECURE 2.0

REQUIREMENTS FOR TRANSFERRING LEFTOVER 529 PLAN FUNDS INTO A ROTH IRA

- Prior to the transfer, the 529 plan account of a designated beneficiary has been maintained for at least 15 years
- The amount transferred does not exceed the total amount contributed to the 529 plan account (plus earnings on those contributions) before the 5-year period ending on the date of the rollover
- The funds are paid to a Roth IRA established and maintained for the designated beneficiary of the 529 plan account in a direct trustee-to-trustee transfer
- The aggregate amount rolled over for the tax year does not exceed the annual Roth IRA contribution limit for that year (determined without regard to the modified adjusted gross income limit for Roth IRA contributions), reduced by the aggregate amount of other contributions made to traditional and Roth IRAs owned by the designated beneficiary of the 529 plan account for that year
- The aggregate amount of such amounts transferred with respect to the designated beneficiary for all tax years does not exceed $35,000 [2]
- Such transfer is not subject to federal income tax or the 10% federal penalty tax but, unlike rollovers to the IRA, such transferred amount counts toward the annual contribution limit for Roth IRAs

More about SECURE 2.0

The SECURE 2.0 Act contains dozens of provisions that aim to strengthen the retirement system, including raising the age at which many individuals must begin taking required minimum distributions (RMDs), higher catch-up contributions and other improved opportunities to save for retirement. Recognizing the importance of 529 plans in planning for the future, the Act also helps 529 plan account owners, regardless of their income, by permitting tax-free and penalty tax-free transfers of qualifying unused 529 funds into a Roth IRA.

1. This change to 529 plan rules was effective January 2024.
2. This material does not address the impact of state and local income taxes. The state and local income tax treatment of a 529 plan may differ from the federal tax treatment.

You should consult with and rely on your own independent tax advisor.

Trusts May Benefit From Investing in 529 Plans

Trusts That Are Established Primarily, or in Part, to Pay Educational Expenses May Want to Consider investing in a 529 Plan for Potential Income Tax-advantages, and Funding Opportunities

INCOME TAX BENEFITS

- While trusts play a critical role in wealth transfer and the management of wealth for future generations, irrevocable (non-grantor) trusts are subject to onerous income tax rates.
- In 2025, an irrevocable (non-grantor) trust only needs to generate more than $15,650 in federal taxable income to be subject to the maximum 37% Federal tax bracket, as well as the 3.8% Net Investment Income Tax. State income taxes apply as well.
- Some trusts are established primarily to fund future education expenses while many allow for the trust to pay out whenever for the “future benefit, welfare or education” of the trust beneficiaries.
- Irrevocable (non-grantor) trusts may want to consider investing in 529 plans to help avoid such onerous tax rates, enjoy the benefit of tax-deferred growth potential and the opportunity for tax-free withdrawals for the qualified educational expenses of such trust beneficiaries, starting as early as kindergarten and continuing through graduate school.1 Advisory 529 Plans offering a fiduciary role are available.
- The trustee, as 529 account owner, is empowered under federal tax law to change 529 account designated beneficiaries to certain other family members of the 529 plan designated beneficiary as often as desired in order to carry out the legacy directives of the trust.[1]

FUNDING OPPORTUNITIES

- Revocable (living) and irrevocable trusts are permitted to contribute to and own a 529 account.
- Funding an irrevocable trust involves utilizing the individual(s) gift tax credits, similar to funding their 529 account(s).
- However, only 529 account funding can utilize the 5 year forward use of the contributor’s annual exclusion (currently $19,000).
- The strategy would be for the individual contributor to fund one or more 529 accounts then transfer ownership to the irrevocable trust.2
- Additionally, existing trusts can invest in and own 529 accounts.
- While a transfer of funds or other property by an individual to an irrevocable trust is generally subject to the federal gift tax rules, a contribution to a 529 plan by an irrevocable trust is not subject to the federal gift tax rules and thus an irrevocable trust can generally invest in each 529 account up to the maximum contribution limit, often > $500,000, without federal gift tax consequences.

1. State tax laws vary as to conforming to IRC 529. 1 – Family members for 529 purposes include younger generations not required to be living when the accounts are established. Consult your tax advisors whether a trust changing the 529 account designated beneficiary creates any tax issues.
2. Before engaging in an ownership change, you should consult with your tax advisor to determine whether or not such a change in ownership will result in any adverse tax consequences.

Significant tax advantages

The headline appeal of 529 plans is their income and estate tax benefits for the account owner. 529 plans offer compounding free of federal and state income tax, with accumulation generally outside of the contributor's taxable estate.

A VARIETY OF TAX ADVANTAGES

Federal Income Tax

- Accounts grow free of annual federal and state income tax and qualified1 withdrawals are free from federal income tax.

Estate Tax

- Assets in a 529 plan are generally treated as outside of the account owner's estate for federal estate tax purposes, despite the account owner maintaining control.

Gift Tax[2]

- Contributions are treated as completed gifts and qualify for the annual per-beneficiary gift tax exclusion, with an "accelerated gift" option.

FUNDING OPPORTUNITIES

Tax-free growth potential

- Generous funding opportunities – fund each account >$500K at once, or over time
- 529 accounts grow free of annual federal and state income tax
- No required distributions at any time, even once the beneficiary or account holder attains a specified age
- Available for multiple generations with years of tax-free compounding
- Some states offer income tax deduction or credit for contributions (subject to limitations)

Versatile distribution

- Option to apply funds free of federal and most state taxes beginning with kindergarten tuition (up to $10k per year)
- Option to apply funds free of federal and state taxes for most post-secondary school expenses
- Option to apply funds to educational expenses of certain members of the designated beneficiary's family, given account owners' flexibility to change the designated beneficiary

Nonqualifying distributions

- Distributions of earnings that are not used for qualifying education expenses or transfers are subject to ordinary income taxes at recipient's applicable tax rate and may be subject to a 10% penalty tax. 3
- The 10% penalty tax does not apply to certain distributions, including (but not limited to) distributions made on account of the death or qualifying disability of the designated beneficiary, or to the extent the distribution does not exceed the amount the designated beneficiary receives as a qualifying scholarship

1. Assets can accumulate and be withdrawn federally tax-free only if they are used to pay for qualified expenses. Earnings on nonqualified distributions will be subject to income tax and a 10% federal income tax penalty. Account owners should consult with a qualified tax advisor prior to making such withdrawals as they may be subject to adverse tax consequences. Tax laws are complex and subject to change. Morgan Stanley Smith Barney LLC ("Morgan Stanley"), its affiliates and Morgan Stanley Financial Advisors or Private Wealth Advisors do not provide tax or legal advice. Individuals are urged to consult their personal tax or legal advisors to understand the tax and legal consequences of any actions, including any implementation of any strategies or investments described herein.
2. No further annual exclusion gifts and/or generation-skipping transfers to the same beneficiary may be made over the same five-year period, and an election to do so must be made on a gift tax return for the year of the gift. If the donor dies within the five-year period, a portion of the transferred amount will be included in the donor's estate for estate tax purposes.
3. Each distribution from a 529 plan is treated as part earnings (taxable if not used for qualified education expenses) and part a return of after-tax contributions (nontaxable), until the after-tax contributions are fully recovered at which point all future distributions are treated as coming from earnings.

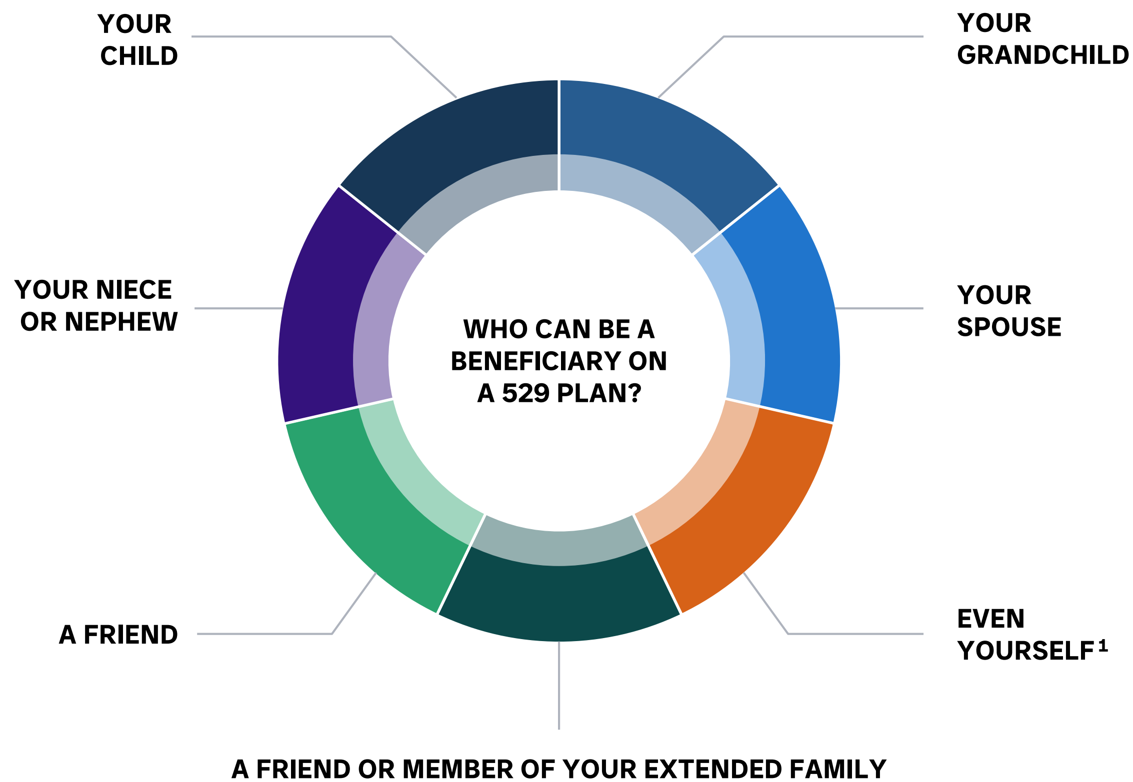
Great Flexibility: Few Limits

With high contribution limits, no income, age or time limits, no minimum distributions, no limits on who can open or contribute, and a long list of qualifying expenses, 529 plans are notable for their flexibility and versatility.

FLEXIBILITY THAT ENABLES A MULTIGENERATIONAL APPROACH TO EDUCATION PLANNING:

HIGH CONTRIBUTION LIMITS

- State plans typically have account contribution limits ranging from roughly $235,000 to $621,000
- Fund at once or over time
- Contributions can also be made in multiple accounts by friends and family, with no set limit on the number of 529 accounts that can be funded or opened for any particular beneficiary
- No limit on account growth with no required distributions



While almost anyone can be named as beneficiary, certain conditions, restrictions, or limitations may apply in some plans.
Beneficiaries must have a Social Security Number (SSN) or Individual Taxpayer Identification Number (ITIN).

1. Selection of yourself as beneficiary will not remove the asset from your taxable estate.

Control and Versatility: Because Life is Unpredictable

As the Account Owner, You– Not the Designated Beneficiary - Retain Control at all Times over the Assets in your 529 Account and You, With Your Advisor, Can Determine How You Want Your Assets to be Invested.

Unlike UTMA/UGMA or Coverdell Education Savings accounts, 529 accounts never belong to the beneficiary. They always belong to the account owner, who can change the beneficiary at any time,[1] and withdraw some or all of the funds in the account at any time, for any reason [2]

Federal tax law provides …

Accounts can be rolled over from one plan to another (limit once per every 12 months)

Assets already in an account can be reallocated twice per calendar year

Changing the beneficiary allows assets to be reallocated

1. May incur income tax consequences and other restrictions may apply.
2. For nonqualified withdrawals, gains are subject to ordinary income tax and a 10% federal income tax penalty.

How Are the Assets in a 529 Plan Invested?

Depending on the Specific Plan, You can Choose From a Range of Investment Strategies Suited to Your Specific Needs, Objectives and Time Frame.

SOME TYPICAL ALLOCATION STRATEGIES INCLUDE:

GOALS-BASED	AGE-BASED (Years-to-Enrollment)	SINGLE-FUND	GUARANTEED
Goals-based asset allocation portfolios align with your unique time frame, risk profile, and education funding goals.	Diversified portfolios, automatically rebalanced and reallocated to more conservative holdings as the beneficiary advances in age to college.	Creates own allocation strategy by selecting from among portfolios that invest in single underlying mutual funds/ETFs	The rate of return is guaranteed as to the resources of the guarantor.

Diversification and rebalancing do not protect against loss in declining financial markets.

Distributing Funds From a 529 Plan

THERE ARE THREE TYPES OF DISTRIBUTIONS:

1

QUALIFIED [1]

Used for approved education expenses, free from federal income tax (and possibly state income tax depending on state rules)

Qualified expenses include:

- Career credentialing and job training programs, with ongoing costs for maintaining professional credentials
- Tuition, fees, room and board, books and supplies
- Up to $10,000 lifetime limit per individual can be used to repay qualified student loans and certain costs for qualifying apprenticeship programs
- $10,000 per beneficiary per year for elementary, middle, and high school tuition, books, tutoring, testing, therapies and more, increasing to $20,000 effective January 2026

2

NON-QUALIFIED

Subject to income tax and 10% penalty tax on the gains portion of the distribution. To the extent you received a state income tax deduction or credit for your 529 plan contributions, you may also be subject to a state recapture tax of deductions taken for contributions but not used for qualifying expenses, in addition to state income tax (if applicable).

3

NON-QUALIFIED BUT PENALTY EXEMPT

Subject to income tax but not to penalty tax.

Three penalty exemptions: [2]

- Death of the beneficiary
- Disability of the beneficiary
- Scholarship Received by the beneficiary

Distributions may be paid to the owner, the beneficiary, or the educational institution of the beneficiary

All distributions result in the issuance of a Form 1099-Q, issued to the distributee (either the owner or beneficiary – even if paid to educational institution)

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2. Penalty-free withdrawals subject to ordinary Income Tax.

Does Having a 529 Plan Affect Eligibility for Financial Aid?

529 Plans Minimize the Financial Aid Repercussions.

Funds in a 529 account are counted as the account owners' assets—they are not counted as the child's assets [1]. A smaller percentage of the family contribution is expected from the parents than from the child to cover the costs of college—5.64% of parental assets versus 20% of student assets, or 0% of grandparents' assets.[2]

Student Aid Index (SAI) Federal student aid formula used nationwide,

PARENTAL INCOME	STUDENT INCOME	STUDENT ASSETS (e.g., UGMA)	PARENTAL ASSETS (e.g.,529 Account)
Up to **47%** (after certain allowances)	**50%** (after certain allowances)	**20%** (of all assets)	**5.64%** (maximum assessment of nonretirement assets) [3]

1. Source: Does a 529 Plan Affect Financial Aid?, December 7, 2023, www.savingforcollege.com
2. Based on federal methodology for 2024-25 school year. Federal financial aid rules are subject to change. Please consult your financial professional for more information. To learn more about how SAI is calculated, see https://fsapartners.ed.gov/sites/default/files/2022-11/202425DraftStudentAidIndexSAIandPellGrantEligibilityGuide.pdf. .
3. Protected amount for parental income is based on household size. Protected amount for parental assets is based on age and marital status and excludes primary residence and retirement accounts.

How do 529 Plans Compare to Other Vehicles?

		529 EDUCATION INVESTMENT PLAN	529 PREPAID TUITION PLAN	COVERDELL EDUCATION SAVINGS ACCOUNT	CUSTODIAL ACCOUNT (UGMA / UTMA)
TAX	State Tax Deductible	Yes, in most states	Yes, in many states	✗	✗
	Tax-Deferred Growth Potential	✓	✓	✓	✗
	Tax-Free Withdrawal On Qualified Expenses	✓	✓	✓	N/A
	Assets Removed from Donor's Estate [1]	✓	✓	✓	✓
FLEXIBILITY	Participate Without Income Limit	✓	✓	✗	✓
	Contribution Gift-Tax Free [2]	✓	✓	✗	✓
	No Age / Time Limit / Residency Requirement for Beneficiary [3]	✓	✗	✗	✗
	Distribution Applicable for K-12 Expenses	✓	✗	✓	N/A
	Ability to Change Beneficiary	✓	✓	✓	✗
	Investment Choices	Static or Age-based with limited rebalancing	Prepaid units	Self-directed	Self-directed
CONTROL	Control of Account	Owner	Owner	Responsible individual until beneficiary reaches the age specified in the governing document	Custodian until minor reaches the age of termination
	Negative Impact on Financial Aid	Up to 5.64% of assets	Up to 5.64% of assets	Up to 5.64% of assets	20% of assets
	Allow Accelerated Gifting	✓	✓	✗	✗

Source: U.S. Department of Education Federal Student Aid, Morgan Stanley Wealth Management Global Investment Committee.

1. The annual gift tax exclusion is available for transfers to UGMA/UTMA accounts, even though the child's enjoyment of the property is delayed. However, UGMA/UTMA transfers will be included in the donor's gross estate for estate tax purposes if the donor dies while serving as custodian.
2. The IRS permits the front-loading of up to five times the annual gift exclusion of $19,000/$38,000 (single/joint) per beneficiary. This process requires filing an IRS Form 709, and will exempt the gift from tax assuming no other gifts are made to that beneficiary during a five-calendar-year period.
3. The tax law limits qualified 529 withdrawals for eligible K-12 tuition to $10,000 per beneficiary per year and state tax treatment will vary on a state-by-state basis. The state tax treatment of K-12 withdrawals is currently under review by many states.

Asset Growth by Investment Vehicle

Alternatives to 529 Plans Need a Much Higher Return to Place Client in Same After-Tax Position.

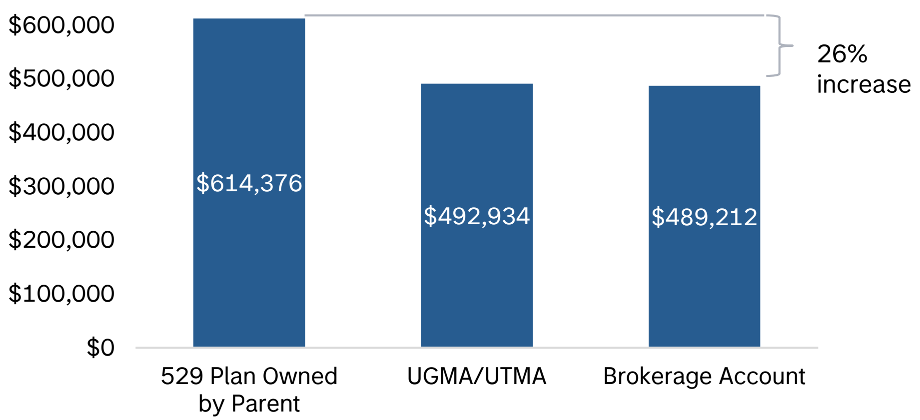
529 PLAN VS UGMA/UTMA AND BROKERAGE ACCOUNTS

- Highlights the value of the 529 plan's tax benefits and the importance of faster compound growth

Case Study: Investments for two beneficiaries, following an annual $19,000 contribution into each account

- The 529 plan assets grew by 26% more than the other investment vehicles

ACCOUNT VALUE OF $19,000 ANNUAL CONTRIBUTION AFTER 18 YEARS

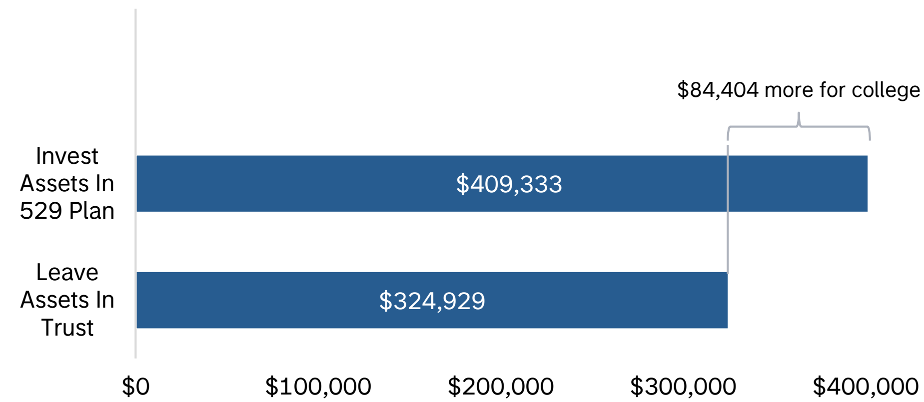


Source: Morgan Stanley Wealth Management Global Investment Committee as of January 2025
Assumptions: This illustration assumes an annual contribution of $19,000 for 18 years. All accounts assume annualized portfolio return of GIC Model 3, with an annual growth rate of 5.79% in first 7 years and 5.90% from year 8 onwards. UGMA and UTMA are applied kiddie tax rate to capital gains: 10% below $2,700, and parent's marginal tax rate of the amount over $2,700. Brokerage account assumes an after-tax portfolio return with 38% investment tax rate. Actual results may vary.

TRUST-OWNED 529 PLAN VS OTHER INVESTMENTS IN THE TRUST

- While many trusts are established to help fund educational expenses, they are generally onerously taxed and can have drawbacks
- Trusts may own and invest in the Morgan Stanley National Advisory 529 Plan, thereby benefiting from both the advantages of a trust and the plan's significant tax savings, while maintaining the fiduciary role when in a 529 advisory account

CASE STUDY: GROWTH OF $190,000 AFTER INVESTING FOR 15 YEARS



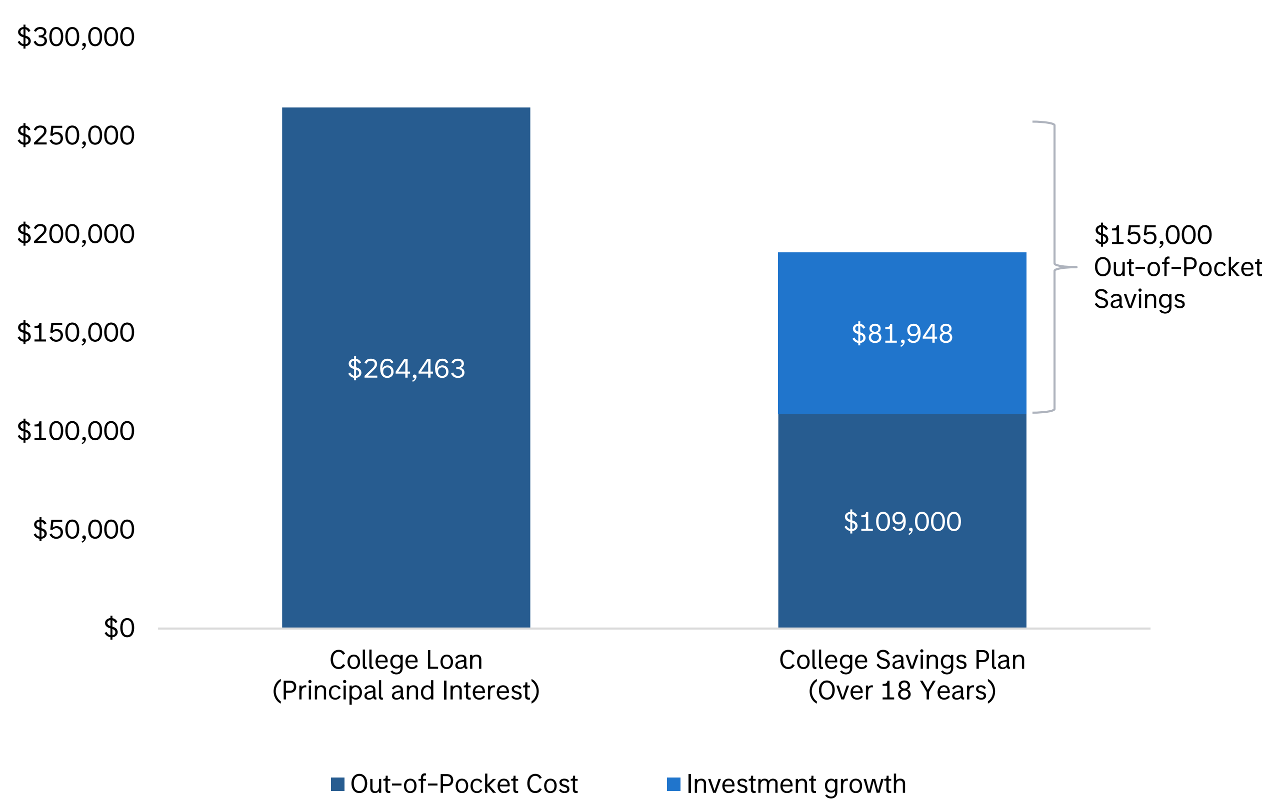
Source: Morgan Stanley Wealth Management Global Investment Committee as of January 2025
Assumptions: This illustration assumes initial investment of $190,000 and annualized before-tax portfolio return of GIC model 3, with an annual growth rate of 5.79% in first 7 years and 5.90% from year 8 onwards. 529 plan scenario transfers all assets to a 529 plan after initial four-year trust investment. Both scenarios assume a before-tax portfolio return of 5.90% (GIC model 3). Trust investment applies a 38% investment tax rate to portfolio growth. The entire investment horizon is 15 years.

Invest Now or Pay More Later

"Compound Interest is the 8th Wonder of the World. He Who Understands It, Earns It; He Who Doesn't, Pays It.“ — Attributed to Albert Einstein

CASE STUDY: INVEST NOW VS PAY LATER

- Investing in advance for college can mean significantly less in out-of- pocket costs than borrowing and paying back a college loan
- An initial investment of $1,000 when your child is born and monthly contributions of $500 over 18 years would add up to $109,000
- Assuming a growth rate using GIC Model 3, those contributions grow to $190,948 by college age
- With a 7% interest rate, borrowing the same amount would cost about $264,463
- That makes the cost of borrowing to pay off an education after the fact $155,000 more than the cost of investing for it in advance



Source: Morgan Stanley Wealth Management Global Investment Committee as of January 2025
Assumptions: The investing illustration assumes an initial lump-sum investment of $1,000, and subsequent monthly investments of $500 thereafter for 18 years. The annual portfolio assumes to follow GIC Model 3 , with an annual growth rate of 5.79% in the first 7 years and 5.90% from year 8 onwards. The borrowing illustration assumes an interest rate of 7% and a payback period of 10 years. This is a hypothetical illustration; actual results may vary.

Advice Matters When Investing for Future Education Expenses

We can offer valuable expertise to help you incorporate an education savings and investment plan into your overall investment strategy:

Project costs for private and public institutions, identify your education savings goals and explain your investment options

Select a plan, recommend an asset allocation and tailor a contribution schedule that may best meet your needs

Provide guidance on qualified versus non-qualified distributions, balancing your liquidity needs with potential tax implications

Take advantage of tax- smart gifting and estate planning opportunities

Navigate changing market and regulatory conditions to help maximize your education savings

Smarter Solutions for Your Education Funding Strategy

A RANGE OF 529 PLANS

A variety of investment options are available, including the **Morgan Stanley National Advisory 529 Plan** – a first-of-its-kind fiduciary 529 plan that leverages our intellectual capital

Additionally, we offer **over 25 other state-sponsored, advisor-guided 529 plans** from some of the nation's leading mutual fund companies, through brokerage accounts.

Whether you're investing to prepare for the future education expenses of a child, grandchild or someone else you love, we're here to provide guidance – while helping to minimize your tax liability and maintain your current lifestyle and long-term financial goals

Other considerations and benefits for the client

ADDITIONAL BENEFITS OF 529 PLANS

ASSET PROTECTION
529 plans may offer protection against certain creditors and judgements, as well as bankruptcy.

STATE TAX BENEFITS
State tax deductions or credits for various levels of contributions are available to residents of certain states.

TRUSTS
Trusts may own and invest in 529 accounts thereby helping to reduce the exposure to the onerous tax rates applicable to trusts.

FINANCIAL AID
529 accounts do not penalize the financial aid applicant as accounts owned by parents are treated similar to taxable investment accounts and grandparent accounts are not factored in at all.

UGMA/UTMA ELIGIBILITY
UGMAs and UTMAs are eligible to invest in 529 accounts.

SPECIAL NEEDS
529 accounts may be used with disabled family members and together with Special Needs Trusts (SNTs), with penalty-free Non-Qualified Withdrawals.

Source: 529 Plans Receive Favorable Treatment on the FAFSA, July 28, 2022, www.savingforcollege.com.

Morgan Stanley National Advisory 529 Plan

Morgan Stanley National Advisory 529 Plan

An Exclusive Offering for Morgan Stanley Clients.

As the first of its kind in the industry, the Morgan Stanley National Advisory 529 Plan is fully integrated into a comprehensive advisory relationship.

It allows you to benefit from fiduciary oversight of your education funding strategy within the context of your broader assets, portfolio and life goals

INDUSTRY-LEADING THOUGHT LEADERSHIP AND PORTFOLIO CONSTRUCTION

Goals-based asset allocation portfolios, guided by the Morgan Stanley Global Investment Committee, align with your unique time frame, risk profile and financial goals, and offer access to over 20 industry- leading investment managers

INTEGRATION INTO A GOALS-BASED TOTAL WEALTH PLAN

Manage your 529 account investments within a holistic advisory relationship and take advantage of integrated tax, risk management and estate planning benefits across your overall wealth strategy. Existing 529 Plan accounts can be transferred into the Morgan Stanley National Advisory 529 Plan[1]

SOPHISTICATED ADVICE FROM YOUR TRUSTED MORGAN STANLEY TEAM

Work with your Financial Advisor or Private Wealth Advisor to invest for future education expenses within the context of your wealth plan, while navigating market conditions and other considerations

Neither the North Carolina State Education Assistance Authority or any other public entity guarantees the principal, earnings or value of any Plan account.

1. Rollovers are federally tax-free if reinvested into a new 529 plan within 60 days and clients are permitted one tax-free rollover per 12 months. Note, the state tax treatment may differ from the federal and if you've previously taken a state income tax deduction or credit for your 529 plan contributions, please review with your tax advisor whether your deduction or credit is subject to a recapture provision, which may require you to pay an additional state income tax based on the value of the state tax benefit you previously received from such deduction or credit.

Investments in a 529 Plan are not FDIC-insured, nor are they deposits of or guaranteed by a bank or any other entity, so an individual may lose money. Investors should review a Program Disclosure Statement, which contains more information on investment options, risks factors, fees and expenses and possible tax consequences. Investors should read the Program Disclosure Statement carefully before investing.

If an account owner or the beneficiary resides in or pays income taxes to a state that offers its own 529 college savings or pre-paid tuition plan (an “In-State Plan”), that state may offer state or local tax benefits. These tax benefits may include deductible 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 denied 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.

The North Carolina State Education Assistance Authority (the "Authority") is an instrumentality of the State of North Carolina sponsoring the Morgan Stanley National Advisory 529 Plan, and the 529 Plan is a component of the Parental Savings Trust Fund established by the General Assembly of North Carolina. Neither the Authority, the State of North Carolina nor any other affiliated public entity or any other public entity is guaranteeing the principal or earnings in any account. Contributions or accounts may lose value and nothing stated herein, the 529 Plan Description and Participation Agreement or any other account documentation shall be construed to create any obligation of the Authority, the North Carolina State Treasurer, the State of North Carolina, or any agency or instrumentality of the State of North Carolina to guarantee for the benefit of any parent, other interested party, or designated beneficiary the rate of return or other return for any contribution to the Parental Savings Trust Fund and the 529 Plan. The Morgan Stanley National Advisory 529 Plan is a proprietary offering available exclusively to Morgan Stanley advisory account clients. Morgan Stanley Smith Barney LLC (“Morgan Stanley”) is the manager of the 529 Plan and is responsible for its administration, distribution and investment management. The Plan is not transferable to other financial intermediaries. For more information, please see the applicable Morgan Stanley ADV brochure: www.ms.com/adv.

Key Features of the Morgan Stanley National Advisory 529 Plan

The Morgan Stanley National Advisory 529 Plan features the combination of tax-free growth and withdrawal potential,[1] flexible provisions, accelerated gifting advantages, estate tax benefits, attractive continuous control features, and versatility to address circumstances as they arise.

PLAN FEATURES

ACCOUNT MINIMUM AND MAXIMUM CONTRIBUTIONS

$1,000 account minimum;
$550,000 maximum account contribution limit

PLATFORM AVAILABILITY

Select UMA® Program

SINGLE ASSET-BASED FEE [2]

Advisory fee leveraging relationship-based pricing across entire household

INVESTMENT SELECTION

You and your Financial Advisor select an appropriate investment portfolio to address your goals, with the ability to change as your investment goals change

INVESTMENT OPTIONS

- 6 U.S. Focused Portfolios
- 6 Tactical Portfolios
- 1 Conservative Fixed Income Portfolio

STATE SPONSORSHIP

Nationwide plan sponsored by the North Carolina State Education Assistance Authority

1. Assets in a 529 plan potentially grow on a tax deferred basis and can generally be withdrawn federal income tax-free only if they are used to pay for qualified education expenses. Qualified expenses include tuition, fees, room and board, books and supplies at virtually any accredited post-secondary school. Effective for distributions made on or after January 1, 2018, the definition of qualified education expenses for federal income tax purposes expanded to include tuition for K-12 schools, as a result of the 2017 Tax Cuts and Jobs Act. The tax law limits qualified 529 withdrawals for eligible K-12 tuition to $10,000 per beneficiary per year, and $20,000 effective January 1, 2026.. Effective for distributions made on or after January 1, 2019, the definition of qualified higher education expenses for federal income tax purposes was expanded to include certain costs associated with qualifying apprenticeship programs and up to $10,000 (lifetime limit per individual) in amounts paid towards qualified student loans of the 529 plan designated beneficiary (or such beneficiary's sibling). Note, however, using 529 plan distributions to repay qualified student loans may impact the deductibility of student loan interest. The state tax treatment of 529 plans (including the state tax treatment of distributions) may be different from the federal tax treatment and may vary based on the particular 529 plan in which you participate and your state of residence. If the applicable state tax law does not conform with the federal tax law, 529 plan distributions used to pay certain expenses, such as K-12 tuition expenses, principal and interest on qualified student loans and/or qualifying apprenticeship costs, may not be considered qualified expenses for state tax purposes and may result in adverse state tax consequences to the account owner or designated beneficiary. Non-qualified distributions of earnings will be subject to ordinary income tax and may be subject to a 10% federal income tax penalty. Many states allow a partial or full state income tax deduction or credit for 529 plan contributions to a 529 plan, but may limit the availability of such credit or deduction to only those contributions made to that state's sponsored 529 plan. As a result of the One Big Beautiful Bill Act (OBBBA) K-12 qualified expenses have expanded to include curriculum materials, books, online educational materials, and supplemental learning tools, tutoring and test prep, standardized test fees, dual enrollment fees, educational therapies and services for students with disabilities. For more information on the Morgan Stanley National Advisory 529 Plan, please see the program description and the applicable ADV brochure available at www.morganstanley.com/ADV.
2. The annual fee, based on assets and billed monthly, covers a full range of investment services. The annual asset-based fee does not cover (1) the state administrative fee, (2) the cost of investment management fees and other expenses charged by Funds, or (3) any Morgan Stanley Wealth Management account establishment, maintenance or termination fees for Plans, which are set forth in the respective Plan account and fee documentation (which may change from time to time).

A Full Spectrum of Advice

Morgan Stanley National Advisory 529 Plan

Select from goals-based asset allocation portfolios to align with your unique time frame, risk profile, and education funding goals. Investment strategies are available in U.S. Focused or Tactical Portfolios.

RISK LEVEL	CONSERVATIVE						AGGRESSIVE
APPROPRIATE FOR INVESTORS WHO …	• Seek liquidity to serve the needs of upcoming expenses. • Short term time horizon. • Aim for low volatility.	• Need to prioritize preservation of purchasing power over potential for higher returns. • Do not rely on income or capital appreciation from their portfolio. • Aim for low volatility.	• Seek to generate steady income. • Do not seek high growth from their portfolio. • Can absorb some volatility.	• Seek to generate some income and capital appreciation. • Aim for moderate volatility.	• Seek to gain capital appreciation in line with market indices. • Seek to generate income. • Are able to tolerate moderate-to-high volatility.	• Seek to gain high capital appreciation and income. • Are able to tolerate high volatility.	• Seek to gain high capital appreciation. • Are able to tolerate high volatility.
COLLEGE SAVING AGE	Over 16	Over 16	13-15	11-12	9-10	6-8	0-5

Industry-Leading Thought Leadership and Portfolio Construction

Morgan Stanley National Advisory 529 Plan

With each of our 529 plan investment strategies, you have access to vast intellectual capital and layers of market intelligence from leading thinkers, including industry-leading investment managers and the firm's Global Investment Committee.

ASSET ALLOCATION	ACTIVE AND PASSIVE	MANAGER SELECTION	PORTFOLIO CONSTRUCTION & RISK MANAGEMENT
The blend of assets in your portfolio align with your goals while providing diversification across asset classes	We believe the right mix of active and passive managers can optimize fees and may beat single-style strategies	Our rigorous manager analysis and patented ranking process ensure managers meet our high quality standards	Complementary manager style mixes and weightings based on risk contributions helps improve the portfolios' risk-reward profile

Morgan Stanley National Advisory 529 Plan: Portfolio Options

Choose from a Suite of Investment Strategies that Match Your Goals and Risk Tolerance

U.S. FOCUSED PORTFOLIOS	**7-YEAR OUTLOOK** based on current macro regime (business cycle, relative valuations, volatility and correlation trends)	**ASSET CLASS REBALANCING 1X / YR**	**LONG-TERM TIME HORIZON**	**PORTFOLIO CONSTRUCTION FAVORS U.S. EQUITY OVER INTERNATIONAL EQUITY**
TACTICAL PORTFOLIOS	**1-YEAR OUTLOOK** based on marginal changes in economic, geopolitical, fundamental, technical and near-term risk indicators	**ASSET CLASS REBALANCING 3-4X / YR**	**SHORT-TERM TIME HORIZON**	**GLOBAL ASSET ALLOCATION**
CONSERVATIVE FIXED INCOME	**LIQUIDITY** Is the primary objective of this portfolio to serve the needs of upcoming expenses	**ASSET CLASS REBALANCING 1X / YR**	**SHORT-TERM TIME HORIZON**	**ALL FIXED INCOME**

Asset Allocations Customized to Help Meet Your Goals

Morgan Stanley National Advisory 529 Plan

ASSET ALLOCATION FOR U.S.-FOCUSED PORTFOLIOS[1]

	WEALTH CONSERVATION	INCOME	BALANCED GROWTH	MARKET GROWTH	OPPORTUNISTIC GROWTH	EQUITY
U.S. EQUITY	**16%**	**27%**	**37%**	**48%**	**59%**	**75%**
LARGE CAP EQUITY FUND	15%	24%	31%	39%	49%	62%
SMALL-MID CAP EQUITY FUND	1%	3%	6%	9%	10%	13%
INTERNATIONAL EQUITY	**6%**	**9%**	**13%**	**16%**	**20%**	**25%**
INTERNATIONAL EQUITY FUND	4%	6%	9%	11%	13%	16%
EMERGING MARKETS EQUITY FUND	2%	3%	4%	5%	7%	9%
FIXED INCOME	**78%**	**64%**	**50%**	**36%**	**21%**	**0%**
CORE FIXED INCOME FUND	42%	36%	31%	23%	13%	–
INTERNATIONAL FIXED INCOME FUND	6%	5%	5%	3%	2%	–
HIGH YIELD FIXED INCOME FUND	3%	3%	3%	3%	3%	–
INFLATION-LINKED FIXED INCOME FUND	1%	1%	1%	1%	1%	–
ULTRA-SHORT TERM FIXED INCOME FUND	26%	19%	10%	6%	2%	–

1. Allocations are as of March 28, 2025, and are subject to change at any time without notice. Pie charts represent strategic allocations for all

Asset Allocations Customized to Help Meet Your Goals

Morgan Stanley National Advisory 529 Plan

ASSET ALLOCATION FOR GIC TACTICAL PORTFOLIOS[1]

	WEALTH CONSERVATION	INCOME	BALANCED GROWTH	MARKET GROWTH	OPPORTUNISTIC GROWTH	EQUITY
U.S. EQUITY	**15%**	**26%**	**35%**	**45%**	**54%**	**67%**
LARGE CAP EQUITY FUND	13%	21%	29%	37%	45%	56%
SMALL-MID CAP EQUITY FUND	2%	5%	6%	8%	9%	11%
INTERNATIONAL EQUITY	**6%**	**11%**	**16%**	**21%**	**26%**	**33%**
INTERNATIONAL EQUITY FUND	4%	7%	10%	13%	16%	20%
EMERGING MARKETS EQUITY FUND	2%	4%	6%	8%	10%	13%
FIXED INCOME	**79%**	**63%**	**49%**	**34%**	**20%**	**0%**
CORE FIXED INCOME FUND	52%	43%	34%	24%	14%	–
INTERNATIONAL FIXED INCOME FUND	7%	5%	4%	3%	2%	–
HIGH YIELD FIXED INCOME FUND	2%	2%	2%	2%	1%	–
INFLATION-LINKED FIXED INCOME FUND	–	–	–	–	–	–
ULTRA-SHORT TERM FIXED INCOME FUND	18%	13%	9%	5%	3%	–

1Allocations are as of April 16, 2025, and are subject to change at any time without notice. Pie charts represent tactical allocations for all portfolios

Asset Allocations Customized to Help Meet Your Goals

Morgan Stanley National Advisory 529 Plan

CONSERVATIVE FIXED INCOME[1]

Fixed Income	100%
Core Fixed Income Fund	30%
Ultra-Short Term Fixed Income Fund	70%

FIXED INCOME

1. Allocations are as of March 31, 2025, and are subject to change at any time without notice. Pie charts represent tactical allocations for all portfolios

Institutional-Caliber Access Through Multi-Manager Funds

Morgan Stanley National Advisory 529 Plan

ASSET CLASS	FUND	STYLE / SUBSTYLE	CURRENT TARGET WEIGHT[1]
U.S. EQUITY			
LARGE CAP EQUITY FUND FOUR SUB-ADVISERS	Blackrock	Passive Index[2]	63%
	ClearBridge	Large Growth, Traditional	8%
	Great Lakes	Large Value, Traditional	17%
	Principal	Large Growth, Traditional	12%
SMALL-MID CAP EQUITY FUND FOUR SUB-ADVISERS	Blackrock	Passive Index[2]	40%
	AB	Small-Mid Value, Discount	20%
	Westfield	Small Growth, Traditional	23%
	Neuberger Berman	Small Value, Discount Value	17%
WORLD EQUITY			
INTERNATIONAL EQUITY FUND FIVE SUB-ADVISERS	Blackrock	Passive Index[2]	25%
	Schroders	Growth Oriented (GARP)[3]	18%
	Causeway	Value Oriented	28%
	BNY Walter Scott	Growth Oriented	19%
	Victory Trivalent	Small Cap Blend	10%
EMERGING MARKETS EQUITY FUND FOUR SUB-ADVISERS	Blackrock	Passive Index[2]	35%
	Van Eck	Growth Oriented	17.5%
	Lazard	Value Oriented	17.5%
	Martin Currie	Core	30%
FIXED INCOME			
CORE FIXED INCOME FUND THREE SUB-ADVISERS	Allspring	Core Plus	40%
	Blackrock	Core Fixed	30%
	JP Morgan	Core Plus	30%
INTERNATIONAL FIXED INCOME FUND ONE SUB-ADVISER	PIMCO	International Core	100%
HIGH-YIELD FIXED INCOME FUND ONE SUB-ADVISERS	PineBridge	High Yield	100%
INFLATION-LINKED FIXED INCOME FUND ONE SUB-ADVISER	PIMCO	Inflation Linked Global	100%
ULTRA-SHORT TERM FIXED INCOME FUND ONE SUB-ADVISER	PIMCO	Ultra-short Fixed Income Plus	100%

1. The allocations shown are target allocations as of March 31, 2025, and may not reflect the portfolio’s current allocations
2. The passive index is the Russell 1000 Index for Large Cap Equity, and the Russell 2500 Index for Small-Mid Cap Equity. MSCI EAFE (net) for International Equity, and the MSCI Emerging Markets (net) for Emerging Markets Equity
3. Growth at a Reasonable Price

Disclosures

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 federally tax-free only if they are used to pay for qualified expenses. Earnings on nonqualified distributions will be subject to income tax and a 10% federal income tax penalty. Contribution 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 or pre-paid tuition plan (an "In-State Plan"), that state may offer state or local tax benefits. These tax benefits may include deductible 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 denied 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.

Morgan Stanley Smith Barney LLC ("Morgan Stanley") is the manager of the **Morgan Stanley National Advisory 529 Plan** and is responsible for its administration, distribution and investment management. Morgan Stanley does not provide tax and/or legal advice to investors in the 529 Plan. Investors should consult their personal tax advisor for tax-related matters and their attorney for legal matters. For more information please see the Morgan Stanley National Advisory 529 Plan Description and the applicable Morgan Stanley ADV brochure at www. morganstanley.com/adv.

The Morgan Stanley National Advisory 529 Plan is a proprietary offering available exclusively to Morgan Stanley advisory account clients. The Plan is not transferable to other intermediaries.

The Morgan Stanley National Advisory 529 Plan. The North Carolina State Education Assistance Authority (the "Authority") is an instrumentality of the State of North Carolina sponsoring the Morgan Stanley National Advisory 529 Plan, and the 529 Plan is a component of the Parental Savings Trust Fund established by the General Assembly of North Carolina. Neither the Authority, the State of North Carolina nor any other affiliated public entity or any other public entity is guaranteeing the principal or earnings in any account. Contributions or accounts may lose value and nothing stated herein, the 529 Plan Description and Participation Agreement or any other account documentation shall be construed to create any obligation of the Authority, the North Carolina State Treasurer, the State of North Carolina, or any agency or instrumentality of the State of North Carolina to guarantee for the benefit of any parent, other interested party, or designated beneficiary the rate of return or other return for any contribution to the Parental Savings Trust Fund and the 529 Plan.

The Morgan Stanley National Advisory 529 Plan Description contains more information on investment options, risk factors, fees and expenses, and potential tax consequences, which should be carefully considered before investing. Investors can obtain a 529 Plan Description from their Financial Advisor and should read it carefully before investing.

Investments in the 529 Plan are not FDIC-insured, nor are they deposits or guaranteed by a bank or any other entity, so an individual may lose money through such investments.
Investors should consider many factors before deciding which 529 plan is appropriate. Some of these factors include: the plan's investment options and the historical investment performance of these options, the plan's flexibility and features, the reputation and expertise of the plan's investment manager, plan contribution limits and the federal and state tax benefits associated with an investment in the plan. Some states, for example, offer favorable tax treatment and other benefits to their residents only if they invest in the state's own qualified tuition program. Investors should determine their home state's tax treatment of 529 plans when considering whether to choose an in-state or out-of-state plan. Investors should consult with their tax or legal advisor before investing in any 529 plan or contact their state tax division for more information.

Morgan Stanley Wealth Management is the trade name of Morgan Stanley Smith Barney LLC, a registered broker-dealer in the United States.

The sole purpose of this material is to inform, and it in no way is intended to be an offer or solicitation to purchase or sell any security, other investment or service, or to attract any funds or deposits. Investments mentioned may not be appropriate for all clients. Any product discussed herein may be purchased only after a client has carefully reviewed the offering memorandum and executed the subscription documents. Morgan Stanley Wealth Management has not considered the actual or desired investment objectives, goals, strategies, guidelines, or factual circumstances of any investor in any fund(s). Before making any investment, each investor should carefully consider the risks associated with the investment, as discussed in the applicable offering memorandum, and make a determination based upon their own particular circumstances, that the investment is consistent with their investment objectives and risk tolerance. Morgan Stanley Smith Barney LLC offers investment program services through a variety of investment programs, which are opened pursuant to written client agreements. Each program offers investment managers, funds and features that are not available in other programs; conversely, some investment managers, funds or investment strategies may be available in more than one program.

Morgan Stanley's investment advisory programs may require a minimum asset level and, depending on your specific investment objectives and financial position, may not be appropriate for you. Please see the Morgan Stanley Smith Barney LLC program disclosure brochure (the "Morgan Stanley ADV") for more information in the investment advisory programs available. The Morgan Stanley ADV is available at www.morganstanley.com/ADV.

Sources of Data. Information in this material in this report has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness or timeliness. Third-party data providers make no warranties or representations relating to the accuracy, completeness or timeliness of the data they provide and are not liable for any damages relating to this data. All opinions included in this material constitute the Firm's judgment as of the date of this material and are subject to change without notice. This material was not prepared by the research departments of Morgan Stanley & Co. LLC or Morgan Stanley Smith Barney LLC. Some historical figures may be revised due to newly identified programs, firm restatements, etc.

Global Investment Manager Analysis (GIMA) Focus List, Approved List and Tactical Opportunities List; Watch Policy. GIMA uses two methods to evaluate investment products in applicable advisory programs: **Focus** (and investment products meeting this standard are described as being on the Focus List) and **Approved** (and investment products meeting this standard are described as being on the Approved List). In general, Focus entails a more thorough evaluation of an investment product than Approved. Sometimes an investment product may be evaluated using the Focus List process but then placed on the Approved List instead of the Focus List. Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status). GIMA has a '**Watch**" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved." The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager or fund to address any concerns. Certain investment products on either the Focus List or Approved List may also be recommended for the **Tactical Opportunities List** based in part on tactical opportunities existing at a given time. The investment products on the Tactical Opportunities List change over time. For more information on the Focus List, Approved List, Tactical Opportunities List and Watch processes, please see the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management. Your Financial Advisor or Private Wealth Advisor can also provide upon request a copy of a publication entitled "Manager Selection Process."

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.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

Adverse Active AlphaSM 2.0 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 and peers. 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 are 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 appropriate for all investors.

The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see Adverse Active AlphaSM 2.0: Scoring Active Managers According to Potential Alpha and Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

The Global Investment Manager Analysis (GIMA) Services Only Apply to Certain Investment Advisory Programs GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA Status changes even though it may give notice to clients in other programs.

Strategy May Be Available as a Separately Managed Account or Mutual Fund Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account ("SMA") and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program. Generally, investment advisory accounts are subject to an annual asset-based fee (the "Fee") which is payable monthly in advance (some account types may be billed differently). In general, the Fee covers Morgan Stanley investment advisory services, custody of securities with Morgan Stanley, trade execution with or through Morgan Stanley or its affiliates, as well as compensation to any Morgan Stanley Financial Advisor.

In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable.

If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at www.morganstanley.com/ADV.

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/ADV, or contact your Financial Advisor / Private Wealth Advisor.

Conflicts of Interest: GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth

Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management ("EVM") and its investment affiliates, may be included in your account. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs.

Morgan Stanley Wealth Management, managers, MS & Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a "revenue-sharing payment," on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

Consider Your Own Investment Needs: The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this material as the sole basis for investment decisions. They should consider all relevant information, including their existing portfolio, investment objectives, risk tolerance, liquidity needs and investment time horizon. Such a determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether Morgan Stanley Pathway Funds is an appropriate program for you.

No obligation to notify – Morgan Stanley Wealth Management has no obligation to notify you when the model portfolios, strategies, or any other information, in this material changes.

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

The Morgan Stanley Pathway Funds, Firm Discretionary UMA Model Portfolios, and other asset allocation or any other model portfolios discussed in this material are available only to investors participating in Morgan Stanley Consulting Group advisory programs. For additional information on the Morgan Stanley Consulting Group advisory programs, see the applicable ADV brochure, available at www.morganstanley.com/ADV or from your Morgan Stanley Financial Advisor or Private Wealth Advisor. To learn more about the Morgan Stanley Pathway Funds, visit the Funds' website at https://www.morganstanley.com/wealth-investmentsolutions/cgcm. Consulting Group is a business of Morgan Stanley.

Morgan Stanley Pathway Program Asset Allocation Models There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 1 is the least aggressive portfolio and consists mostly of bonds. As the model numbers increase, the models have higher allocations to equities and become more aggressive. Pathway is a mutual fund asset allocation program. In constructing the Pathway Program Model Portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Wealth Management's Global Investment Committee (the "GIC"). The Pathway Program 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 Program Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models published by the Global Investment Committee.

The type of mutual funds and ETFs discussed in this presentation utilizes nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted 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 allowing them to pursue 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 to 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 unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."

Please consider the investment objectives, risks, fees, and charges and expenses of mutual funds, ETFs, closed end funds, unit investment trusts, and variable insurance products carefully before investing. The prospectus contains this and other information about each fund. To obtain a prospectus, contact your Financial Advisor or Private Wealth Advisor or visit the Morgan Stanley website at www.morganstanley.com. Please read it carefully before investing.

Money Market Funds: You could lose money in money market funds. Although money market funds classified as government funds (i.e., money market funds that invest 99.5% of total assets in cash and/or securities backed by the U.S government) and retail funds (i.e., money market funds open to natural person investors only) seek to preserve value at $1.00 per share, they cannot guarantee they will do so. The price of other money market funds will fluctuate and when you sell shares they may be worth more or less than originally paid. Money market funds may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A money market fund investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or other government agency. The Fund's sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

Investors should carefully consider the investment objectives, risks, charges and expenses of a money market fund before investing. The prospectus contains this and other information about the money market fund. To obtain a prospectus, contact your Financial Advisor or visit the money market fund company's website. Please read the prospectus carefully before investing.

Exchange Funds are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification by exchanging a concentrated stock position for fund shares without triggering a taxable event. These funds are available only to qualified investors and may only be offered by Financial Advisors who are qualified to sell alternative investments. Before investing, investors should consider the following:

- Dividends are pooled
- Investors may forfeit their stock voting rights
- Investment may be illiquid for several years
- Investments may be leveraged or contain derivatives
- Significant early redemption fees may apply
- Changes to the U.S. tax code, which could be retroactive (potentially disallowing the favorable tax treatment of exchange funds)
- Investment risk and potential loss of principal

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 magnified in **emerging markets and frontier markets**. Some funds also invest in foreign securities, which may involve currency risk. There is no assurance that the fund will achieve its investment objective. **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 issues. 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 low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus 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.

Structured Investments are complex and not appropriate for all investors. An investment in Structures Investments involve risks. These risks can include but are not limited to: (1) Fluctuations in the price, level or yield of underlying instruments, interest rates, currency values and credit quality, (2) Substantial or total loss of principal, (3) Limits on participation in appreciation of underlying instrument, (4) Limited liquidity, (5) Issuer credit risk and (6) Conflicts of Interest. There is no assurance that a strategy of using structured product for wealth preservation, yield enhancement, and/or interest rate risk hedging will meet its objectives.

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 eligible, 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 liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring 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 valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation 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 can give no 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. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. Further, opinions expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management. This is not a "research report" as defined by FINRA Rule 2241 or a "debt research report" as defined by FINRA Rule 2242 and was not prepared by the Research Departments of Morgan Stanley Smith Barney LLC or Morgan Stanley & Co. LLC or its affiliates. Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. While the HFRI indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds, the inclusion of which might 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 HFR Asset Management, L.L.C. Results for 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 may be biased in several ways. Composite index results are shown for illustrative purposes and do not represent the performance of a specific investment. Individual funds have specific tax 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. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Wealth Management and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley Wealth Management or any of its affiliates, (3) are not guaranteed by Morgan Stanley Wealth Management and its affiliates, and (4) involve investment risks, 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 is 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.

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 our 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 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 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 complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors.

As a diversified global financial services firm, Morgan Stanley 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 therefore engages in activities where Morgan Stanley interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley can give no assurance that conflicts of interest will be resolved 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. **Private Markets:** As part of the Morgan Stanley Private Markets – Access program, Morgan Stanley will be limited solely to a role as an introducer and will <u>not</u> be serving as a placement agent or adviser. Eligible investors must enroll in the program in order to see any investment opportunities. Investments require independent evaluation, due diligence, review & analysis. Neither Morgan Stanley nor any of its affiliates is making any recommendation to purchase or take any action of any sort and is not providing any advice on investments. Investors are asked to work directly with the issuer/sponsor and with your own independent (non-Morgan Stanley) financial, legal, accounting, tax, and other professional advisors to evaluate the investment opportunity.

Investors are responsible for complying with the terms of any applicable exemption from securities law requirements and any potential Private Company issuer restrictions for any sale of Private Company shares, and you must obtain your own legal counsel to advise you in connection with such requirements and Private Company issuer restrictions. You should consult with your third-party advisors regarding the risks of transacting in Private Company shares, including the risk of transacting in a market with little or no price transparency or liquidity. Morgan Stanley provides no opinion or view on the valuation of any Private Company shares, or the sufficiency, fairness or competitiveness of any price obtained. Private Securities do not trade on any national securities exchange and, as such, any potential liquidity (i.e., the potential for any buying interest that might satisfy your sell interest) in such Private Company shares is very limited.

Virtual Currency Products (Cryptocurrencies)

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, and **investors could lose their entire investment.**

- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.

- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.

- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.

- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.

- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.

- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.

- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.

- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.

- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.

- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.

- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.

- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human tracking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.

- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

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 an 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.

Artificial intelligence (AI) is subject to limitations, and you should be aware that any output from an AI-supported tool or service made available by the Firm for your use is subject to such limitations, including but not limited to inaccuracy, incompleteness, or embedded bias. You should always verify the results of any AI-generated output.

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 sleeves 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.

When Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors (collectively, "Morgan Stanley") provide "investment advice" regarding a retirement or welfare benefit plan account, an individual retirement account or a Coverdell education savings account ("Retirement Account"), Morgan Stanley is a "fiduciary" as those terms are defined under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and/or the Internal Revenue Code of 1986 (the "Code"), as applicable. When Morgan Stanley provides investment education, takes orders on an unsolicited basis or otherwise does not provide "investment advice", Morgan Stanley will not be considered a "fiduciary" under ERISA and/or the Code. For more information regarding Morgan Stanley's role with respect to a Retirement Account, please visit www.morganstanley.com/disclosures/dol. Tax laws are complex and subject to change. Morgan Stanley does not provide tax or legal advice. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a Retirement Account, and (b) regarding any potential tax, ERISA and related consequences of any investments or other transactions made with respect to a Retirement Account. Individuals should consult their tax advisor for matters involving taxation and tax planning and their attorney for matters involving trust and estate planning, charitable giving, philanthropic planning and other legal matters.

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.

This material is not a financial plan and does not create an investment advisory relationship between you and your Morgan Stanley Financial Advisor. We are not your fiduciary either under the Employee Retirement Income Security Act of 1974 (ERISA) or the Internal Revenue Code of 1986, and any information in this report is not intended to be considered investment advice or a recommendation for either ERISA or Internal Revenue Code purposes and that (unless otherwise provided in a written agreement and/or as described at www.morganstanley.com/disclosures/dol) you remain solely responsible for your assets and all investment decisions with respect to your assets. Nevertheless, if Morgan Stanley or your Financial Advisor provides "investment advice," as that term is defined under Section 3(21) of ERISA, to you with respect to certain retirement, welfare benefit, or education savings account assets for a fee or other compensation, Morgan Stanley and/or your Financial Advisor will be providing such advice in its capacity as a fiduciary under ERISA and/or the Code. Morgan Stanley will only prepare a financial plan at your specific request using Morgan Stanley approved financial planning software.

The Morgan Stanley Goals-Planning System (GPS) includes a brokerage investment analysis tool. While securities held in a client's investment advisory account may be included in the analysis, the reports generated from the GPS Platform are not financial plans nor constitute a financial planning service. A financial plan generally seeks to address a wide spectrum of a client's long-term financial needs, and can include recommendations about insurance, savings, tax and estate planning, and investments, taking into consideration the client's goals and situation, including anticipated retirement or other employee benefits. Morgan Stanley Smith Barney LLC ("Morgan Stanley") will only prepare a financial plan at a client's specific request using Morgan Stanley approved financial planning software. Investing in financial instruments carries with it the possibility of losses and that a focus on above-market returns exposes the portfolio to above-average risk. Performance aspirations are not guaranteed and are subject to market conditions. High volatility investments may be subject to sudden and large falls in value, and there could be a large loss on realization which could be equal to the amount invested. IMPORTANT: The projections or other information provided by the Morgan Stanley Goals Planning System regarding the likelihood of various investment outcomes (including any assumed rates of return and income) are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Morgan Stanley does not represent or guarantee that the projected returns or income will or can be attained.

A LifeView Financial Goal Analysis ("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 makes no guarantees as to future results or that an individual's investment objectives will be achieved. 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.

Important information about your relationship with your Financial Advisor and Morgan Stanley Smith Barney LLC when using LifeView Goal Analysis or LifeView Advisor. When your Financial Advisor prepares and delivers a Financial Goal Analysis (i.e., when using LifeView Goal Analysis), they will be acting in a brokerage capacity. When your Financial Advisor prepares a Financial Plan (i.e., when using LifeView Advisor), they will be acting in an investment advisory capacity with respect to the delivery of your Financial Plan. This Investment Advisory relationship will begin with the delivery of the Financial Plan and ends thirty days later, during which time your Financial Advisor can review the Financial Plan with you. To understand the differences between brokerage and advisory relationships, you should consult your Financial Advisor, or review our "Understanding Your Brokerage and Investment Advisory Relationships," brochure available at https://www.morganstanley.com/wealth-relationshipwithms/pdfs/understandingyourrelationship.pdf

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 Financial Advisor or 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 in 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 Financial Advisor or Private Wealth Advisor, may vary by product and over time.

Investment and services offered through Morgan Stanley Smith Barney LLC, Member SIPC.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE-AWARE INVESTMENTS ("ESG")

Certain portfolios may include investment holdings deemed Environmental, Social and Governance ("ESG") investments. For reference, environmental ("E") factors can include, but are not limited to, climate change, pollution, waste, and how an issuer protects and/or conserves natural resources. Social ("S") factors can include, but not are not limited to, how an issuer manages its relationships with individuals, such as its employees, shareholders, and customers as well as its community. Governance ("G") factors can include, but are not limited to, how an issuer operates, such as its leadership composition, pay and incentive structures, internal controls, and the rights of equity and debt holders. You should carefully review an investment product's prospectus or other offering documents, disclosures and/or marketing material to learn more about how it incorporates ESG factors into its investment strategy.

ESG investments may also be referred to as sustainable investments, impact aware investments, socially responsible investments or diversity, equity, and inclusion ("DEI") investments. It is important to understand there are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. This is due to a current lack of consistent global reporting and auditing standards as well as differences in definitions, methodologies, processes, data sources and subjectivity among ESG rating providers when determining a rating. Certain issuers of investments including, but not limited to, separately managed accounts (SMAs), mutual funds and exchange traded-funds (ETFs) may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. Further, socially responsible norms vary by region, and an issuer's ESG practices or Morgan Stanley's assessment of an issuer's ESG practices can change over time.

Portfolios that include investment holdings deemed ESG investments or that employ ESG screening criteria as part of an overall strategy may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results. For risks related to a specific fund, please refer to the fund's prospectus or summary prospectus.

Investment managers can have different approaches to ESG and can offer strategies that differ from the strategies offered by other investment managers with respect to the same theme or topic. Additionally, when evaluating investments, an investment manager is dependent upon information and data that may be incomplete, inaccurate or unavailable, which could cause the manager to incorrectly assess an investment's ESG characteristics or performance. Such data or information may be obtained through voluntary or third-party reporting. Morgan Stanley does not verify that such information and data is accurate and makes no representation or warranty as to its accuracy, timeliness, or completeness when evaluating an issuer. This can cause Morgan Stanley to incorrectly assess an issuer's business practices with respect to its ESG practices. As a result, it is difficult to compare ESG investment products.

Morgan Stanley's assessment of an issuer's ESG practices or an ESG portfolio is as of the date of this material. No assurance is provided that the underlying assets have maintained or will maintain any applicable ESG designations or any stated ESG compliance, or that the underlying assets have been operated or will be operated in an ESG-compliant manner. The ESG impacts of the securities and any underlying assets may vary over time.

This can cause Morgan Stanley to incorrectly assess an issuer's business practices with respect to its ESG practices. As a result, it is difficult to compare ESG investment products.

Morgan Stanley makes no representation as to the compliance or otherwise of any fund or portfolio with any laws or regulatory guidelines, recommendations, requirements or similar relating to the ESG characterization of any fund or portfolio, or in connection with or to meet any of your investing ESG objectives, metrics or criteria.

The appropriateness of a particular ESG investment or strategy will depend on an investor's individual circumstances and objectives. Principal value and return of an investment will fluctuate with changes in market conditions.

The Morgan Stanley Impact Quotient report is an assessment of an investor's portfolio (or subset thereof) utilizing various environmental, social, and governance ("ESG") factors. The metrics included in the report are based on key topic areas for sustainable and impact investing. Assessment of the investor's portfolio's alignment with ESG factors, established by Morgan Stanley, is evaluated based on available data and expertise from MSCI ESG Research, ISS-ESG and Fossil Free Indexes.

The Morgan Stanley Impact Quotient report does not represent Morgan Stanley's view of any individual fund or security, is not a judgment on any company's commitment to sustainability issues, and is provided for informational purposes only. The report is not a "research report" as defined by FINRA Rules 2241 and 2242. It is not prepared by the Research Departments of Morgan Stanley Smith Barney LLC or Morgan Stanley & Co. LLC or its affiliates.

The information provided by Morgan Stanley Impact Quotient does not provide a complete basis for recommending a particular product to an investor. Financial Advisors must carefully and thoroughly evaluate a specific product and understand its potential risks as well as benefits. They should carefully review available information about the product, such as a research report, offering document or prospectus, as applicable.

Annuities and insurance products are offered in conjunction with Morgan Stanley Smith Barney LLC’s licensed insurance agency affiliates. Not all products and services discussed herein are available through Morgan Stanley Smith Barney LLC's licensed insurance agency affiliates.

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 that sponsors a donor advised fund program. MS Global Impact Funding Trust ("MS GIFT") is a donor-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.

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 federally tax-free only if they are used to pay for qualified expenses. Earnings on nonqualified distributions will be subject to income tax and a 10% federal income tax penalty. Contribution 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 or pre-paid tuition plan (an "In-State Plan"), that state may offer state or local tax benefits. These tax benefits may include deductible 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 denied 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.

Morgan Stanley Smith Barney LLC ("Morgan Stanley") is the manager of the **Morgan Stanley National Advisory 529 Plan** and is responsible for its administration, distribution and investment management. Morgan Stanley does not provide tax and/or legal advice to investors in the 529 Plan. Investors should consult their personal tax advisor for tax-related matters and their attorney for legal matters. For more information please see the Morgan Stanley National Advisory 529 Plan Description and the applicable Morgan Stanley ADV brochure at www.morganstanley.com/adv.

The Morgan Stanley National Advisory 529 Plan is a proprietary offering available exclusively to Morgan Stanley advisory account clients. The Plan is not transferable to other intermediaries.

The Morgan Stanley National Advisory 529 Plan. The North Carolina State Education Assistance Authority (the "Authority") is an instrumentality of the State of North Carolina sponsoring the Morgan Stanley National Advisory 529 Plan, and the 529 Plan is a component of the Parental Savings Trust Fund established by the General Assembly of North Carolina. Neither the Authority, the State of North Carolina nor any other affiliated public entity or any other public entity is guaranteeing the principal or earnings in any account. Contributions or accounts may lose value and nothing stated herein, the 529 Plan Description and Participation Agreement or any other account documentation shall be construed to create any obligation of the Authority, the North Carolina State Treasurer, the State of North Carolina, or any agency or instrumentality of the State of North Carolina to guarantee for the benefit of any parent, other interested party, or designated beneficiary the rate of return or other return for any contribution to the Parental Savings Trust Fund and the 529 Plan.

The Morgan Stanley National Advisory 529 Plan Description contains more information on investment options, risk factors, fees and expenses, and potential tax consequences, which should be carefully considered before investing. Investors can obtain a 529 Plan Description from their Financial Advisor and should read it carefully before investing.

Investments in the 529 Plan are not FDIC-insured, nor are they deposits or guaranteed by a bank or any other entity, so an individual may lose money through such investments.

Investors should consider many factors before deciding which 529 plan is appropriate. Some of these factors include: the plan's investment options and the historical investment performance of these options, the plan's flexibility and features, the reputation and expertise of the plan's investment manager, plan contribution limits and the federal and state tax benefits associated with an investment in the plan. Some states, for example, offer favorable tax treatment and other benefits to their residents only if they invest in the state's own qualified tuition program. Investors should determine their home state's tax treatment of 529 plans when considering whether to choose an in-state or out-of-state plan. Investors should consult with their tax or legal advisor before investing in any 529 plan or contact their state tax division for more information.

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.

The trust services referenced herein are provided by the third parties listed who are not affiliated with Morgan Stanley. Neither Morgan Stanley nor its affiliates are the provider of such trust services and will not have any input or responsibility concerning a client's eligibility for, or the terms and conditions associated with these trust services. Neither Morgan Stanley nor its affiliates shall be responsible for content of any advice or services provided by the unaffiliated third parties listed herein. Morgan Stanley or its affiliates may participate in transactions on a basis separate from the referral of clients to these third parties and may receive compensation in connection with referrals made to them.

Trusts are not necessarily appropriate for all clients. There are risks and considerations which may outweigh any potential benefits. Establishing a trust will incur fees and expenses which may be substantial. Trusts often incur ongoing administrative fees and expenses such as the services of a corporate trustee or tax professional.

The Portfolio Analysis report ("Report") is generated by Morgan Stanley Smith Barney LLC's ("Morgan Stanley") Portfolio Risk Platform. The assumptions used in the Report incorporate portfolio risk and scenario analysis employed by BlackRock Solutions ("BRS"), a financial technology and risk analytics provider that is independent of Morgan Stanley. BRS' role is limited to providing risk analytics to Morgan Stanley, and BRS is not acting as a broker-dealer or investment adviser nor does it provide investment advice with respect to the Report. Morgan Stanley has validated and adopted the analytical conclusions of these risk models.

Any recommendations regarding external accounts/holdings are asset allocation only and do not include security recommendations. Transitioning from a brokerage to an advisory relationship may not be appropriate for some clients.

IMPORTANT: The projections or other information provided in the Report regarding the likelihood of various investment outcomes (including any assumed rates of return and income) are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Hypothetical investment results have inherent limitations.

- There are frequently large differences between hypothetical and actual results.
- Hypothetical results do not represent actual results and are generally designed with the benefit of hindsight.
- They cannot account for all factors associated with risk, including the impact of financial risk in actual trading or the ability to withstand losses or to adhere to a particular trading strategy in the face of trading losses.
- There are numerous other factors related to the markets in general or to the implementation of any specific strategy that cannot be fully accounted for in the preparation of hypothetical risk results and all of which can adversely affect actual performance.

Morgan Stanley cannot give any assurances that any estimates, assumptions or other aspects of the risk analyses will prove correct. They are subject to actual known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those shown in a Report. The information is as of the date of the Report or as otherwise noted within the Report. Morgan Stanley expressly disclaims any obligation or undertaking to update or revise any statement or other information contained in a Report to reflect any change in past results, future expectations or circumstances upon which that statement or other information is based.

The Morgan Stanley Digital Vault ("Digital Vault") is accessible to clients with dedicated Financial Advisors. Documents shared via the Digital Vault should be limited to those relevant to your Morgan Stanley account relationship. Uploading a document to the Digital Vault does not obligate us to review or take any action on it, and we will not be liable for any failure to act upon the contents of such document. Please contact your Financial Advisor or Branch Management to discuss the appropriate process for providing the document to us for review. If you maintain a Trust or entity account with us, only our certification form will govern our obligations for such account. Please refer to the Morgan Stanley Digital Vault terms and conditions for more information.

Information related to your external accounts is provided for informational purposes only. It is provided by third parties, including the financial institutions where your external accounts are held. Morgan Stanley does not verify that the information is accurate and makes no representation or warranty as to its accuracy, timeliness, or completeness. Additional information about the features and services offered through Total Wealth View are available on the Total Wealth View site on Morgan Stanley Online and also in the Total Wealth View Terms and Conditions of Use.

Eaton Vance and Parametric Portfolio Associates are businesses of Morgan Stanley Investment Management and are affiliated with Morgan Stanley Wealth Management.

Lending products and securities-based loans are provided by Morgan Stanley Smith Barney LLC, Morgan Stanley Private Bank, National Association or Morgan Stanley Bank, N.A, as

applicable.

Borrowing against securities may not be appropriate for everyone. Clients must be aware that there are risks associated with a securities based loan, including possible maintenance calls on short notice, and that market conditions can magnify any potential for loss. For details please see the important disclosures below.

Important Risk Information for Securities Based Lending: Clients must be aware that: (1) Sufficient collateral must be maintained to support the loan and to take future advances; (2) Clients may have to deposit additional cash or eligible securities on short notice; (3) Some or all of the pledged securities may be sold without prior notice in order to maintain account equity at required collateral maintenance levels. Clients will not be entitled to choose the securities that will be sold. These actions may interrupt long-term investment strategy and may result in adverse tax consequences or in additional fees being assessed; (4) Morgan Stanley Bank, N.A., Morgan Stanley Private Bank, National Association or Morgan Stanley Smith Barney LLC (collectively referred to as "Morgan Stanley") reserve 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; (5) Morgan Stanley reserves the right to increase the collateral maintenance requirements at any time without notice; and (6) 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.

The lending products described are separate and distinct, and are not connected in any way. The ability to qualify for one product is not connected to an individual's eligibility for another.

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 Bank, N.A., as applicable, each an affiliate of Morgan Stanley Smith Barney LLC. All LAL loans/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 loans/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 at 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.**

Clients may be responsible for the fees of a third party law firm engaged to review complex transactions (e.g., review of trust agreements). Clients may also be charged a fee for the issuance of a letter of credit, for prepayment of principal on fixed rate advances, and upon a client's request for certain cash management services (e.g., duplicate statement or check re-order).

Borrower shall pay Morgan Stanley Private Bank, National Association or Morgan Stanley Bank, N.A. ("Bank"), as applicable, a prepayment fee if any portion of the principal on a Fixed Rate Advance is prepaid prior to the applicable Scheduled Payment Date(s), regardless of the reason that the Fixed Rate Advance is prepaid, and including, without limitation, as a result of a demand by the Bank or liquidation of collateral by the Bank. The Bank, in its sole discretion, can make a Variable Rate Advance and apply the proceeds to such prepayment fee. Interest will accrue on the unpaid portion of the debited amount at a variable interest rate until the amount is paid in full.

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 loans/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 Identifier #663185. **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.**

"Home equity" refers to a home equity loan that is a second mortgage that allows you to use the equity in your home as collateral to borrow money. "Home equity," as referenced here, is not a line of credit but a closed-end loan. The funds are loaned to you as a lump sum at a fixed or adjustable interest rate, and you make your monthly payments during a repayment period.

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 that the borrower will be obligated to pay will vary based on the amount of principal paid down , if any. If a borrower makes just an interest-only payment, and no payment of principal, 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.

The interest rate and payments on an adjustable rate mortgage ("ARM") loan may increase over the life of a loan as interest is fixed for a specified period and then will adjust periodically thereafter. The annual percentage rate may increase after consummation of the loan.

3/6M, 5/6M, 7/6M, 10/6M adjustable rate mortgage ("ARM") loans are based on the Secured Overnight Financing Rate ("SOFR") 30-Day Average.

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, siblings 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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The Morgan Stanley American Express Card portfolio consists of three cards: The Platinum Card from American Express Exclusively for Morgan Stanley, the Morgan Stanley Blue Cash Preferred American Express Card, and the Morgan Stanley Credit Card.

The Platinum Card from American Express exclusively for Morgan Stanley and the Morgan Stanley Blue Cash Preferred American Express Card are available for acquisition, and eligible clients are invited to apply. Existing Morgan Stanley Credit Card members may continue to enjoy the benefits of their card, but this product is no longer available for acquisition.

The Platinum Card® from American Express exclusively for Morgan Stanley is only available for clients who have an Eligible Account with Morgan Stanley Smith Barney LLC.

The Morgan Stanley Blue Cash Preferred® Card is only available for clients who have an Eligible Account with Morgan Stanley Smith Barney LLC or its eligible affiliates, including but not limited to E*TRADE from Morgan Stanley.

An "Eligible Account" is a brokerage account (i) held in your name, (ii) held by a trust where you are both the grantor and trustee of such trust, or (iii) held as a beneficial owner of a personal holding company, a non-operating limited liability company, a non-operating limited partnership, or a similar legal entity. Eligibility is subject to change. American Express may cancel your Card Account and participation in this program, if you do not maintain an Eligible Account.

The Platinum Card® from American Express exclusively for Morgan Stanley and the Morgan Stanley Blue Cash Preferred® Card are issued by American Express National Bank, not Morgan Stanley Smith Barney LLC. Services and rewards for the Cards are provided by Morgan Stanley Smith Barney LLC, American Express or other third parties. Restrictions and other limitations apply. See the terms and conditions for the Cards for details. Clients are urged to review fully before applying.

Morgan Stanley, its affiliates, and Morgan Stanley Financial Advisors and employees are not in the business of providing tax or legal advice. Clients should speak with their tax advisor regarding the potential tax implications of the Rewards Program upon their specific circumstances.

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The CashPlus Account is a brokerage account offered through Morgan Stanley Smith Barney LLC. Conditions and restrictions apply. Please refer to the CashPlus Account Disclosure Statement for further details at https://www.morganstanley.com/wealth-disclosures/cashplusaccountdisclosurestatement.pdf.

The qualifying criteria to avoid the monthly account fee for all CashPlus Accounts in an Account Link Group (ALG) is: an additional eligible Morgan Stanley investment account (that may include additional fees), one Morgan Stanley Online enrollment; for Premier CashPlus account $2,500 monthly deposit or 10,000 Average BDP Daily Balance; for Platinum CashPlus account $5,000 monthly deposit and $25,000 Average BDP Daily Balance. For more information, please refer to the CashPlus Account Disclosure Statement at https://www.morganstanley.com/wealth-disclosures/cashplusaccountdisclosurestatement.pdf.

Morgan Stanley CashPlus Accounts receive SIPC coverage for securities and free credit balances and cash swept into the Bank Deposit Program receives FDIC insurance, both up to applicable limits.

Securities Investor Protection Corporation ("SIPC") — Morgan Stanley Smith Barney LLC is a member of SIPC, which protects securities of its customers up to $500,000 (including $250,000 for claims for cash). Losses due to market fluctuation are not protected by SIPC. To obtain information about SIPC, including an explanatory SIPC brochure, contact SIPC at 1-202-371-8300 or visit www.sipc.org. Federal Deposit Insurance Corporation ("FDIC") — Cash balances swept into deposit accounts at participating banks in the Bank Deposit Program are protected by FDIC Insurance up to applicable FDIC limits. FDIC insurance is a federal government program administered by the Federal Deposit Insurance Corporation. This insurance covers bank deposits held in checking accounts, savings accounts, certificates of deposits and money market deposits (not money market funds). This insurance comes into play in the event of a bank failure and covers client cash up to a total of $250,000 per bank, for each "insurable capacity" (e.g. each individual, joint, etc.). It does not cover investment products that are not deposits, such as mutual funds, annuities, life insurance policies, stocks or bonds. Refer to https://www.fdic.gov for additional details.

The Active Assets Account is a brokerage account offered through Morgan Stanley Smith Barney LLC.

Under the Bank Deposit Program, free credit balances held in an account(s) at Morgan Stanley Smith Barney LLC are automatically deposited into an interest-bearing deposit account(s) at FDIC-insured banks. Certain conditions must be satisfied to obtain FDIC insurance coverage. For more information, view the Bank Deposit Program Disclosure Statement.

Under the Savings and Preferred Savings programs ("Savings"), Morgan Stanley Smith Barney LLC makes available interest-bearing FDIC insured deposit accounts(s) at either Morgan Stanley Private Bank, National Association or Morgan Stanley Bank, N.A., each a national bank, Member FDIC, and an affiliate of Morgan Stanley Smith Barney LLC, as selected by the client. Deposits placed in

Savings are eligible for FDIC insurance up to $250,000 (including principal and interest) per depositor, per each bank selected by the client for all deposits held in the same insurable capacity (the Maximum Applicable Deposit Insurance Amount), provided that certain conditions are satisfied. All deposits per bank held in the same insurable capacity will be aggregated for purposes of the Maximum Applicable Deposit Insurance Amount, including deposits maintained through the Bank Deposit Program. The client is responsible for monitoring the total amount held with each bank. The bank also reserves the right to offer promotional rates from time to time. Detailed information on federal deposit insurance coverage is available on the FDIC's website (https://www.fdic.gov/deposit/deposits/). **The Savings programs are not intended for clients who need to have frequent access to funds and those funds will not be automatically accessed to reduce a debit or margin loan in your brokerage account. Withdrawals from an account in Savings are limited to 10 transactions per calendar month, and any withdrawal or transfer over the limit in any one calendar month will be subject to an excess withdrawal fee.**

Reserved clients and CashPlus accounts are eligible for unlimited global ATM fee rebates. All other clients are eligible for up to $200 in annual global ATM fee rebates.

While Morgan Stanley will always make transferred and deposited funds available immediately for investment purposes, we may not make all transferred or deposited funds immediately available for withdrawal. Funds deposited by check or funds transfer may be delayed depending on certain circumstances, such as dollar value, account status, etc., and could be held for up to six business days. Please contact your Financial Advisor or Private Wealth Advisor for additional information and/or review the Fund Availability Policy by signing into your Morgan Stanley Online account.

The Greenlight App and Debit Card is provided by Greenlight Financial Technologies, not Morgan Stanley or any of its affiliates. Morgan Stanley has entered into a referral partnership with Greenlight Technology Inc., the program manager for the Greenlight card and related mobile application. Greenlight charges a usage fee of $4.99 per month. Morgan Stanley will reimburse this $4.99 monthly fee to Greenlight on your behalf for one Greenlight account (up to five minors under 18 years old) as long as the following conditions are met:
- Enroll in Greenlight using the enrollment link on Morgan Stanley Online or Mobile;
- Enroll in the Greenlight standard plan (currently $4.99/month (subject to change). Greenlight +Invest and Greenlight Max or any other current and future products are excluded from this offer; and
- Link a CashPlus Account for the Greenlight debit card funding.

Limited to one free Greenlight enrollment per CashPlus ALG. This fee waiver only applies while you fund the Greenlight Debit Card from your CashPlus Account. Other Morgan Stanley accounts are not eligible for this offer and the Greenlight usage fee will no longer be waived if you close the associated CashPlus account or change the funding source on the Greenlight Debit Card to any other account type, including another Morgan Stanley non-CashPlus account type.

Please review the Greenlight terms and conditions and other applicable fees for the service at Greenlightcard.com before enrolling (such terms are subject to change at any time) Only the monthly usage fee is waived. You are responsible for all other fees associates with the use of the Greenlight service.

 The Greenlight card is issued by Community Federal Savings Bank, member FDIC, pursuant to license by Mastercard International. Message and data rates may apply.

Mobile check deposits are subject to certain terms and conditions. Checks must be drawn on a U.S. Bank.

Send Money with Zelle® is available on the Morgan Stanley Mobile App for iPhone and Android. Enrollment is required and dollar and frequency limits may apply. Domestic fund transfers must be made from an eligible account at Morgan Stanley Smith Barney LLC (Morgan Stanley) to a US-based account at another financial institution. Morgan Stanley maintains arrangements with JP Morgan Chase Bank, N.A. and UMB Bank, N.A. as NACHA-participating depository financial institutions for the processing of transfers on Zelle®. Data connection required, and message and data rates may apply, including those from your communications service provider. Must have an eligible account in the U.S. to use Zelle®. Transactions typically occur in minutes when the recipient's email address or U.S. mobile number is already enrolled with Zelle®. See the Send Money with Zelle® terms for details.

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Electronic payments arrive to the payee within 1-2 business days, check payments arrive to the payee within 5 business days. Same-day and overnight payments are available for an additional fee within the available payment timeframes.

The Morgan Stanley Mobile App is currently available for iPhone® and iPad® from the App Store® and AndroidTM on Google PlayTM. Standard messaging and data rates from your provider may apply. Subject to device connectivity.

Cash management and lending products and services are provided by Morgan Stanley Smith Barney LLC, Morgan Stanley Private Bank, National Association or Morgan Stanley Bank, N.A, as applicable.

The information provided herein is not intended to address any particular matter and may not apply depending on the context, as all clients' circumstances are unique. Incremental rate discounts of 0.125% for qualifying new assets of between $500,000 and $999,999.99; 0.250% for qualifying new assets between $1,000,000 and $4,999,999.99; 0.375% for qualifying new assets between $5,000,000 and $9,999,999.99; and 0.500% for qualifying new assets $10,000,000 and over. Terms are subject to change. New assets can be deposited into existing or new MSWM accounts. Brokerage and E*TRADE from Morgan Stanley accounts are eligible. Discount is applied on top of the rate discount you may be eligible for in the existing relationship pricing program. Qualifying new assets may be deposited 30 days before the Application Date and will be measured on the 10th business day before the mortgage closing date, at which time the eligible assets and the rate discount eligibility will be confirmed. If the assets are not in a qualifying account on the 10th business day before closing, the closing date may have to move, or the discount may not be applied. New qualifying assets are defined as Inflows less outflows, not impacted by market fluctuations. Retirement assets deposited after the Application Date are not eligible to be used to qualify for this offer. Assets transferred from E*TRADE from Morgan Stanley to Morgan Stanley Smith Barney, LLC are not eligible as net new assets.

Limits and conditions apply. Mobile remote check deposits are subject to certain terms and conditions. Daily limits vary and are dependent on asset level. Transfers of up to $100,000 daily for existing Reserved clients.

Morgan Stanley Smith Barney LLC is a registered Broker/Dealer, Member SIPC, and not a bank. Where appropriate, Morgan Stanley Smith Barney LLC has entered into arrangements with banks and other third parties to assist in offering certain banking related products and services.

Investment, insurance and annuity products offered through Morgan Stanley Smith Barney LLC are: NOT FDIC INSURED | MAY LOSE VALUE | NOT BANK GUARANTEED | NOT A BANK DEPOSIT | NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY

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Results show a statistical estimate of a portfolio's reaction to a simulated market scenario or simulated historical scenario (such hypothetical scenarios also referred to throughout as 'Stress Test Scenarios') based on a portfolio's estimated exposure to different risk factors. Performance is hypothetical and does not represent any actual portfolio performance. See Important Disclosures on the report material for i. a description of the methodology used and assumptions made to calculate the hypothetical performance, including definitions of simulated market scenarios and simulated historical scenarios, ii. information about any fees, expenses and costs that were excluded in the calculation of this hypothetical performance, iii. an explanation of the risks and limitations of relying on hypothetical performance results and iv. information regarding the use of proxies RESULTS OF THE STRESS TEST SCENARIOS ARE NOT GUARANTEES OF WHAT WILL HAPPEN BASED ON THESE ASSUMPTIONS. Information on this page provides an analysis of how a portfolio might react during the relevant simulated market scenario or simulated historical scenario presented, if it had occurred at one moment in time, based on the factors described in a PRP report. The portfolio return has been reduced by 0.005%, which represents a single day's worth of a maximum advisory program fee of 2.0% in order to reflect the impact of applicable advisory fees for advisory portfolios. The portfolio return is rounded to the nearest hundredth digit after application of this fee. Although this fee is not applicable to brokerage relationships, it has been applied to the analysis, which may result in hypothetical returns that are slightly lower than what would have been achieved by a brokerage account. The actual fee may be less than this amount and will generally be charged monthly and not daily.

How is liquidity calculated?
The liquidity analytics represent the hypothetical projected ease of selling the assets in a portfolio without causing a drastic change in the price of those assets. Liquidity is calculated by comparing the size of each position in a portfolio to its average trading volume (ADV) to determine each position's Days to Unwind (DTU), a representation of the estimated amount of time it would take to sell a position without impacting the price of a security (based on an assumed percentage of ADV able to be traded in a given day, known as the Participation Rate). Generally, the greater the size of a position relative to that security's ADV, the higher the DTU will be. The model assumes a linear relationship between the DTU and the liquidation value of a security. A portfolio level DTU is then calculated using the asset weighted average of the positions, and Liquidity Classification is assigned based on the below DTU levels:
Liquidity Classification:

- Potentially High Liquidity – Less than or equal to 2 days to unwind
- Potentially Moderate Liquidity – Greater than 2 days and less than or equal to 10 days to unwind
- Potentially Less Liquidity – Greater than 10 days and less than or equal to 15 days to unwind
- Potentially Low Liquidity – Greater than 15 days to unwind

The Average Daily Volume (ADV) of a position is meant to estimate the next day's trading volume based on observations over a rolling period obtained at the end of the previous day. Where trading volume data is insufficient, a factor model based on indicative security information is utilized. For asset classes that have rich data sets and relatively frequent trading, such as public market equities, forecasting an ADV requires less advanced modeling techniques. Fixed income or OTC securities might not have daily observable trading volume, however that does not necessarily imply that there is no liquidity for these securities. For those asset classes, the model will use statistical techniques to determine the probability that a security will trade that day. The model then combines the probability of trade with the observed daily trading values from a proxy security to calculate an expected ADV which is used in the model calculations.

The liquidity estimate may differ (sometimes significantly) from historical, realized liquidity depending on the time period and assumptions of the liquidity model. The assumptions used in this model reflect normal market conditions, and the results of the model may vary significantly from realized liquidity during stressed markets. Some model assumptions may vary and evolve over time based on market and economic conditions.

Use of Fallback Values
For investment products that are lightly traded or are not exchange traded such as annuities and private alternatives, the model will use an assumed DTU value. This value is based on common attributes of the product type and / or asset class and might not be reflective of the actual liquidity available for a given security. Securities with insufficient data will also leverage fallbacks based on their product type.

MMI / Barron's nominations were reviewed and evaluated by a specially appointed MMI Industry Awards Steering Council and the MMI Membership Experience Committee (MEC). The council and committee members represent all segments of the MMI membership—asset managers, wealth managers and solutions providers. The Steering Council and MEC reviewed the nominations based on:
- Level of innovation and forward-thinking
- Potential to effect noticeable change in the investment advisory industry
- Advancement of existing investment advisory practices and protocols
- Potential to deliver improved outcomes for financial advisors and investor

After carefully reviewing the nominations submitted, the Steering Council and MEC determined a slate of finalists in each award category. The primary contacts at each of MMI's 208 members firms were eligible to vote to determine the winners in each category.

MMI / Barron's did not receive compensation from the participating firms in exchange for the award and Morgan Stanley did not pay a fee to MMI / Barron's in exchange for the award. Morgan Stanley is not affiliated with MMI / Barron's. This award was granted to Morgan Stanley based on the time period from October 2022 to June 2023. the Money Management Institute (MMI) is the industry association representing financial services firms and Barron's is a financial magazine both groups are responsible for the award.

The American Financial Technology Award's Best Risk Management Initiative was awarded in 2022. This ranking was determined based on an evaluation process conducted by Waters Technology during the period from 02/09/2022 – 04/11/22. Neither Morgan Stanley Smith Barney LLC nor its Financial Advisors or Private Wealth Advisors paid a fee to Waters Technology. This ranking is based on an evaluation led by Waters Technology's editorial team, judging the content and quality of submissions. Rankings are based on the opinions of Waters Technology and this award may not be representative of any one client's experience. This Award is not indicative of the Financial Advisor's future performance. Morgan Stanley Smith Barney LLC is not affiliated with Waters Technology. For more information, see https://www.aftas.org/.

The Aite Group Impact Innovation Award for Digital Client Engagement was granted to Morgan Stanley Smith Barney LLC ("Morgan Stanley") following an evaluation process conducted by Aite Group analysts. To be considered for this award, Morgan Stanley submitted an Impact Innovation Nomination Award Worksheet to Aite Group on March 19, 2021 and provided a live demonstration of Morgan Stanley's Portfolio Risk Platform to representatives of Aite Group on April 7, 2021. Morgan Stanley was the only firm to win this award out of more than 40 submissions. Aite Group judged each submission on the following criteria: (1) Level of innovation and competitive advantage; (2) Market needs assessment; (3) Impact on customer experience; (4) Impact on customer operational efficiency; (5) Level of new revenue opportunity for the organization; (6) Impact on customer retention/new customer attraction; (7) Level of scalability across customer base; (8) Future roadmap. Aite Group does not receive compensation from the participating firms in exchange for the award and Morgan Stanley did not pay a fee to Aite Group in exchange for the award. Morgan Stanley is not affiliated with Aite Group. This award was granted to Morgan Stanley based on the time period from March 2021 to May 2021. Aite Group is an independent research and advisory firm focused on business, technology, and regulatory issues in financial services and is responsible for determining the recipient of this award.

The Celent Model Wealth Manager 2024 Award for Data and Analytics was granted to Morgan Stanley Smith Barney LLC ("Morgan Stanley") following an evaluation process conducted by Celent analysts. To be considered for this award, Morgan Stanley submitted a Model Wealth Manager 2024 Nomination Award Worksheet to Celent on or about October 2023. Celent judged each submission on three criteria: (1) Measurable business benefits of live initiatives; (2) degree of innovation relative to the industry; and (3) technology or implementation excellence. In order to win, the initiatives must demonstrate clear business benefits, innovation, and technology or implementation excellence.

Celent does not receive compensation from the participating firms in exchange for the award and Morgan Stanley did not pay a fee to Celent in exchange for the award. Morgan Stanley is not affiliated with Celent. Based on their submission in October 2023 for Celent's 2024 Model Awards program, Celent granted Morgan Stanley their awards in January 2024 and publicly shared the news in March 2024. Celent is a global financial services research and advisory firm and is responsible for determining the recipient of this award.

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