WEALTH MANAGEMENT

Morgan Stanley

Topics in Wealth Strategies:

Concentrated Position Toolkit

CONCENTRATED POSITION TOOLKIT

Executive Summary

Concentrated positions create opportunities and present significant challenges. Both the opportunities and challenges rest with the numerous techniques that could be implemented with regard to a concentrated position

The concentrated position toolkit assists in curating and navigating an expansive suite of specialized resources to address concentrated positions. The intention is to present a framework (stage of company, ownership, stakeholder emphasis and risk) for the constituents within the concentrated position ecosystem to identify and distinguish potential considerations (control, planning, liquidity and investment) by grouping strategies (ISOs, GRAT, QSBS, Collars) according to their similarities, differences and impact

The sequential process organizes types of decisions so that each subsequent decision may complement those made prior and leads to the creation of integrated, holistic and customized solutions. Through this process one, some or many decisions may be implemented in combination so they should be compatible and reinforce each other. Managing a concentrated position is an ongoing repeatable process rather than a one-off static initial set of decisions

CONTROL

Is the concentrated position eligible in that it is owned outright and is either not subject to vesting requirements, or has satisfied any applicable vesting requirements

Techniques used by companies to compensate participants include:

- ISOs – Incentive Stock Options
- NQSOs – Non-Qualified Stock Options
- RSUs – Restricted Stock Units
- RSAs – Restricted Stock Awards

PLANNING

If eligible, is the concentrated position appropriate to be used in trust, tax and estate planning:

- GRAT – Grantor Retained Trust
- CRUT – Charitable Remainder Unitrust
- Pooled Income Fund
- DAF – Donor Advised Fund

LIQUIDITY

If eligible, consider whether the concentrated stock is subject to selling restrictions and what tax consequences may apply:

- QSBS – Qualified Small Business Stock
- 10b5-1 – Pre-set Selling Plan

INVESTMENT

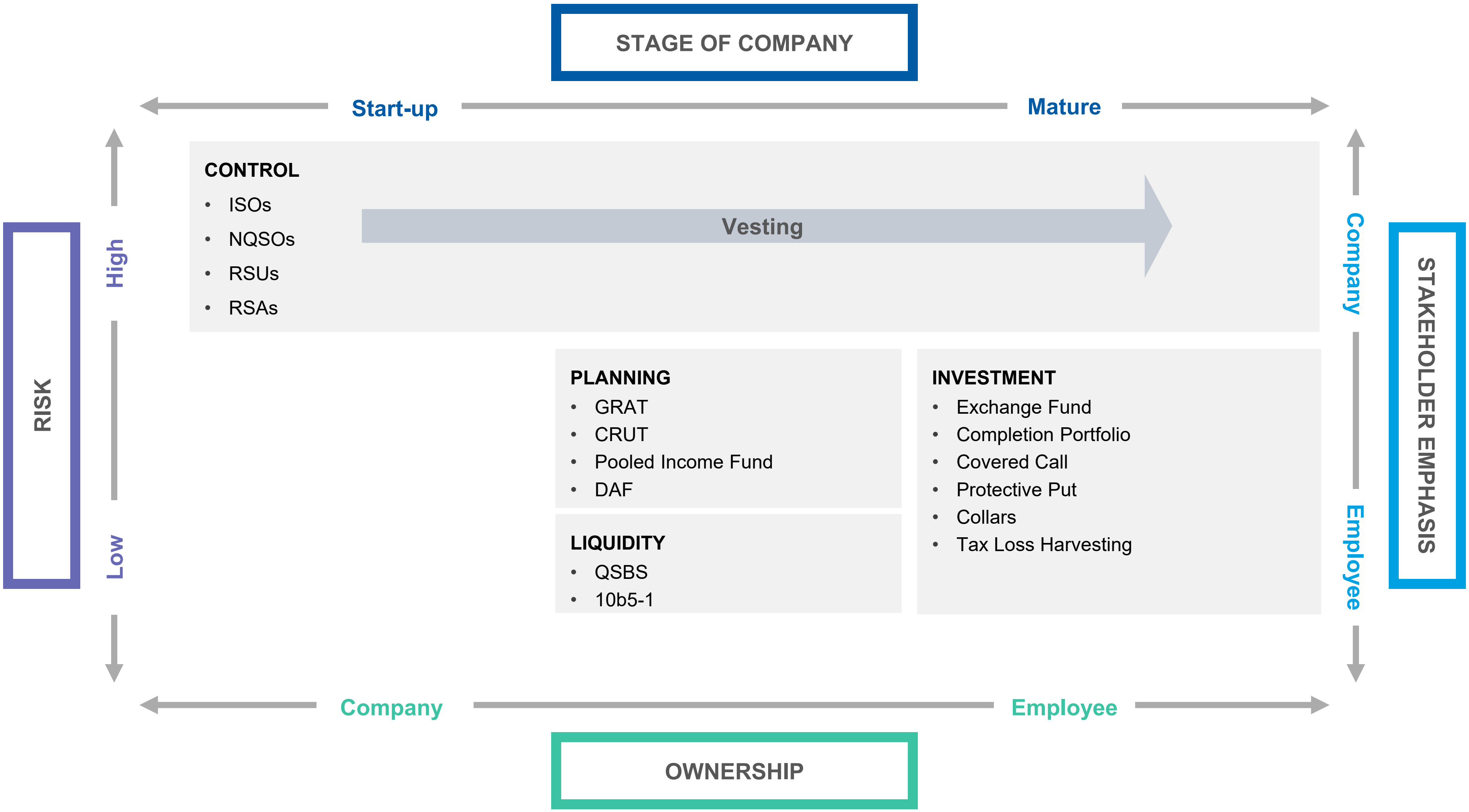
If eligible, how much risk through market exposure is preferred when considering how large the concentrated position might be relative to other assets:

- Exchange Fund
- Completion Portfolio
- Covered Call
- Protective Put
- Collars
- Tax Loss Harvesting

1. Please see “Considerations and Strategies for Concentrated Positions” for a pictorial representation

CONCENTRATED POSITION TOOLKIT

Considerations and Strategies for Concentrated Positions



1. Please see “Executive Summary” for descriptions

CONCENTRATED POSITION TOOLKIT

Incentive Stock Options (ISOs)

WHAT IS IT?

A form of incentive compensation that allows participants to buy shares of company stock at a predetermined price (also referred to as the "strike price" or "exercise price") for a specified period of time

WHAT TO CONSIDER

CONTROL

- No ownership until exercised so do not receive dividends or voting rights before exercise
- The equity compensation plan may include accelerated vesting and ownership if the company is sold

LIQUIDITY

- Options become exercisable as they vest, typically according to a vesting schedule
- Participants must have sufficient liquidity to pay strike price when options are exercised and held (Cash Exercise) or can engage in alternate strategy (depending on the terms of the company's equity plan) such as:
  - Cashless exercise (Participants net cash): where all shares are sold immediately upon exercise and the cash proceeds are used to cover the exercise cost
  - Sell-to-Cover (Participants net shares): where just enough shares are immediately sold upon exercise to cover the exercise cost
- Exercising and holding an ISO increases participants' Alternative Minimum Tax (AMT) taxable income by the difference between the fair market value of the stock at exercise and strike price and may result in additional federal income tax due

INVESTMENT

Diversification

- Concentration in one stock

Risk

- Of no value if fair market value remains below strike price or are not exercised prior to expiration date
  - The value of ISOs becoming exercisable for the first time during any calendar year cannot exceed $100,000, with the value being determined by the number of options vesting multiplied by the exercise price, and any excess over the $100,000 are taxed as Non-qualified stock options

TAX IMPLICATIONS

Next Page

1. Participant stock is typically prohibited from any form of hedging and (at times) for certain participants the ability to pledge. All contingent on the Corporate Trading Policy

CONCENTRATED POSITION TOOLKIT

Incentive Stock Options (ISOs) (continued)

WHAT IS IT?

A form of incentive compensation that allows participants to buy shares of company stock at a predetermined price (also referred to as the "strike price" or "exercise price") for a specified period of time

WHAT TO CONSIDER

TAX IMPLICATIONS

Transaction Initiation

- No tax when ISOs are awarded

Federal Income Tax

- Generally, no ordinary income when exercised and held, but the amount subject to an AMT adjustment is the difference between the fair market value of the stock at exercise and strike price
- A disqualifying disposition creates different tax consequences and may result in federal ordinary income (see below)

Capital Gains

- When the stock is sold, there is federal long-term capital gain or loss treatment if the shares are sold more than two years after award date and one year after exercise date (a qualifying disposition
  - A disqualifying disposition occurs if these requirements are not met and results in all or a portion of the shares being taxed as federal ordinary income (see above)
  - It is the responsibility of the employee to determine if taxes should be prepaid to avoid penalties

Cost Basis

- In a qualifying disposition there is a dual cost basis at sale for federal income tax and AMT purposes
  - Basis of the acquired shares for regular tax purposes is the exercise price
  - Basis of the acquired shares for AMT purposes is the exercise price paid for the stock increased by the amount AMT was increased due to the earlier exercise of the ISO
- In a disqualifying disposition in the year of exercise, generally AMT exposure is not triggered and the value above the exercise price is federal ordinary income in addition to possible federal capital gains

Gift and Estate Tax

- When options are exercised and shares are held, gifting and other estate planning strategies are possible

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CONCENTRATED POSITION TOOLKIT

Incentive Stock Options (ISOs)

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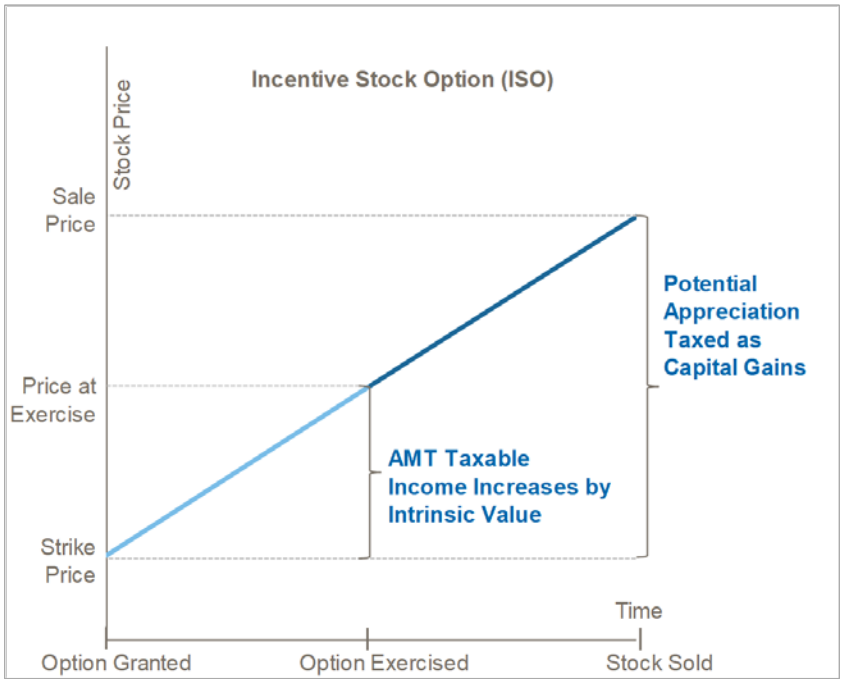
HYPOTHETICAL ILLUSTRATION: EXERCISE VESTED IN-THE-MONEY OPTIONS AND HOLD STOCK

The following illustrates a bullish scenario in which the stock price continues to increase over time



An ISO may qualify for more favorable tax treatment than a NQSO if certain requirements are met. Exercising an ISO increases one's AMT taxable income by the ISO's intrinsic value and may result in additional tax due if AMT exceeds the regular tax. If stock price at the time of sale is greater than strike price, the entire appreciation may be taxable as federal long term capital gains if certain holding period requirements are met. One may receive federal tax credit upon sale for the additional AMT paid in the year ISOs are exercised

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CONCENTRATED POSITION TOOLKIT

Non-Qualified Stock Options (NQSOs)

WHAT IS IT?

A form of incentive compensation that allows participants to buy shares of company stock at a predetermined price (also referred to as the "strike price" or "exercise price") for a specified period of time

WHAT TO CONSIDER

CONTROL

- No ownership until exercised, so generally do not receive dividends or voting rights before exercise
- The equity compensation plan may include accelerated vesting and ownership if the company is sold

LIQUIDITY

- Options become exercisable as they vest, typically according to a vesting schedule
- Participants must have sufficient liquidity to pay strike price when options are exercised and held (Cash Exercise) or can engage in alternate strategy (depending on the terms of the company's equity plan) such as:
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  - Sell-to-Cover (Participants net shares): where just enough shares are immediately sold upon exercise to cover the exercise cost

INVESTMENT

Diversification

- Concentration in one stock

Risk

- Of no value if fair market value remains below strike price or are not exercised prior to expiration date

TAX IMPLICATIONS

Transaction Initiation

- Generally, no tax when NQSOs are awarded

Federal Income Tax

- Ordinary income and employment taxes at time of exercise and amount subject to tax is the difference between the fair market value of the stock and the exercise price
  - NQSOs are subject to mandatory federal income tax withholding of 22% minimum

Capital Gains

- When stock is sold, the difference between the fair market value at exercise and sale is a capital gain and taxed. The holding period commences on date of exercise and are subject to short-term capital gains tax if the holding period is less than or equal to one year and long-term capital gains tax if holding period is greater than one year

Cost Basis

- Fair market value at time of exercise

Gift and Estate Tax

- When options are exercised and shares are held, gifting and other estate planning strategies are possible

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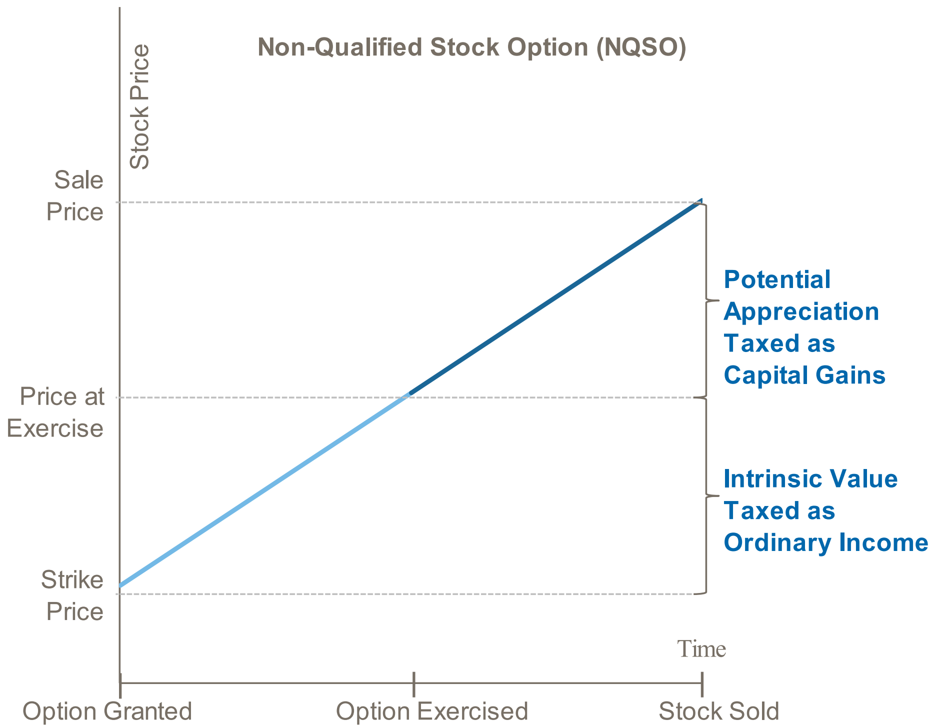

Upon the exercise of a NQSO, the intrinsic value of the option is generally treated as compensation and creates federal tax consequences of ordinary income and employment taxes. The cost basis of the acquired stock is the market price at the time of exercise. Thus, if stock price appreciates after option exercise and prior to the ultimate sale, such appreciation is taxed as capital gains

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CONCENTRATED POSITION TOOLKIT

Restricted Stock Units (RSUs)

WHAT IS IT?

A form of incentive compensation structured as an unsecured promise from the company to deliver shares of stock (or cash equivalent) to a participant in the future subject to vesting requirements

WHAT TO CONSIDER

CONTROL

- No ownership until award vests so do not generally receive dividends or voting rights
- The equity compensation plan may include accelerated vesting and ownership if the company is sold

LIQUIDITY

- Vesting requirements are typically met by passage of time, no exercise is needed

INVESTMENT

Diversification

- Concentration in one stock

Risk

- May not vest
- Decline in stock price

TAX IMPLICATIONS

Transaction Initiation

- No tax when RSUs are awarded

Federal Income Tax

- Federal ordinary income is determined at the time the award is settled (generally when the award vests) and is based on the fair market value of the underlying shares at the time the award is settled
- Employment taxes are determined at the time the award vests and are based on the fair market value of the underlying shares at the time the award vests

Capital Gains

- If the award is settled in stock, when stock is sold, the difference between the fair market value at vesting and at sale is a federal capital gain or loss and taxed
  - Short-term capital gains tax if the holding period is less than or equal to one year and long-term capital gains tax if holding period is greater than one year

Cost Basis

- Fair market value at time of settlement

Gift and Estate Tax

- Once award is settled gifting and other estate planning techniques are available

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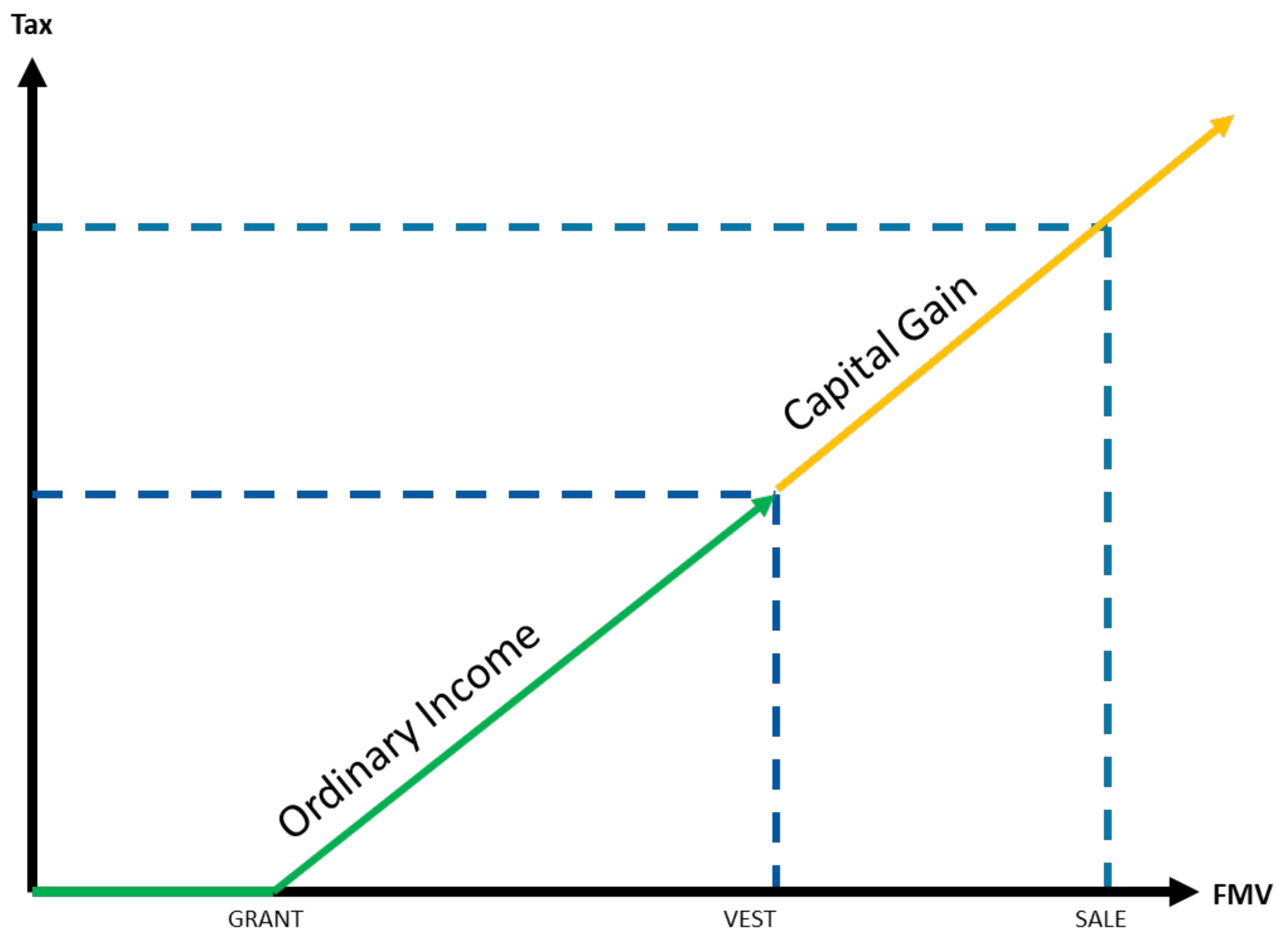

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CONCENTRATED POSITION TOOLKIT

Restricted Stock Awards (RSAs)

WHAT IS IT

A form of incentive compensation structured as a grant of company stock to a participant subject to vesting requirements and transfer restrictions

WHAT TO CONSIDER?

CONTROL

- Ownership at award date so may receive dividends and voting rights
- The equity compensation plan may include accelerated vesting and ownership if the company is sold

LIQUIDITY

- Vesting requirements are typically met by passage of time, no exercise is needed

INVESTMENT

Diversification

- Concentration in one stock

Risk

- May not vest
- Decline in stock price

TAX IMPLICATIONS

Transaction Initiation

- Generally, no federal tax when RSAs are awarded

Federal Income Tax

- Federal ordinary income and withholding taxes is determined by multiplying the fair market value on the date of vest times the quantity of shares vesting

Capital Gains

- When stock is sold, the difference between the fair market value at vesting and at sale is a federal capital gain or loss and is subject to tax
  - Short-term capital gains tax if the holding period is less than or equal to one year and long-term capital gains tax if holding period is greater than one year

Cost Basis

- Fair market value at time of vesting

Gift and Estate Tax

- Once award vests or restrictions lapse, gifting and other estate planning techniques are available

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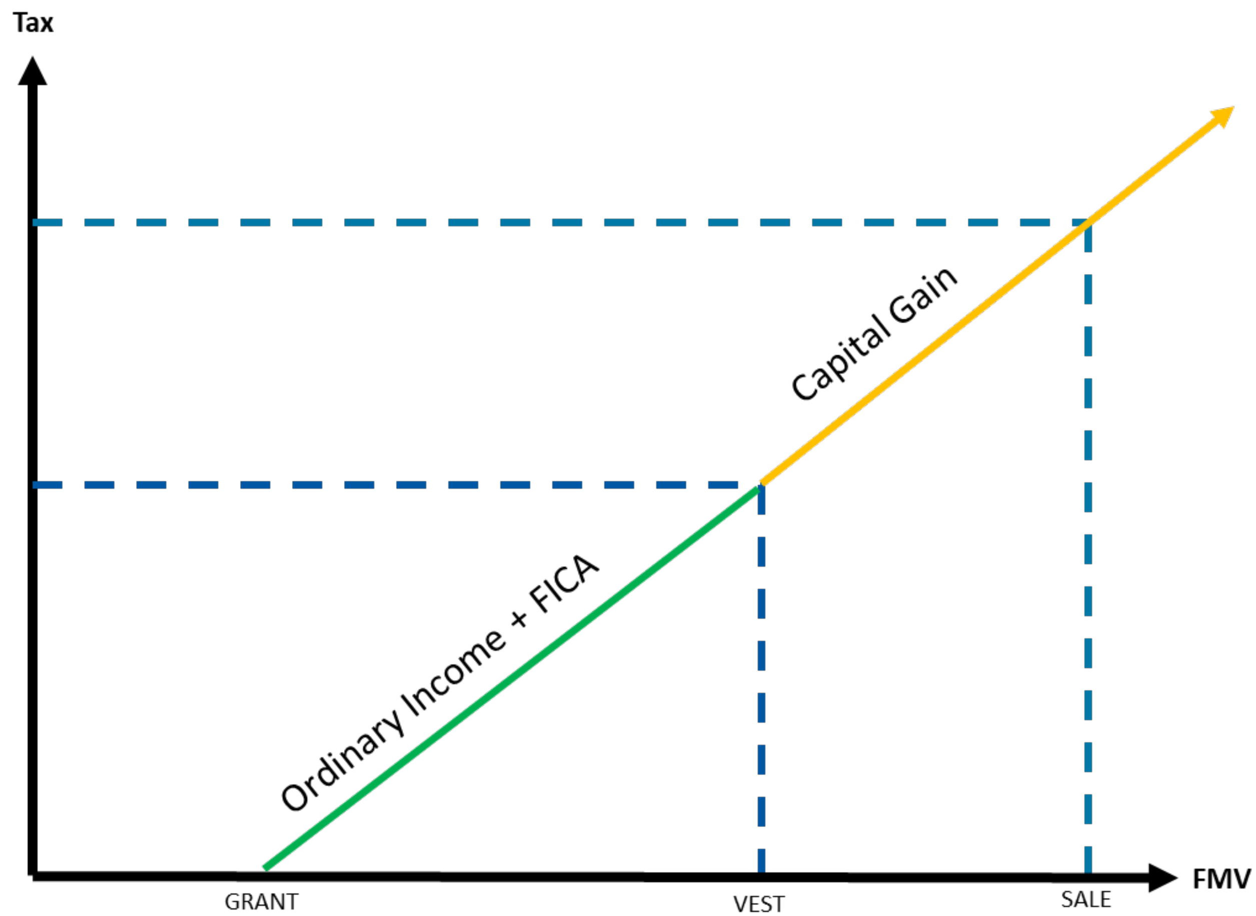

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CONCENTRATED POSITION TOOLKIT

Grantor Retained Annuity Trust (GRAT)

WHAT IS IT?

An irrevocable trust into which an individual (grantor) transfers assets and receives a fixed annuity payment, made at least annually, for a specified term of years. At the end of the term, the remaining trust assets will pass to the remainder beneficiaries designated in the trust document

WHAT TO CONSIDER

CONTROL

- Trustee will have stock ownership with dividend and voting rights while assets are in trust
- Ownership of stock used to make annuity payments will revert to grantor
- Ownership of stock remaining in the trust at the end of the term of years will pass to the remainder beneficiaries

LIQUIDITY

- Annuity payments may be paid in kind (in stock) so the stock does not need to be sold
- Grantor is responsible for and needs liquidity to pay trust taxes

INVESTMENT

Diversification

- A concentrated position is well suited for a GRAT. Generally, it is beneficial to create a GRAT for each concentrated position

Risk

- GRAT fails and beneficiaries do not receive any remaining interest and grantor does not benefit from cost of establishing the trust

TAX IMPLICATIONS

Transaction Initiation

- No income tax when trust is created
- Can be structured to create little or no taxable gift when trust is created

Federal Income Tax

- During term of the GRAT, the grantor is treated as the owner of the trust property for federal income tax purposes and therefore taxed on all trust income

Capital Gains

- If GRAT assets are sold within the trust, the grantor is responsible for any capital gains taxes

Cost Basis

- During the specified term of years, cost basis is that of grantor
- At the end of term of years, the beneficiaries who receive the remaining trust assets will assume the grantor's basis in the property for federal income tax purposes

Gift and Estate Tax

- If the grantor survives term of years, then at such time, the remaining trust assets will pass to the trust remainder beneficiaries free of federal estate and gift taxes
- If the grantor dies before the end of the term of years, some or all of the remaining trust property will be includible in their estate and may be subject to federal estate tax

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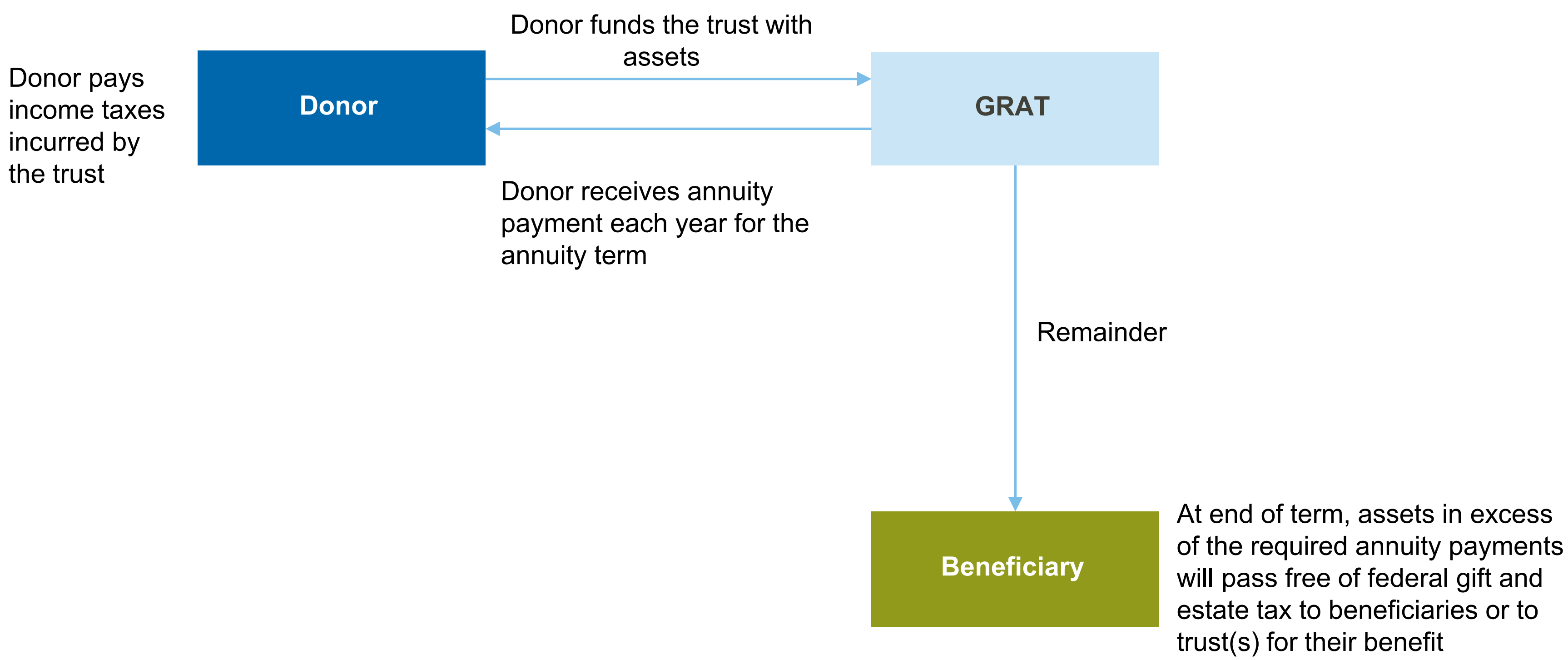

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CONCENTRATED POSITION TOOLKIT

Charitable Remainder Unitrust (CRUT)

WHAT IS IT?

An irrevocable trust into which an individual (grantor) transfers assets and the trust makes a fixed unitized payment (expressed as a percentage of trust assets), made at least annually, to the grantor and/or family members for a specified term. At the end of the specified term, the remaining trust assets will pass to the charity/ies designated in the trust document's provisions

WHAT TO CONSIDER

CONTROL

- Ownership is held by the trustee while the assets are in trust
- Ownership of stock used to make unitrust payments will pass to the grantor or other noncharitable beneficiaries
- Ownership of stock remaining in the trust at the end of the trust term will pass to the charity/ies

LIQUIDITY

- Payment term can last for life of grantor and/or family members or for a fixed number years not exceeding twenty
- Each payment from the CRUT is based on a fixed percentage of the annually revalued trust assets so the payments from the CRUT will fluctuate from year to year
- The grantor receives the annual payment stream and the charity/ies receive the remainder interest at the end of the trust term

INVESTMENT

Diversification

- As a split-interest trust, the CRUT should be invested in a diversified portfolio
- The CRUT is a tax-exempt entity so a concentrated position contributed can be sold in the trust and capital gains deferred over all or a portion of the trust term

Risk

- Trust assets decline in value so annual payments and remainder interest are reduced

TAX IMPLICATIONS

Transaction Initiation

- If the grantor creates the CRUT during lifetime, the grantor will receive a federal charitable gift tax deduction and may receive a federal charitable income tax deduction, each being equal to the value of the property transferred to the CRUT less the present value of grantor's/family's payment stream

Federal Income Tax

- The accrued CRUT taxes are allocated annually to the income beneficiary to the extent of the distribution received

Capital Gains

- When a concentrated stock is transferred to a CRUT and is sold, the capital gain is deferred

Cost Basis

- The cost basis for the concentrated stock contributed to the trust is that of the grantor. For assets purchased by the trust, the cost basis is determined by the trust's investment

Gift and Estate Tax

- At the end of the trust term, the remaining assets in the trust may not be included in grantor's federal taxable estate and go to one or more charities
- If the grantor creates the CRUT at death, the grantor's estate will receive a federal charitable estate tax deduction for the present value of the remainder interest

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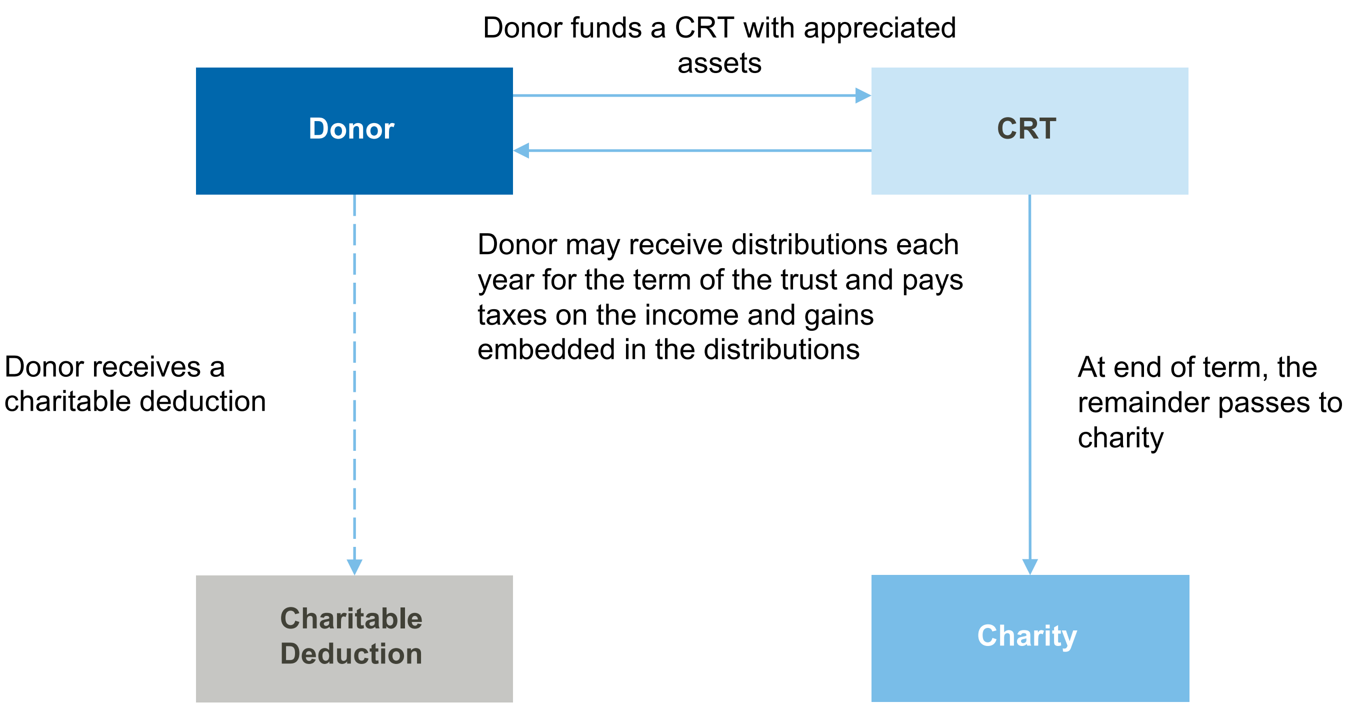

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CONCENTRATED POSITION TOOLKIT

Pooled Income Fund

WHAT IS IT?

A trust established by a public charity into which a donor irrevocably transfers assets and the trust makes a distribution of income (based on units of participation in the trust), made at least monthly, to the donor and/or other income beneficiaries designated by the donor for their lifetimes(s). Upon the death of the life of the donor or last surviving income beneficiary the remaining assets pass to the designated charity/ies

WHAT TO CONSIDER

CONTROL

- The donor irrevocably surrenders ownership of contributed assets. The donor may not direct the investments although they may direct distribution of the assets to approved charity/ies

LIQUIDITY

- Payment term will last for the life of the donor or last surviving income beneficiary designated by the donor
- Each payment from the pooled income fund will fluctuate based on performance of investments
- Designated income beneficiary/ies receive(s) monthly payment stream and the charity/ies may receive the remainder

INVESTMENT

Diversification

- The pooled income fund should be invested in a diversified portfolio
  - The pooled income fund is prohibited from holding tax-exempt securities
- There are generally no capital gains recognized when gifting appreciated assets to a pooled income fund

Risk

- Assets can decline in value so recurring income distributions may decrease

TAX IMPLICATIONS

Transaction Initiation

- Donor will receive a federal charitable gift tax deduction and receive a federal income tax deduction equal to the present value of the charitable remainder interest

Federal Income Tax

- Income beneficiary/ies are generally subject to ordinary income tax on the distributions received

Capital Gains

- When a concentrated stock is transferred into a pooled income fund and is sold, a capital gain is generally not recognized if the asset was a long-term capital asset

Cost Basis

- Transferring lower cost basis assets allows those assets to be sold without the donor (and potentially the pooled income fund) recognizing capital gain

Gift and Estate Tax

- Depending on who the donor designated as the income beneficiary/ies, a portion of the transferred assets may be included in the donor's federal taxable estate at the donor's death. If so, generally the donor's estate will be entitled to a charitable deduction that may offset taxes

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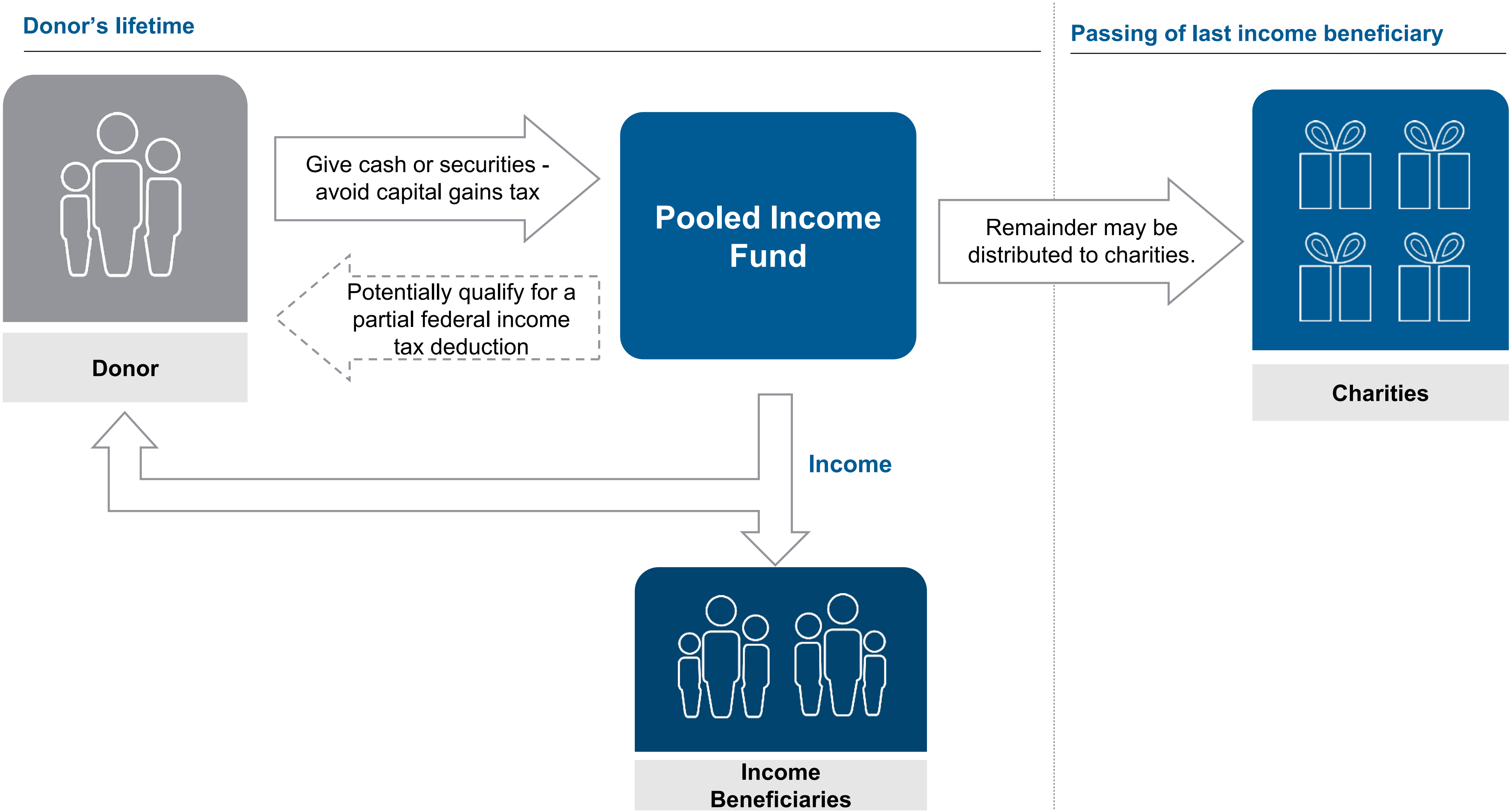

CONCENTRATED POSITION TOOLKIT

Donor Advised Fund (DAF)

WHAT IS IT?

A separate fund or account established by a public charity into which an individual (donor) gifts assets. While the DAF manages the assets, the donor may recommend how much and to which charitable beneficiary/ies the asset may be given over time

WHAT TO CONSIDER

CONTROL

- The donor irrevocably surrenders ownership of contributed assets though the donor may make recommendations regarding the investments and distribution of the assets to approved charity/ies

LIQUIDITY

- A concentrated position donated to a DAF may receive a federal income tax deduction and alleviate cash outflow that would be needed to pay taxes if donor instead sold the assets

INVESTMENT

Diversification

- The charity managing the DAF has a fiduciary duty of care with respect to its investments and therefore may need to sell concentrated positions

Risk

- The timing and sale strategy undertaken by the charity managing the DAF with respect to a concentrated position may not be consistent with the wishes of the donor or company

TAX IMPLICATIONS

Transaction Initiation

- The donor will receive a federal charitable gift tax deduction and may receive a federal charitable income tax deduction

Federal Income Tax

- Donor may receive a federal income tax charitable deduction based upon the fair market value or the donor's cost basis of the assets donated, depending on the type of asset donated, subject to limitations based on adjusted gross income
  - Any excess deduction may be carried over for use in the following five years subject to further adjusted gross income limitations

Capital Gains

- The DAF is a tax-exempt entity so the sale of the concentrated position does not generate capital gains tax

Cost Basis

- Potential federal income tax charitable deduction may be based on the fair market value or the donor's cost basis depending on the type of property donated

Gift and Estate Tax

- Contributions to a DAF are not included in the donor's federal taxable estate

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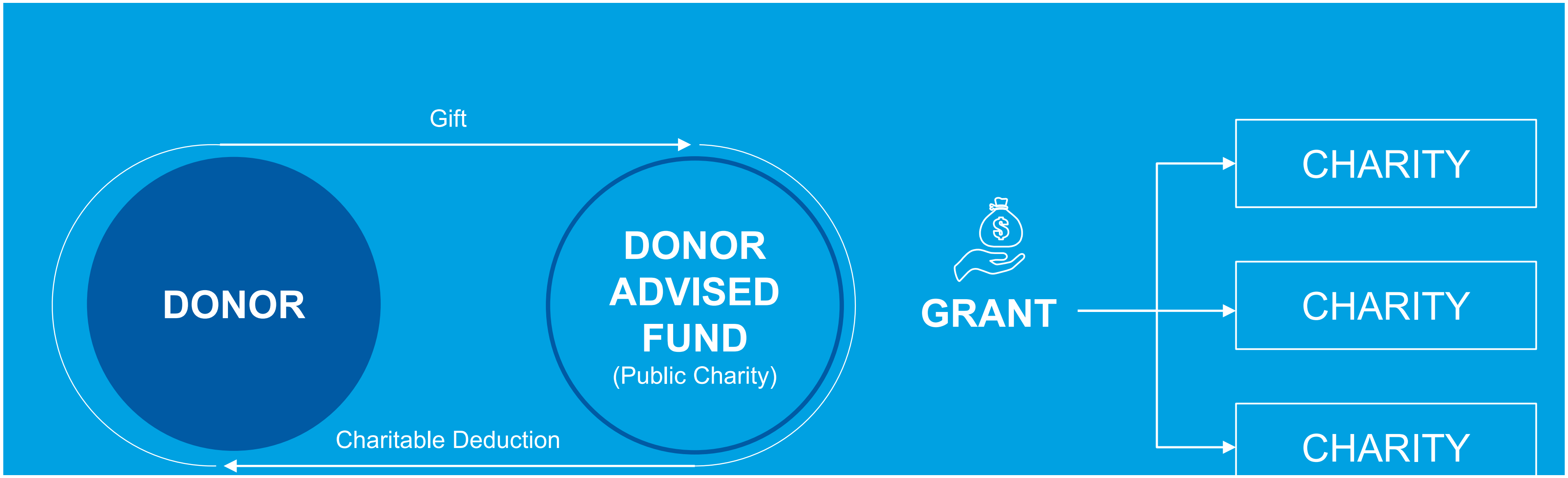

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CONCENTRATED POSITION TOOLKIT

Qualified Small Business Stock (QSBS)

WHAT IS IT?

QSBS generally allows the owner/seller to exclude from gross income a portion of the capital gain if all of the following apply:

- The stock is: acquired at original issue and held more than five years
- The issuing company is: a domestic C corporation, has $50 million or less in assets at all times prior to and immediately after the issuance of stock, operates an active business

WHAT TO CONSIDER

CONTROL

- May be owned directly or indirectly by an allowed pass-through entity including: partnership, S Corporation, regulated investment company and common trust fund

LIQUIDITY

- To realize full tax benefits, the stock must adhere to specific criteria
- The owner may rollover the stock to another qualified small business stock

INVESTMENT

Diversification

- Concentration in one stock

Risk

- Over the five year holding period, the company assets may appreciate beyond $50 million or the stock value may decline

TAX IMPLICATIONS

Transaction Initiation

- There is no federal income tax on the purchase of QSBS stock

Federal Income Tax

- Generally, QSBS rules should not have ordinary income effects, as they provide an exclusion for an amount that generally would constitute a capital gain

Capital Gains

- If GRAT assets are sold within the trust, the grantor is responsible for any capital gains taxes
  - Federal
    - If qualified, may exclude 50, 75, or 100 percent of capital gain depending on date of acquisition (non-excludable portion of gain is taxed at a special 28% plus a potential 3.8% net investment income tax)
    - Gain that may be excluded is the greater of $10 million or 10 times the aggregate adjusted basis of the stock issued by the corporation and disposed of by the taxpayer
  - State
    - It is important to check state rules because some states provide a modified QSBS gain exclusion and other states do not recognize federal QSBS treatment (instead state capital gain tax rules will apply

Cost Basis

- Value at primary issue

Gift and Estate Tax

- Gifting QSBS during life or at death results in the recipient being treated as having acquired the stock in the same manner as the transferor and having held the stock for the same period as the transferor

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QSBS Date Acquired	Percent Exclusion of the Capital Gain from Gross Income (1)
On or before February 17, 2009	50%
February 18, 2009 to September 27, 2010	75%
September 28, 2010 or later	100%

1. Non-excludable portion of gain is taxed at a special 28% rather then the generally applicable 15% and 20% federal long-term capital gain rates; a 3.8% federal net investment income tax may also apply

CONCENTRATED POSITION TOOLKIT

10b5-1 Plan

WHAT IS IT?

A pre-set diversification plan for executives' shares that specifies amounts, prices and dates for securities to be sold

WHAT TO CONSIDER

CONTROL

- If an executive holds Material Non-Public Information (MNPI), decisions on amounts, prices and dates must be delegated to another person who does not possess MNPI
- In the absence of MNPI, the executive sets parameters for periods to sell, the number of shares and price while the Issuer might have specific allowable time periods to sell (i.e. earning periods)
- Plans may be used for sales, monetization strategies, exercise of options

LIQUIDITY

- Facilitates legal sale of concentrated positions according to holder's specifications within the company's allowable time periods

INVESTMENT

Diversification

- Reduces risk of holding a concentrated position

Risk

- Plan modifications can be changed though changing it might weaken the benefit of affirmative defence
- Plan must comply with Section 13, Section 16 and Rule 144 (may not be applicable for non-affiliate)

TAX IMPLICATIONS

Transaction Initiation

- There is no tax when a plan is put in place

Federal Income Tax

- Determined by type of position sold and time

Capital Gains

- Depending on the type of position, the cost basis might be the fair market value at vesting, exercise or primary issue (when selling shares, the cost basis assigned to the shares sold is determined by the first in/first out method given the various cost bases of shares)

Cost Basis

- Fair market value at time of settlement

Gift and Estate Tax

- Concentrated positions may have restrictions that limit their use in estate planning. For example, with Rule 144, there may be volume limitations that limit the number of shares that can be transferred

CONCENTRATED POSITION TOOLKIT

10b5-1 Plan

WHAT IS IT?

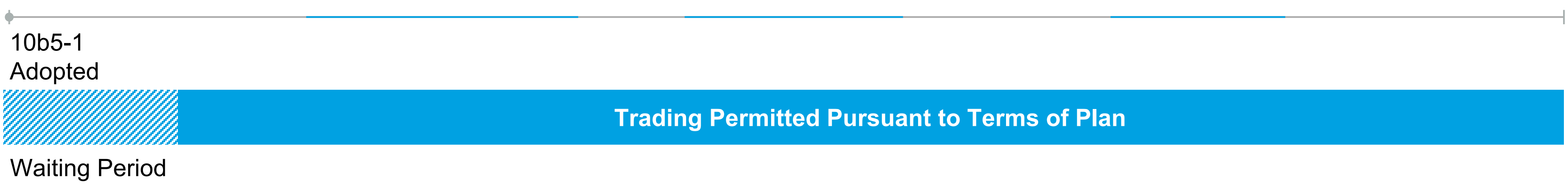
A pre-set diversification plan for executives' shares that specifies amounts, prices and dates for securities to be sold

Without a 10b5-1 Plan – hypothetical access to 4 windows a year

But certain events can result in trading windows being closed…

Trading Prohibited During Window Periods When Key Employees or Insiders Are in Possession of Material Non-public Information

Sales could happen within a 10b5-1 Plan even during regular quarterly or special blackouts



1. The above illustrations are based on hypothetical conditions and are not representative of any specific company or company stock
2. Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized
3. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy
4. Please refer to important information, disclosures and qualifications at the end of this material

CONCENTRATED POSITION TOOLKIT

Exchange Fund

WHAT IS IT?

Pooled special-purpose vehicle that offers concentrated stock owners the ability to diversify their investments by exchanging concentrated stock positions for shares of a diversified portfolio

WHAT TO CONSIDER

CONTROL

- Exchange fund retains dividends and voting rights

LIQUIDITY

- Share holdings may be redeemed in whole or part usually on a monthly or daily basis depending on fund rules and early redemptions may be subject to fees
  - During the first seven years following a shareholder's final exchange fund contribution, stocks contributed by a redeeming shareholder are generally distributed first
  - After seven years following the shareholder's final exchange fund contribution, a redeeming shareholder generally may elect to receive a diversified basket of securities
- There may be the potential to borrow using the exchange fund as collateral and benefit from its diversified portfolio

INVESTMENT

Diversification

- Concentration in one stock is exchanged for exposure in a diversified portfolio potentially resulting in reduced exposure to significant loss and variability in return
- Each exchange fund invests at least 20% in non-securities/illiquid investments and identifies stocks in an investable universe that may be considered for inclusion

Risk

- High minimum investments result in sustained market exposure and other shareholders' contributions and redemptions may impact the portfolio positioning

TAX IMPLICATIONS

Transaction Initiation

- Concentrated shares are exchanged for fund shares without triggering a taxable event

Federal Income Tax

- Non-securities/illiquid investments may result in pass through income/losses and the issuance of K-1s

Capital Gains

- With a redemption, when the stock/proportional share of the diversified portfolio is sold, the difference between the fair market value at sale and cost basis is a capital gain and taxed
- Determination of short/long-term capital gain is not based on the amount of time in the exchange fund rather it is based on the holding period determined by the shares originally contributed. Short-term capital gains tax rate applies if the holding period is less than or equal to one year and long-term capital gains tax rate applies if holding period is greater than one year

Cost Basis

- Same as the aggregate cost basis of the concentrated shares originally contributed

Gift and Estate Tax

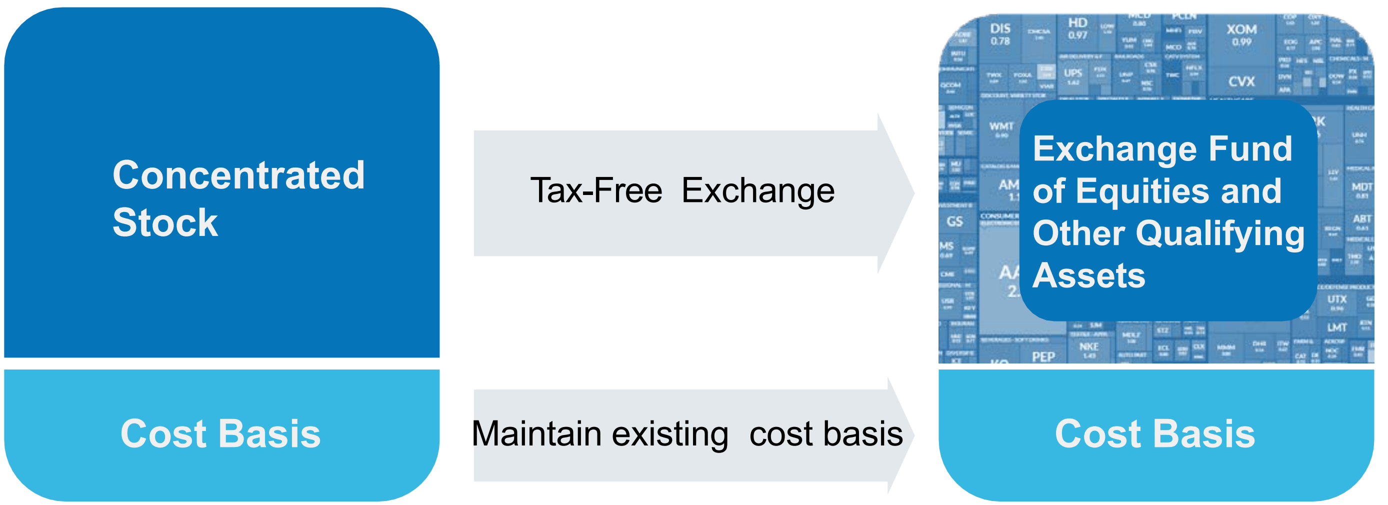
- Exchange Funds may be used in estate planning

CONCENTRATED POSITION TOOLKIT

Exchange Fund

WHAT IS IT?

Pooled special-purpose vehicle that offers concentrated stock owners the ability to diversify their investments by exchanging concentrated stock positions for shares of a diversified portfolio



CONCENTRATED POSITION TOOLKIT

Completion Portfolio

WHAT IS IT?

Construct a risk-managed portfolio around a concentrated stock holding, choosing investments that will provide exposure that aligns with a benchmark while offsetting risk exposure

WHAT TO CONSIDER

CONTROL

- Retain stock ownership with dividend and voting rights

LIQUIDITY

- Additional liquidity is needed to create and invest the completion portfolio
- There is the potential to borrow against the concentrated stock position to access liquidity
- Concentrated stock position may be sold over time and overarching risk exposures re-examined

INVESTMENT

Diversification

- Risk of concentration in one stock is maintained though in combination with completion portfolio transforms into that of a specific benchmark

Risk

- Designation of additional funds for the completion portfolio expose more monies to the targeted benchmark
- To offset risk, the completion portfolio may have its own concentrated holdings

TAX IMPLICATIONS

Transaction Initiation

- If the completion portfolio is funded through the sale of assets, there may be tax consequences

Federal Income Tax

- Generally, will not have ordinary income tax effects beyond dividends, as portfolio transactions generate capital gains

Capital Gains

- Incurred with sale of securities as the completion portfolio manages evolving risk over time
- Short-term capital gains tax rate applies if the holding period is less than or equal to one year and long-term capital gains tax rate applies if holding period is greater than one year

Cost Basis

- Owner's original cost basis applies

Gift and Estate Tax

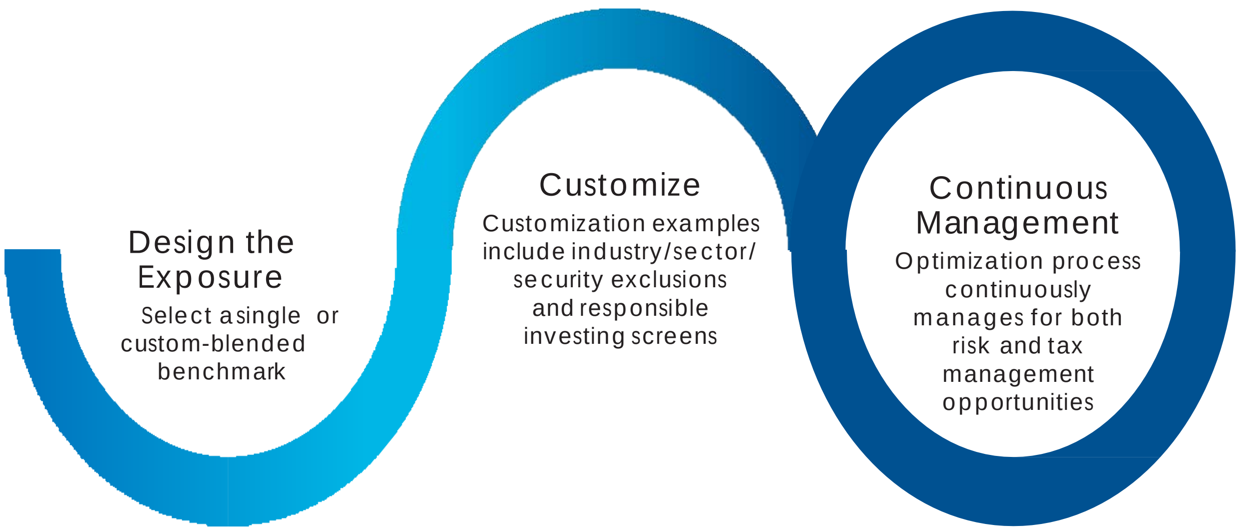
- Concentrated positions may have restrictions that limit their use in estate planning
- Completion portfolios are specific to concentrated positions and may (not) be good candidates for estate planning

CONCENTRATED POSITION TOOLKIT

Completion Portfolio

WHAT IS IT?

- Construct a risk-managed portfolio around a concentrated stock holding, choosing investments that will provide exposure that aligns with a benchmark while offsetting risk exposure



CONCENTRATED POSITION TOOLKIT

Covered Call

WHAT IS IT?

A strategy to potentially generate cash flow where an investor sells a call option against an underlying stock position and receives a premium by agreeing to sell the stock position at the call strike price if the option is exercised

WHAT TO CONSIDER

CONTROL

- Investor maintains ownership of the stock with dividend and voting rights unless assigned

LIQUIDITY

- Investor receives a premium
- The investor can seek to unwind the short call position on a listed exchange subject to market liquidity

INVESTMENT

Potential Benefits

- May enable the investor to potentially generate cash flows from the premium received on the sale of the call option
- May be used as an alternative selling strategy where the investor potentially sells the underlying stock position at the call strike

Risk / Considerations

- The investor forgoes potential upside price appreciation above the call strike
- The investor is exposed to depreciation in the underlying stock
- The investor may be required to deliver the underlying stock position at the call strike price
- There are associated costs to roll the option to future periods before expiration

TAX CONSEQUENCES

Gift and Estate Tax Consequences

- Concentrated positions may have restrictions that limit their use in estate planning
- Covered call options are specific to concentrated positions and may (not) be good candidates for estate planning

Options carry a high level of risk and are not appropriate for all investors.
Before engaging in the purchase or sale of options, clients should understand the nature and extent of their rights and obligations and be aware of the risks involved, including, without limitation, the risks pertaining to the business and financial condition of the issuer of the underlying security/instrument. Options investing, like other forms of investing, involves tax considerations, transaction costs and margin requirements that can significantly affect clients' potential profits and losses. Clients should not enter into options transactions until they have read and understood the Disclosure Document and discussed transaction costs with the Financial Advisor or Private Wealth Advisor. A copy of the ODD is also available online at: http://www.theocc.com/about/publications/publication-listing.jsp

CONCENTRATED POSITION TOOLKIT

Covered Call

WHAT IS IT?

A strategy to potentially generate cash flow where an investor sells a call option against an underlying stock position and receives a premium by agreeing to sell the stock position at the call strike price if the option is exercised

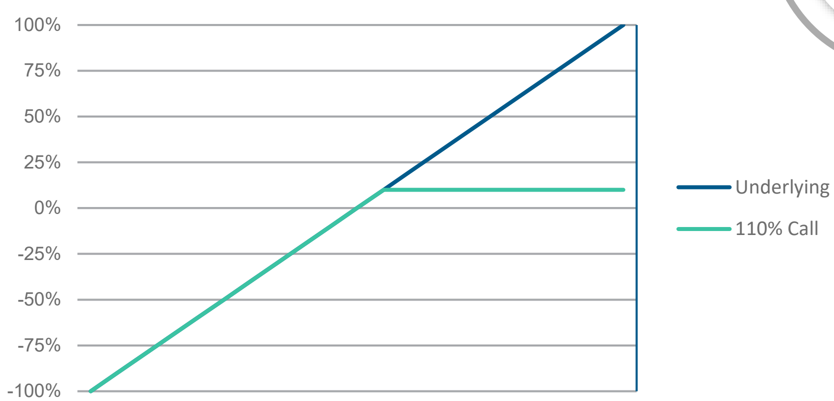
POTENTIAL BENEFITS

- May enable the investor to potentially **generate cash flows** from the premium received on the sale of the call option
- May be used as an **alternative selling strategy** where the investor potentially sells the underlying stock position at the call strike price

SOME RISKS / CONSIDERATIONS

- The investor may be required to **deliver the underlying stock position** at the call strike price
- The investor **forgoes potential upside** price appreciation above the call strike price
- Potential **tax consequences** of delivering the stock position at the time of an exercised call
- There are associated costs to roll the option to future periods before expiration

POSITION VALUE AT MATURITY*



*Does not include 5% premium

HYPOTHETICAL TERMS

- Underlying Shares: XYZ stock
- Stock Reference Price: $100.00
- Call Option Strike Price: $110.00 (110%)
- Call Premium: $5.00 (5.00%)
- Potential Max Gain: $15.00 (Stock Price appreciates to Call Strike Price, $5.00 Call Premium received)
- Potential Max Loss: $95.00 (Stock Price depreciates to $0.00, less $5.00 Call Premium received)
- Breakeven Price: $95 (Stock Price depreciates, plus $5.00 Call Premium received. Call expires worthless.)

CONCENTRATED POSITION TOOLKIT

Protective Put

WHAT IS IT?

A hedging strategy where an investor pays a premium in exchange for the right, but not the obligation, to sell a stock and / or fund at a specified price on a future date

WHAT TO CONSIDER

CONTROL

- Investor maintains ownership of the stock with dividend and voting rights unless exercised

LIQUIDITY

- The investor pays a premium for the put option
- The investor can seek to sell the put position on a listed exchange subject to market liquidity

INVESTMENT

Potential Benefits

- May allow an investor to protect against a decline in an equity position, while retaining potential upside price appreciation
- May provide downside protection below the put option strike

Risk / Considerations

- The investor is exposed to depreciation in the underlying stock from the initial level down to the put strike price
- The investor may lose the full premium if the option expires worthless
- The investor may have to purchase additional options if stock price increases and therefore current protection becomes inadequate

TAX CONSEQUENCES

Gift and Estate Tax Consequences

- Concentrated positions may have restrictions that limit their use in estate planning
- Put options are specific to concentrated positions and may (not) be good candidates for estate planning

Options carry a high level of risk and are not appropriate for all investors.
Before engaging in the purchase or sale of options, clients should understand the nature and extent of their rights and obligations and be aware of the risks involved, including, without limitation, the risks pertaining to the business and financial condition of the issuer of the underlying security/instrument. Options investing, like other forms of investing, involves tax considerations, transaction costs and margin requirements that can significantly affect clients' potential profits and losses. Clients should not enter into options transactions until they have read and understood the Disclosure Document and discussed transaction costs with the Financial Advisor or Private Wealth Advisor. A copy of the ODD is also available online at: http://www.theocc.com/about/publications/publication-listing.jsp

CONCENTRATED POSITION TOOLKIT

Protective Put

WHAT IS IT?

A hedging strategy where an investor pays a premium in exchange for the right, but not the obligation, to sell a stock and / or fund at a specified price on a future date

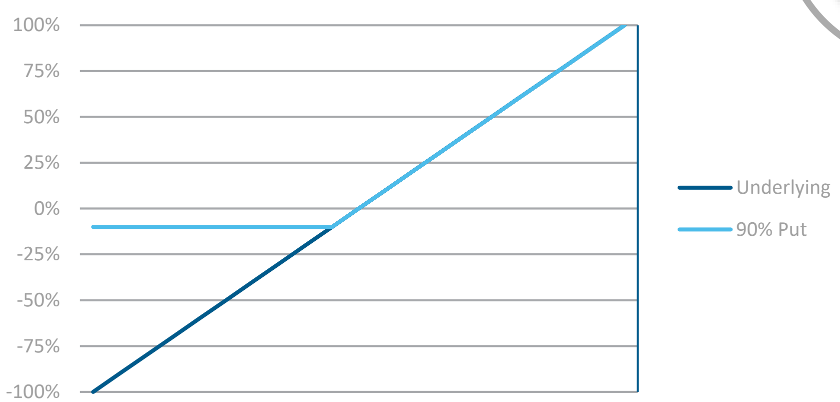
POTENTIAL BENEFITS

- May allow an investor to **protect against a decline** in an equity position, while retaining potential upside price appreciation
- May provide **downside protection** below the put option strike price

SOME RISKS / CONSIDERATIONS

- The investor **pays a premium** for the put option
- The investor is exposed to **depreciation** in the underlying stock from the initial level down to the put strike price

POSITION VALUE AT MATURITY*



*Does not include 5% premium

HYPOTHETICAL TERMS

- Underlying Shares: XYZ stock
- Stock Reference Price: $100.00
- Put Option Strike Price: $90.00 (90%)
- Premium: $5.00 (5.00%)
- Potential Max Gain: Strategy maintains the benefits of any stock price appreciation minus the cost of the put option
- Potential Max Loss: $15.00 (Stock Price depreciates to Put Strike Price, Put expires worthless)
- Breakeven Price : $105 (Stock Price appreciates, Put expires worthless)

CONCENTRATED POSITION TOOLKIT

Collar

WHAT IS IT?

A hedging strategy where an investor pays a premium to purchase a put option for downside protection and simultaneously sells a call option to fund some or all of the put premium

WHAT TO CONSIDER

CONTROL

- Investor maintains ownership of the stock with dividend and voting rights unless the call is assigned or the put is exercised

LIQUIDITY

- It can be structured as a credit, debit or zero premium
- The investor can seek to unwind the collar positions on a listed exchange subject to market liquidity

INVESTMENT

Potential Benefits

- May allow an investor to protect against a decline in an equity position, while retaining limited upside price appreciation
- May provide downside protection below the put option strike.
- Potentially lowers upfront cost when compared to outright put purchase

Risk / Considerations

- The investor forgoes potential upside price appreciation above the call strike
- The investor is exposed to depreciation in the underlying stock from the initial level down to the put strike price
- The investor may be required to deliver the underlying stock position at the call strike price
- The investor may pay or receive a net premium for the collar

TAX CONSEQUENCES

Gift and Estate Tax Consequences

- Concentrated positions may have restrictions that limit their use in estate planning
- Collars are specific to concentrated positions and may (not) be good candidates for estate planning

Options carry a high level of risk and are not appropriate for all investors.
Before engaging in the purchase or sale of options, clients should understand the nature and extent of their rights and obligations and be aware of the risks involved, including, without limitation, the risks pertaining to the business and financial condition of the issuer of the underlying security/instrument. Options investing, like other forms of investing, involves tax considerations, transaction costs and margin requirements that can significantly affect clients' potential profits and losses. Clients should not enter into options transactions until they have read and understood the Disclosure Document and discussed transaction costs with the Financial Advisor or Private Wealth Advisor. A copy of the ODD is also available online at: http://www.theocc.com/about/publications/publication-listing.jsp

CONCENTRATED POSITION TOOLKIT

Collar

WHAT IS IT?

A strategy to potentially generate cash flow where an investor sells a call option against an underlying stock position and receives a premium by agreeing to sell the stock position at the call strike price if the option is exercised

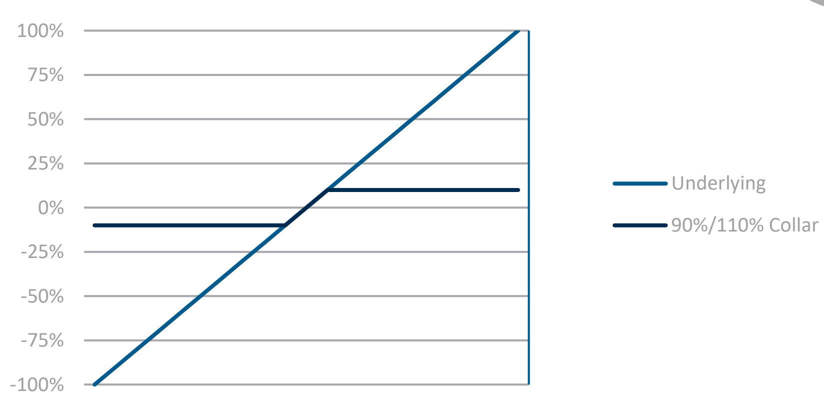
POTENTIAL BENEFITS

- May allow an investor to **protect against a decline** in an equity position, while retaining limited upside price appreciation
- May provide **downside protection** below the put option strike price
- Potentially lowers upfront cost when compared to outright put purchase

SOME RISKS / CONSIDERATIONS

- The investor **forgoes potential upside** price appreciation above the call strike price
- The investor may **pay or receive a net premium** for the collar
- The investor is exposed to **depreciation** in the underlying stock from the initial level down to the put strike price
- The investor may be required to **deliver the underlying stock position** at the call strike price

POSITION VALUE AT MATURITY



HYPOTHETICAL TERMS

- Underlying Shares: XYZ stock
- Stock Reference Price: $100.00
- Put Option Strike Price: $90.00 (90%)
- Put Premium: +$5.00 (5.00%)
- Call Option Strike Price: $110.00 (110%)
- Call Premium: -$5.00 (-5.00%)
- Net Premium: $0.00 (0.00%)
- Potential Max Gain: $10.00 (Stock Price appreciates above Call Strike Price, delivers Stock at $110.00)
- Potential Max Loss: $10.00 (Stock Price depreciates below Put Strike Price, delivers Stock at $90.00)
- Breakeven Price: $100 (Call Option Premium paid and Put Option Premium received nets to $0)

CONCENTRATED POSITION TOOLKIT

Tax-Loss Harvesting

WHAT IS IT?

Sell a concentrated stock position tax efficiently over time by simultaneously harvesting capital gains and losses in other investments to offset the capital gains and losses realized by selling or disposing the concentrated stock position

WHAT TO CONSIDER

CONTROL

- Stock ownership with dividend and voting rights

LIQUIDITY

- Additional investments may be needed to become a source of unrealized losses/gains
- Sale of concentrated stock over time as tax-loss offsets become available

INVESTMENT

Diversification

- Concentrated in one stock reduced over time through sales
- Diversified portfolio created over time using sales proceeds for purchases

Risk

- Over time there may be changes in tax rates and tax laws that may impact the efficacy of tax loss harvesting

TAX IMPLICATIONS

Transaction Initiation

- Only if capital gains are realized at the onset

Federal Income Tax

- Generally, will not have ordinary income effects, as transactions will generate a capital gain or loss

Capital Gains

- Portfolio manager identifies and realizes short-term losses to offset short-term gains and long-term losses to offset long-term gains in concentrated stock to mitigate taxes

Cost Basis

- Owner’s original cost basis applies

Gift and Estate Tax

- Concentrated positions may have restrictions that limit their use in estate planning
- It may be more advantageous to use tax harvested assets with certain estate planning strategies so subsequent generations may benefit from high cost basis in positions

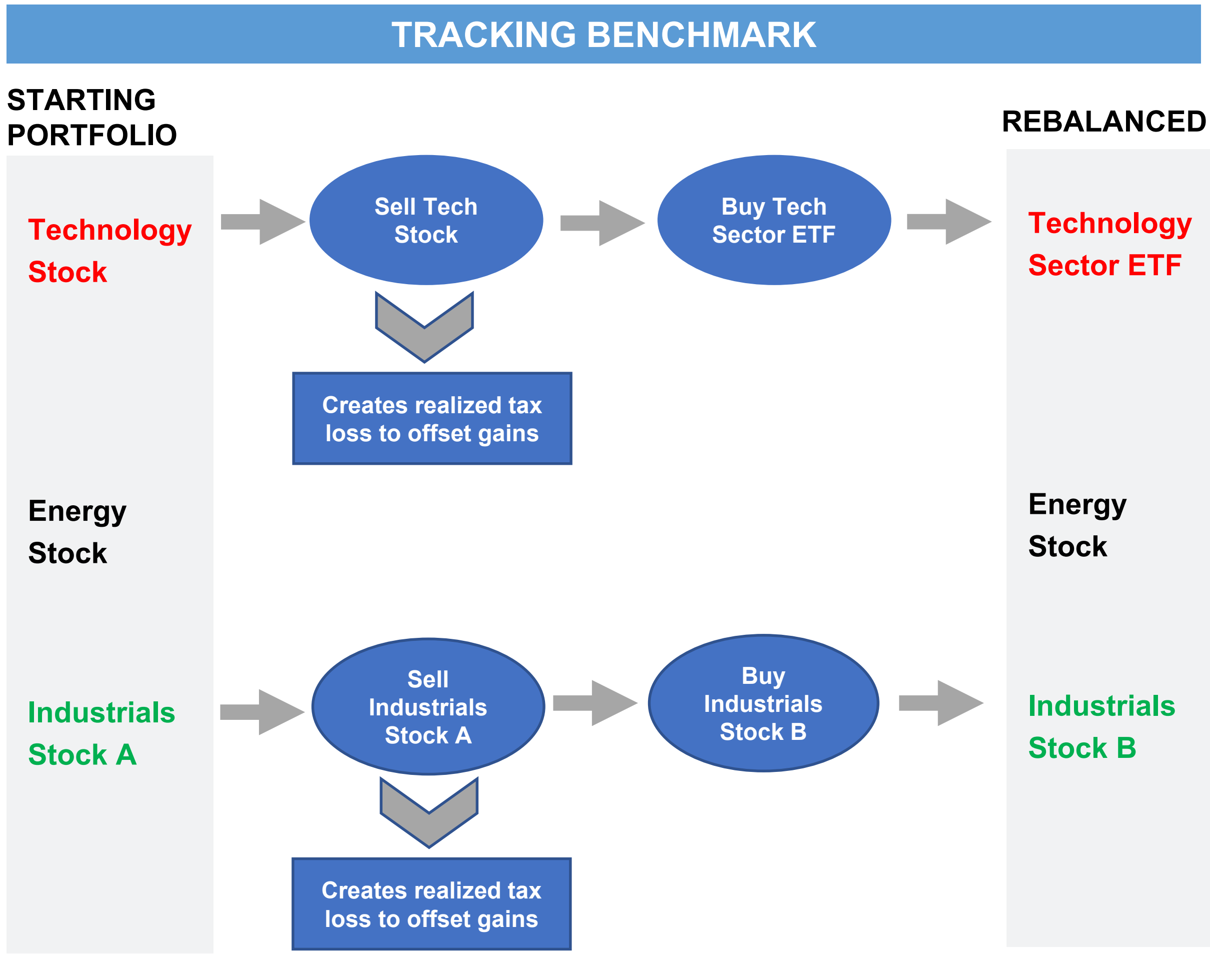
CONCENTRATED POSITION TOOLKIT

Tax-Loss Harvesting

WHAT IS IT?

- Sell a concentrated stock position tax efficiently over time by simultaneously harvesting capital gains and losses in other investments to offset the capital gains and losses realized by selling or disposing the concentrated stock position

USE	TO OFFSET
Short Term Losses	Short Term Gains
Long Term Losses	Long Term Gains
Leftover Losses, either Short or Long Term	Leftover Gains, either Short or Long Term
Remaining Losses	Excess losses may be carried forward for use in subsequent year until death



1. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material

CONCENTRATED POSITION TOOLKIT

Options Disclosures and Considerations

If you are considering options as part of your investment plan, your Morgan Stanley Financial Advisor or Private Wealth Advisor is required to provide you with the "Characteristics and Risks of Standardized Options" booklet from the Options Clearing Corporation.

Options carry a high level of risk and are not appropriate for all investors.

Certain requirements must be met to trade options through Morgan Stanley. Investing involves risks, including loss of principal. Hedging and protective strategies generally involve additionalcosts and do not assure a profit or guarantee against loss. With long options, investors may lose 100% of funds invested. Covered calls provide cash flow, downside protection only to the extentof the premium received, and limit upside potential to the strike price plus premium received. Spread trading must be done in a margin account.

Before engaging in the purchase or sale of options, clients should understand the nature and extent of their rights and obligations and be aware of the risks involved, including, without limitation, the risks pertaining to the business and financial condition of the issuer of the underlying security/instrument. Options investing, like other forms of investing, involves tax considerations, transaction costs and margin requirements that can significantly affect clients' potential profits and losses. The transaction costs of options investing consist primarily of commissions (which are imposed in opening, closing, exercise and assignment transactions) but may also include margin and interest costs in particular transactions. Transaction costs are especially significant in options strategies calling for multiple purchases and sales of options, such as multiple leg strategies, including spreads, straddles and collars. If a client is considering engaging in options trading, the Financial Advisor and Private Wealth Advisor are required to provide the client with the "Characteristics and Risks of Standardized Options" (ODD) booklet from the Options Clearing Corporation. Clients should not enter into options transactions until they have read and understood the Disclosure Document and discussed transaction costs with the Financial Advisor or Private Wealth Advisor. A copy of the ODD is also available online at: http://www.theocc.com/about/publications/publication-listing.jsp

The sale of the stock through an option assignment or the closing/expiration of an option position may produce a tax consequence. Certain in-the-money covered call writes are deemed 'unqualified' and carry certain tax consequences. Prior to entering into any proposed transaction, recipients should determine, in consultation with their own investment, legal, tax, regulatory and accounting advisors, the economic risks and merits, as well as the legal, tax, regulatory and accounting characteristics and consequences, of the transaction. Morgan Stanley Smith Barney LLC and its affiliates do not provide tax or legal advice. To the extent that this material or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

Supporting documentation for any claims (including any claims made on behalf of options programs or the options expertise of salespersons), comparisons, recommendations, statistics, or other technical data, will be supplied upon request.

There are many factors that an investor should be aware of when trading options including interest rates, volatility, stock splits, stock dividends, stock distributions, currency exchange rates, etc.

Annualized returns will not be calculated for holding periods less than 60 days.

If a secondary market in options becomes unavailable and prevents a closing transaction, the options writer's obligation would remain until expiration or assignment.

NOTE: This statement is not intended to enumerate all of the risks entailed in trading options. It is expected that you will read the booklet entitled "Characteristics and Risks of Standardized Options" (see www.theocc.com/components/doc/riskstoc.pdf). Please direct your attention to Chapter X, "Principal Risks of Options Positions."

Morgan Stanley Wealth Management would like to inform investors of the inherent risks of trading the following strategies.

- Bullish strategies have greater risk of loss in falling markets.
- Neutral strategies have greater risk of loss in volatile markets.
- Bearish strategies have greater risk of loss in rising markets.

CONCENTRATED POSITION TOOLKIT

Disclosures

This material was designed to illustrate the financial impact of a particular planning decision. It does not constitute a recommendation.

Caution: many estate techniques share the common risk of the loss of control of the assets once the gift of the assets is complete.

This material has been prepared for informational purposes only and is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Information and data contained herein have been obtained from multiple sources and Morgan Stanley Smith Barney LLC ("Morgan Stanley") makes no representation as to the accuracy or completeness of the information and data from sources outside of Morgan Stanley. We have included information that we found to be pertinent for our purposes. We make no representation as to the completeness of the information, and information which you may find material for your own investment or planning purposes may not have been included. The information and data are subject to change at any time without further notice.

This material does not provide individually tailored investment advice. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it.

The information provided in this material is affected by laws and regulations in effect from time to time. It also is affected by facts and assumptions regarding your life circumstances which may change from time to time. Morgan Stanley Smith Barney LLC. undertakes no obligation to update or correct this information as laws, regulations, facts and assumptions change over time. If you have a change in your life circumstances that could impact your investment or planning, it is important that you keep your financial, tax and legal advisors informed, as appropriate.

Be aware that particular legal, accounting and tax restrictions, margin requirements, commissions and transaction costs applicable to any given client may affect the consequences described, and these analyses will not be appropriate to discuss with every client. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives.

Tax laws are complex and subject to change. This information is based on current federal tax laws in effect at the time this was written. Morgan Stanley Smith Barney LLC, its affiliates, employees and Morgan Stanley Financial Advisors and Private Wealth Advisors do not provide tax or legal advice. Clients should consult their tax advisor for matters involving taxation and tax planning and their attorney for matters involving trust and estate planning and other legal matters.

Diversification does not assure a profit or protect against loss. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy.

Clients executing a 10b5-1 Plan (a "PDP") should keep the following important considerations in mind:

(1) PDPs should be approved by the compliance officer or general counsel of the company.

(2) A PDP may require a cessation of trading activities at times when lockups may be necessary to the company (i.e. secondary offerings, pooling transactions, etc.).

(3) A PDP does not generally alter the restricted stock regulatory requirements (e.g. Rule 144, Section 16, Section 13D) that may otherwise be applicable.

(4) PDPs that are modified or terminated early may weaken or cause you to lose the benefit of the affirmative defense.

(5) Public disclosure of PDPs (e.g., via press release) may be appropriate for some insiders.

(6) Most companies will permit PDPs to be entered into only during open window periods.

(7) Morgan Stanley, as well as some issuers, impose a mandatory waiting period between the execution of the PDP and the first sale pursuant to the PDP.

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CONCENTRATED POSITION TOOLKIT

Disclosures

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The Morgan Stanley Global Impact Funding Trust, Inc. (“MS GIFT, Inc.”) is an organization described in Section 501(c) (3) of the Internal Revenue Code of 1986, as amended. MS Global Impact Funding Trust (“MS GIFT”) is a donor-advised fund. Morgan Stanley Smith Barney LLC provides investment management and administrative services to MS GIFT.

While we believe that MS GIFT provides a valuable philanthropic opportunity, contributions to MS GIFT are not appropriate for everyone. Other forms of charitable giving may be more appropriate depending on a donor’s specific situation. Of critical importance to any person considering making a donation to MS GIFT is the fact that any such donation is an irrevocable contribution. Although donors will have certain rights to make recommendations to MS GIFT as described in the Donor Circular & Disclosure Statement, contributions become the legal property of MS GIFT when donated.

The Donor Circular & Disclosure Statement describes the risks, fees and expenses associated with establishing and maintaining an MS GIFT account. Read it carefully before contributing.

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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. **Environmental, Social and Governance ("ESG") investments** in a portfolio 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 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. Certain issuers of investments may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. ESG designations are as of the date of this material, and no assurance is provided that the underlying assets have maintained or will maintain and such designation or any stated ESG compliance. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. Investors should also independently consider whether the ESG investment product meets their own ESG objectives or criteria. 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. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors' risk of loss. The risk of loss due to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund's net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases or sells shares of a closed-end fund, shares may have a market price that is above or below NAV. Portfolios that invest a large percentage of assets in only one industry **sector** (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

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.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

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.

<u>Virtual Currency Products (Cryptocurrencies)</u>

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and <u>may result in a loss of the entire investment</u>. 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 **<u>investors could lose their entire investment</u>.**

- 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.

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.**

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, 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.

The Morgan Stanley Debit Card is issued by Morgan Stanley Private Bank, National Association pursuant to a license from Mastercard International Incorporated. Mastercard and Maestro are registered trademarks of Mastercard International Incorporated. The third-party trademarks and service marks contained herein are the property of their respective owners. Investments and services offered through Morgan Stanley Smith Barney LLC, Member SIPC. Certain terms, conditions, restrictions, and exclusions apply. Please refer to the Morgan Stanley Debit Card Terms and Conditions at http://www.morganstanley.com/debitcardterms for additional information.

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 Securities LLC.

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.

American Express may share information about your Card Account with Morgan Stanley in support of Morgan Stanley programs and services. For information as to how Morgan Stanley will use your Card Account data please visit http://www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/mssb_privacynotice.pdf.

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.

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. 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). 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.

Zelle® and the Zelle® related marks are wholly owned by Early Warning Services, LLC and are used herein under license. Morgan Stanley is not affiliated with Zelle®.

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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Alternative investment securities discussed herein are not covered by the protections provided by the Securities Investor Protection Corporation, unless such securities are registered under the Securities Act of 1933, as amended, and are held in a Morgan Stanley Wealth Management Individual Retirement Account.
This material has been prepared for informational purposes only. It does not provide individually tailored investment advice. This material is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. Morgan Stanley Smith Barney LLC ("Morgan Stanley") recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a Morgan Stanley Financial Advisor. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives.

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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