Wealth Management Perspectives

Private Banking Group Insights

Helping You Achieve Your Personal and Business Goals

Morgan Stanley offers a variety of sophisticated lending and cash management products and services that can help meet your individual needs. Our one page ideas highlight specific concepts designed for education and awareness.

Sample topics include:

- Lending Strategies for Alternative Investments Investors
- Lending Strategies for Business Owners and Business Succession
- Cash Management Education and Strategies
- Education on Applicable Lending Regulations
- Lending to Fund Education Expenses
- Lending to Facilitate Estate Planning
- Lending Strategies for Executives
- Education on Fraud and Protection
- Intergenerational Financing
- Home Loans Education and Strategies
- Lending Strategies for Insurance
- Cash Management Considerations for International Travelers
- Lending and Cash Management Considerations for Various Life Stages and Situations
- Lending Strategies for Philanthropy and Nonprofits
- Risk and Collateral Considerations and Education in Lending
- Securities Based Lending Education and Strategies
- Funding Tax Liabilities With Loans
- Lending and Cash Management Considerations in Retirement

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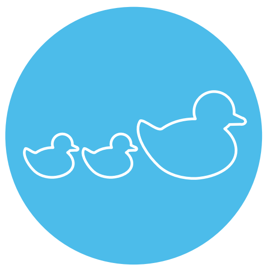
Lending to Facilitate Estate Planning

- Debt to Facilitate Gifting
- Lending to Estates
- Lending Strategies for Grantor Retained Annuity Trusts
- Financing Estate Tax Payments With Debt

Lending and Cash Management Considerations for Various Life Stages and Situations



- Debt Incurred During Divorce or Separation
- Intergenerational Financing
- Lending Strategies to Fund Education Expenses
- Cash Management Education for Parents, Travelers, Retirees, Busy Professionals and Snow Birds

Lending Strategies for Philanthropy and Nonprofits

- Funding Grants With Debt
- Lending Strategies for Private Foundations
- Lending to Nonprofits
- Program Related Investments

Lending Strategies for Business Owners and Business Succession

- Lending Strategies for Business Succession
- Lending to Support Business Growth
- Education on Letters of Credit
- Education on Tax Deductibility of Interest Payments on Loans

Education on Fraud and Protection

- Identity Theft Considerations
  - During Tax Time
  - For International Travelers
  - For Children
- Education on Cybersecurity

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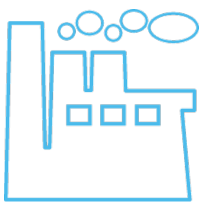
Tax Reform – Bank Impact

The "Tax Reform and Jobs Act" signed into law on December 22nd, 2017, may have impacted some of your borrowing considerations

Mortgage Interest Deductibility

- **Interest may be deductible** on up to **$750k** in new mortgage debt (cap **reduced** from $1MM).
- Interest on Home Equity Lines of Credit **(HELOCs)** may **no longer be deductible**.

Did you know? If you qualify, a **Securities Based Loan (SBL)** may be an **alternative** to a **mortgage** or a **HELOC**.



Business Investment

- Your business may be able to take advantage of **more favorable cost recovery** for **equipment purchases**.

Did you know? If your business qualifies, a **Securities Based Loan (SBL)** may meet your business's **equipment financing** needs, and your business may be able to **deduct SBL interest**.

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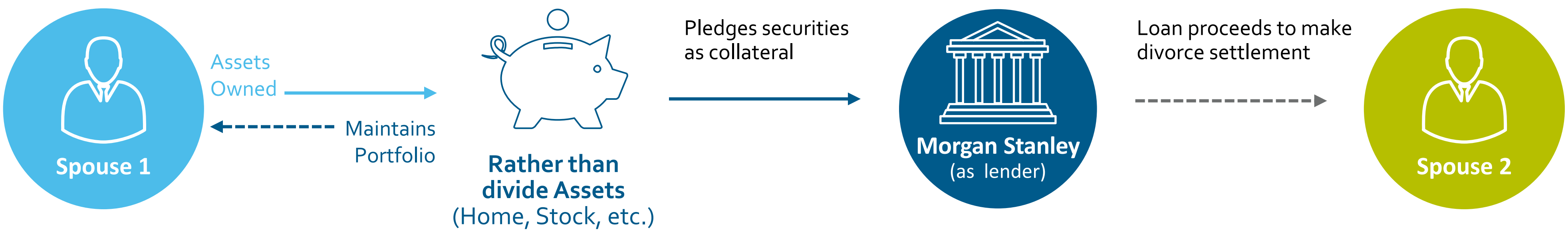
How a Loan May Help You Weather a Divorce

- The **impact of divorce** on your personal and financial life is likely to be **complex,** with assets and liabilities being **split** between both parties. But certain assets including a **home, stock** or **other property** may be difficult to separate.
- If suitable, **short-term debt** may be employed to assist when being confronted with such a situation. For example:
  - Spouse 1 has the opportunity to keep his or her **investment strategy intact** and **control over his or her portion of the collateralized investment portfolio**, reducing possible tax consequences related to a stock sale in the payment of a divorce settlement.
  - Spouse 2 may receive **pay-out in the form of loan proceeds** to settle required divisions of the family home, investment portfolio, insurance, art, retirement accounts, small business interests or other property.



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Considerations for Loans Incurred During and After Separation

If you are taking out a new loan or seeking to draw on an existing loan facility during separation, you may want to take into consideration the following:

- In many cases, **debt of one party may remain the obligation of the other**, even if incurred after separation.
- Criteria which may help determine if a new loan is permissible or an existing facility is structured in a way that allows the separating spouse to draw upon it immediately include:

Do you intend to use the debt for **personal or household expenses?**

Do you reside in a **community property state?**

Do you have a **written separation agreement?**

Is the **loan secured with collateral** such as a mortgage on the family residence or **unsecured** such as with credit cards ?

Is the loan titled in **joint or individual** names?

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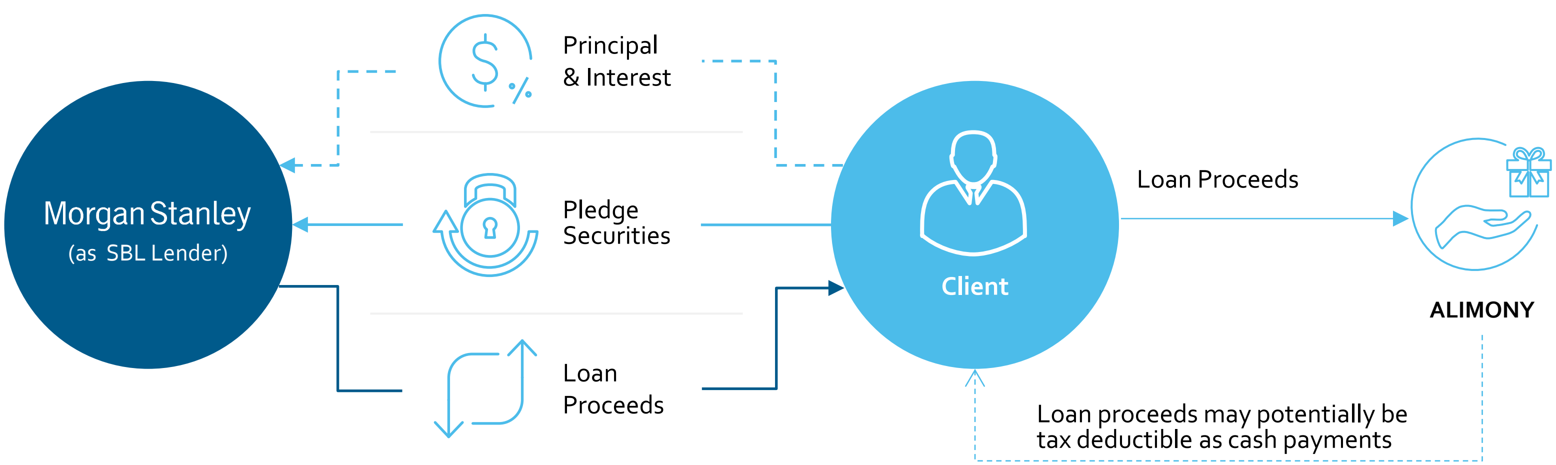
An Alternative Method to Fund Alimony Payments

If you are making alimony payments, you may know that they need to be made in cash to qualify as tax deductible

- If cash is unavailable, or if alimony needs to be paid as a lump sum, a securities based loan (SBL) may be a potential option to fund these payments. If you qualify, you can pledge eligible securities in your existing portfolio to establish an SBL, which provides the following benefits:
  - Alimony payments made with cash loan proceeds may qualify as tax deductible
  - You may be able to keep your investment strategy intact without having to potentially liquidate securities
  - Potentially preserve the portion of the income that may have been otherwise surrendered in selling assets



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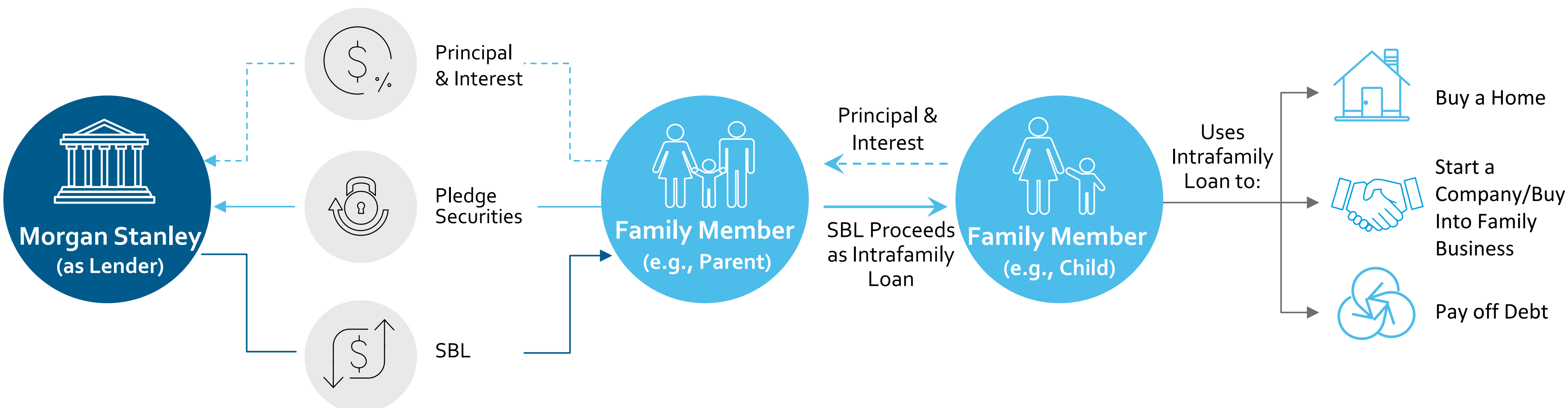
Intrafamily Lending and the Securities Based Loan

Do you want to help family members obtain financing when they are unable to?

- An intrafamily loan* may allow you to provide family members a low-cost source of funds with potential tax benefits for starting a company, buying the family business, paying off high-interest debt or buying a home.
- This strategy can be particularly effective when family members are unable to obtain the required financing for reasons such as a lack of credit history or insufficient savings for the down payment on a home or for expensive commercial and construction financing.
- If you qualify, you may use securities based loan proceeds to fund the loan to your family member, which may defer or avoid potential capital gains taxes that may occur from the sale of assets. In addition:
  - A properly structured intrafamily loan through an attorney should not result in gift taxes.
  - If the intrafamily loan is properly recorded as a lien against real property, the interest paid may be tax-deductible for the borrower on your loan.



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*Intrafamily loans are not a product offered by Morgan Stanley or its affiliates. Intrafamily loans can be arranged between any family members and are not limited to parent-child relationships.

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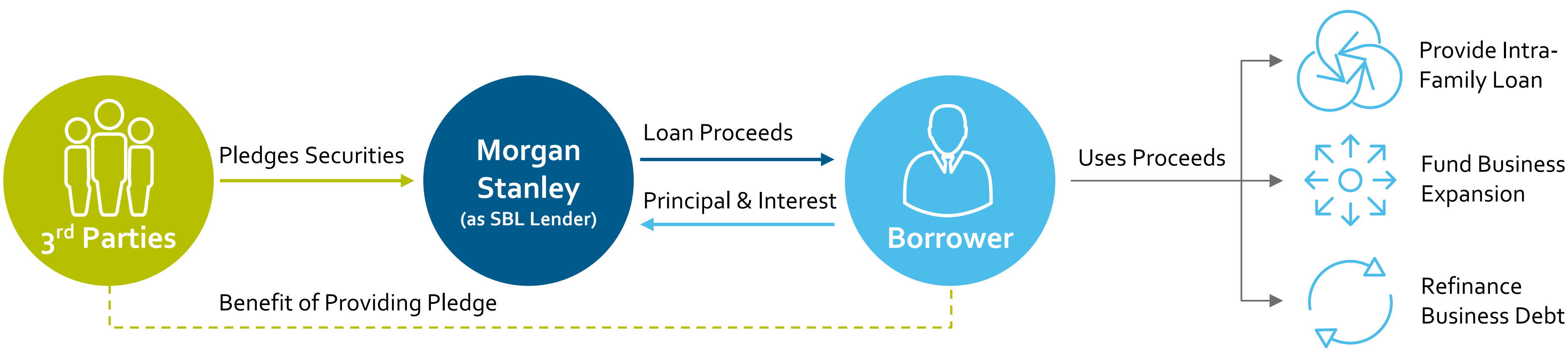
Third Party Pledges for Securities Based Loans

A third party pledge for a Securities Based Loan (SBL) is when an individual or entity pledging securities as collateral for a loan is someone other than the borrower. **Third party pledges are commonly used in SBLs to help facilitate client needs including those for their family members or businesses.** If permissible, third party pledges can be used for a variety of purposes. For example, you might pledge your securities to set up a loan:

- In the name of your adult child so they can make an all cash offer to buy a home.
- To fund the expansion of your family-owned business
- To refinance higher interest business-related debt secured by illiquid balance sheet assets



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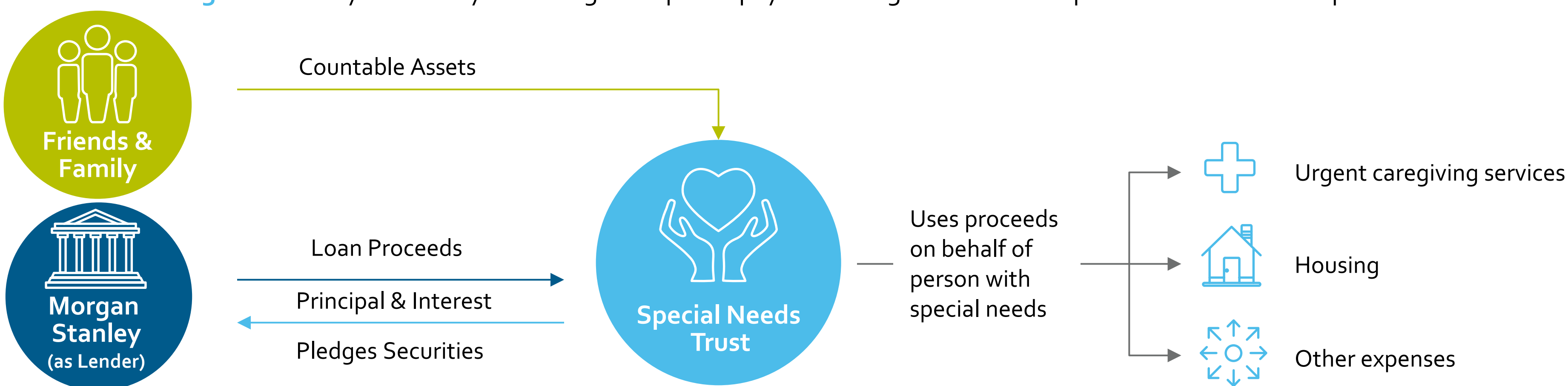
Lending and Special Needs Trusts

You may have created a trust to support a person with special needs

- Persons with special needs may be eligible for benefits from needs-based government programs such as Medicaid and Supplemental Security Income
  - However, gifts of "countable" assets, such as cash or securities, from well-meaning friends and family members could actually reduce eligibility for these benefits
  - A special needs trust is created to receive gifts of countable assets on behalf of special needs persons
- If you qualify, a short-term securities based loan to the trust can be used as part of this strategy and may assist with providing funds for unexpected needs while also:
  - Providing the opportunity to **preserve** the trust's investment strategy
  - **Modulating** portfolio adjustments and avoid triggering a taxable event from the sale of appreciated assets
  - **Smoothing** cash flow by effectively executing a lump sum payment obligation with loan proceeds which can be paid over time



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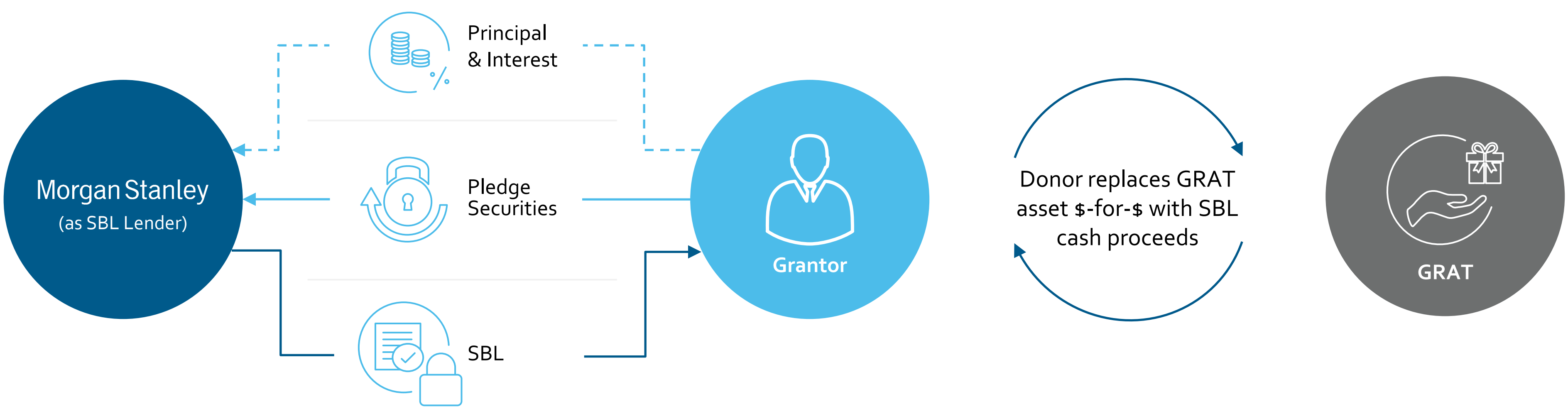
Grantor Retained Annuity Trust (GRAT) Immunization and the Securities Based Loan

- A GRAT is typically created with the **goal of any appreciation in the assets** to be passed to beneficiaries free of gift and estate tax
- **Locking in the value** of (or "immunizing") appreciated securities in a GRAT involves:
  (i) Moving appreciated securities out of the GRAT
  (ii) Replacing them with assets that may be more stable, such as fixed income, cash or cash equivalents
- If cash is unavailable, **securities based loan proceeds** may potentially be used to **replace the appreciated securities and preserve, or immunize, the appreciation** within the GRAT
- Prior to termination of a GRAT, one may substitute the original contributed securities for the remaining cash (loan proceeds) held by the GRAT and then **use the cash to pay down the securities based loan**



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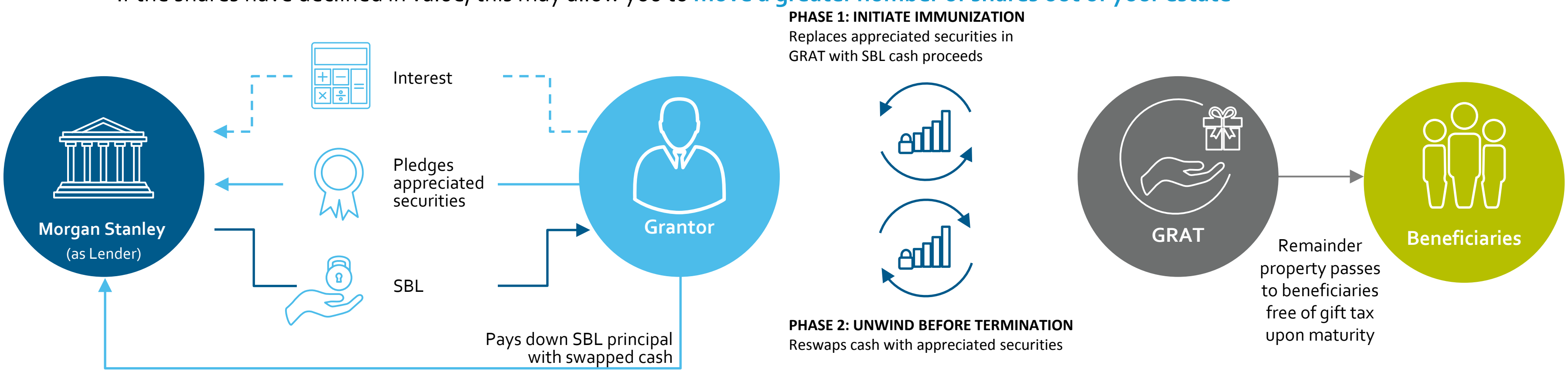
Grantor Retained Annuity Trust (GRAT)—Lock and Grow Strategy

If you have a GRAT, you may consider the debt strategy described below.

- If publicly traded securities in your GRAT have **appreciated substantially** and your GRAT still has **significant time to maturity**, you may want to "freeze" some or all of this early gain, **ensure a minimum level of success** and avoid potential future losses caused by adverse market action
  - To **lock in the value** of the appreciated publicly traded securities, with the assistance of a qualified tax advisor, you may potentially move them out of the GRAT and **replace them with assets that may be more stable, such as cash,** thereby preserving, or **"immunizing,"** the early appreciation within the GRAT
- Did you know? If cash is unavailable without liquidating assets, you may be able to set up a **securities based loan (SBL)** and, once approved, use cash proceeds to **immunize your GRAT**
  - Prior to your GRAT's maturity, you may choose to substitute shares of the same type which the GRAT originally held with a value equal to the remaining cash held by the GRAT, then use the cash to pay down the principal of the SBL
  - If the shares have declined in value, this may allow you to **move a greater number of shares out of your estate**



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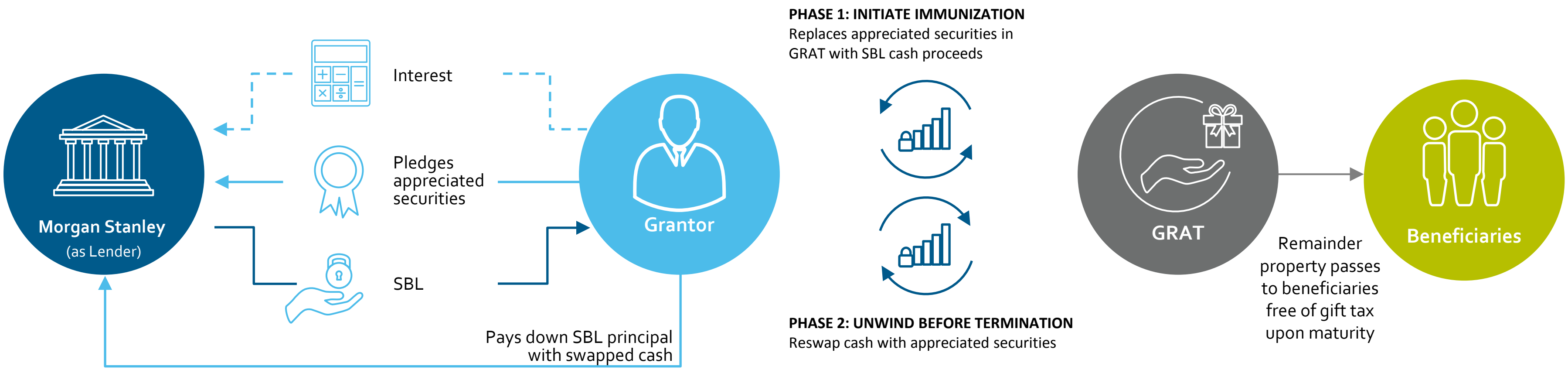
Grantor Retained Annuity Trust (GRAT)—Rescue Strategy

If you have a GRAT, you may consider the debt strategy described below.

- If your GRAT is **nearing its maturity** and holds publicly traded securities which have appreciated to just over the applicable "hurdle rate," a **decline in market value** could **cause your GRAT to fail**
  - You may be able to **rescue your GRAT** that is at risk of failure by effectively **locking in the value** of the appreciated publicly traded securities
  - To do this, with the assistance of a qualified tax advisor, you may potentially move the appreciated securities out of the GRAT and **replace them with assets that may be more stable, such as cash,** thereby rescuing, or **"immunizing,"** the appreciation within the GRAT
- Did you know? If cash is unavailable without liquidating assets, you may be able to set up a **securities based loan (SBL)** and, once approved, use cash proceeds to **immunize your GRAT**



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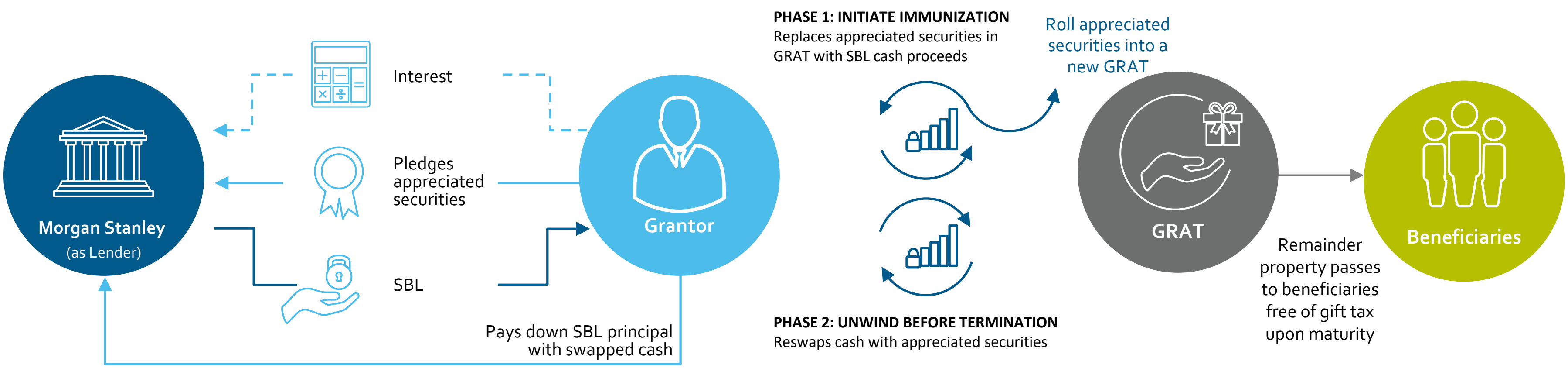
Grantor Retained Annuity Trust (GRAT)—Lock and Roll Strategy

If you have a GRAT, you may consider the debt strategy described below.

- If publicly traded securities in your GRAT have **appreciated substantially** and your GRAT still has significant time to maturity, you may want to "freeze" the early gain in the GRAT, **ensure a minimum level of success** and then work with your tax advisor to **"roll"** the GRAT's appreciated assets into a **second GRAT**, seeking to capture further tax-efficient gain during the second GRAT's term
  - To **lock in the value** of the appreciated publicly traded securities, with the assistance of a qualified tax advisor, you may potentially move them out of the first GRAT and **replace them with assets that may be more stable, such as cash,** thereby preserving, or **"immunizing,"** the appreciation in the first GRAT
- Did you know? If cash is unavailable without liquidating assets, you may be able to set up a **securities based loan (SBL)** and, once approved, use cash proceeds to **immunize your GRAT(s)**
  - With the assistance of a qualified tax advisor, using **"rolling GRATs"** supported by strategic debt potentially **leaves your growth potential as a possibility**, since publicly traded securities may remain continually deployed in one or more GRATs



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Four Ways to Pay Estate Taxes

When losing a loved one, you may be faced with new and unanticipated financial challenges including estate tax obligations that may require immediate liquidity. Consider the below four options when determining which funding method to use:

Cash

Cash may be used if sufficient reserves are available in the estate but often times, estates inherit illiquid assets such as real estate or stock in the family business.

Life Insurance Proceeds

Life insurance cash proceeds may be used, provided sufficient liquidity is available after federal or state estate tax liabilities and other related expenses have been covered.

Liquidation of Assets

You may liquidate existing assets in the estate but this may not always be desirable as you may be faced with financial loss if market conditions are unfavorable .

Debt

If you qualify, you can pledge eligible securities in the deceased's estate to establish a short-term loan and use the loan proceeds to cover the tax obligation. This may allow you to maintain the existing portfolio without having to liquidate assets. You may also be able to liquidate the assets at a potentially more favorable time.

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Considerations in Providing a Securities Based Loan to an Estate

Trust and Estate planning is an important part of certain individuals' overall strategic plan to pass on wealth to the next generation, and considering all potential solutions is important, even during important or challenging family events.

An often overlooked question is how to address debt held in the name of the deceased, or how a short-term securities based loan (SBL) might actually help facilitate the settlement of the Estate. For example:

- An SBL may be a possible solution to pay the Estate tax liability, provided the tax liability is paid in full using loan proceeds
- A short-term SBL may even help facilitate the settlement of an Estate by providing much needed funding

A loan to an Estate may not work in all situations, but Morgan Stanley has the experts to help you navigate the process.

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Combining Lending Strategies With Alternative Investments

As an Investor in Alternative Investments, you may have access to a variety of lending solutions to facilitate your strategies and accomplish your goals. Some strategies may include:

CAPITAL CALLS

If eligible, a loan collateralized by marketable securities to fund capital calls may offer you financing for strategies to manage risks while managing cash flow needs throughout the Fund's investment and holding periods.

EXCHANGE FUNDS AND LIQUIDITY

You may be able to use your Exchange Fund interests as collateral to establish a loan which may allow you to diversify, while avoiding a tax bill and redemption fees.

BARBELL INVESTMENT STRATEGY

A loan may enhance your barbell investment strategy by providing you with liquidity to meet capital call obligations and other expenses while you invest in assets with higher potential returns.

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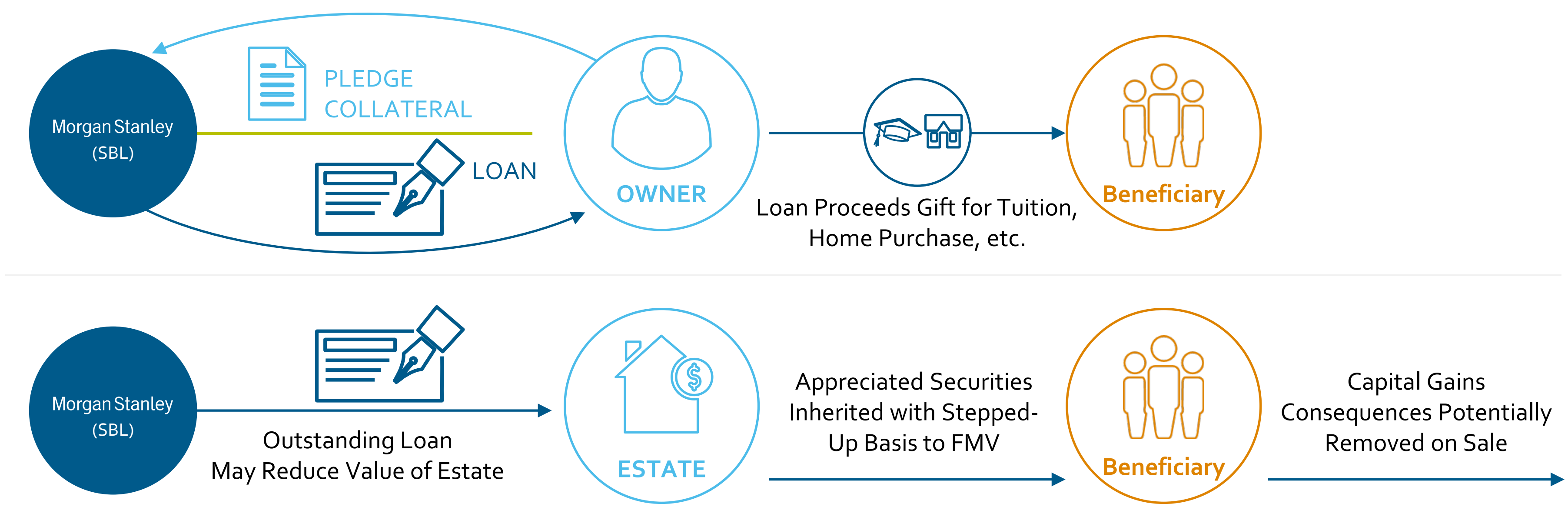
Debt to Facilitate a Gifting Strategy

- How can your children benefit from gifts during your lifetime while minimizing the negative tax consequences associated with gifting appreciated property unless you have substantial amounts of uninvested cash reserves available?
- Establishing a loan collateralized by your eligible securities and gifting the loan proceeds rather than the securities directly. This strategy offers two potential benefits:
  - The gift recipient may have immediate access to cash that can be used for many needs, including a home purchase or college expenses.
  - You can wait to pass your appreciated securities to your heirs with a stepped-up basis at the time of death, removing any capital gains consequences on a sale.



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Funding Private Capital Offerings With Loans

If you are investing in Alternative Investments (AIs) such as Private Capital Offerings which include Private Equity, Private Credit and Private Real Estate, you may want to consider lending as an alternative funding option.

- The typical horizon for Private Capital Offerings is 7 – 10 years (see J-Curve diagram below) with some funds going above their 10 year stated life. This may expose you, the investor, to **Liquidity Risk** as the funds cannot be redeemed, and potential **Interest Rate Risk** as interest rates tend to change over time.[1]
  - If you are unable to provide the capital when requested by the fund, penalties may apply.
- Have you considered using a securities based loan to fund capital calls for Private Capital Offerings? If you qualify, this option may allow you to obtain access to financing in lieu of selling appreciated assets, with the potential to keep your investment strategy intact and avoiding the negative tax consequences that may come with liquidating.
- As a Private Capital Offerings Investor, this strategy may allow you to manage the **non-investment risks** associated with liquidity and rising interest rates, while managing the cash flow needs throughout the fund's investment and holding periods.

J-CURVE: HYPOTHETICAL CASH FLOWS OF A PRIVATE CAPITAL OFFERING

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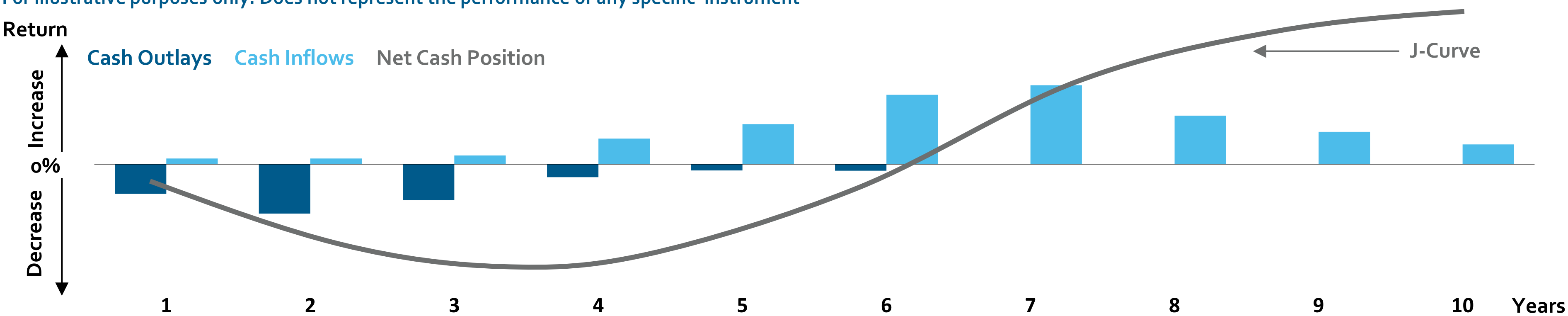

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Borrowing against liquid assets to fund the purchase of illiquid AI can be risky, complicated, and not all clients or funds are eligible. In order to be eligible to invest, a client must be an Accredited Investor, as defined by Rule 501 of Regulation D of the 1933 Act. For certain private funds, the client must also be a Qualified Client, as defined by Rule 205-3 of the Investment Advisers Act of 1940, as amended, or a Qualified Purchaser, as defined by Section 2(a)(51) of the 1940 Act. The Firm may impose an eligibility standard for a particular private fund that may be higher than those required to meet the Accredited Investor, Qualified Client, or Qualified Purchaser standards. Please also note that Alternative Investments are not eligible collateral for any of the securities based loans discussed.

1. Global Investment Committee, Tactical Asset Allocation Changes, July 14, 2016.

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Considerations if Funding Capital Calls With Securities Based Loans

Do you need to raise funding to cover capital calls but do not want to liquidate securities or use cash reserves?

- Funding capital call requirements with cash or through the liquidation of existing assets may not always be desirable
- Have you considered using a securities based loan (SBL) to fund your capital call requirements? Pledging your eligible securities as collateral to establish an SBL and using the loan proceeds to cover capital call requirements may allow you to:
  - Potentially keep your investment strategy intact without having to potentially liquidate existing assets
  - Obtain **access to a source of funds** for a variety of needs
  - Help manage **liquidity and interest rate risk** associated with Private Capital Offerings, such as Private Equity, Private Credit and Private Real Estate
  - Retain **cash flow yield** from your fully invested portfolio of marketable securities

The following considerations must be taken into account when determining if an SBL can be used to fund capital calls:

- Suitability
- SBL product type
- Underlying strategy and use of funds of the Alternative Investment (AI) Fund
- Potential affiliation of the Fund with Morgan Stanley
- Technology and Operations

The below table outlines SBL eligibility to fund capital calls:

Eligibility for using loan proceeds to fund Private Capital Offerings Capital Calls

Loan Product	On-Platform at Morgan Stanley	AI Investments away from Morgan Stanley
Margin	✓ Eligible	✓ Eligible
Liquidity Access Line	! ***Potentially*** Eligible	! ***Potentially*** Eligible

* Although clients may be eligible to utilize a SBL to fund the purchase of an alternative investment or fund a capital call for investments that were purchased away from Morgan Stanley (at another broker-dealer or direct with a fund manager), such investments will not receive the support, services, and/or benefits which on-platform, approved/researched alternative investments receive

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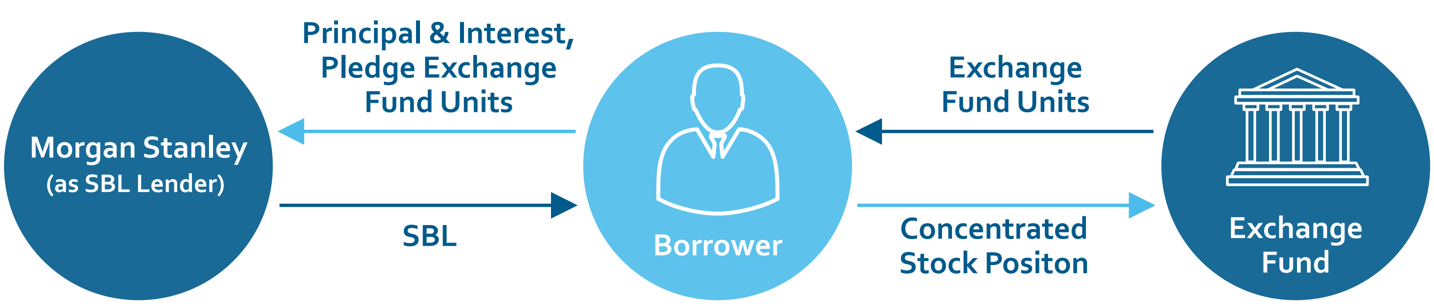
Exchange Fund Liquidity and Lending

Who Typically Contributes to Exchange Funds?

- Investors who hold large single stock position(s), acquired over time or through a single event
- Investors often seeking viable methods to
  - Participate in potential growth and earnings
  - Improve diversification of assets
  - Diversify without triggering a taxable event

How does this pertain to Lending?

- Certain investors who qualify may be able to achieve diversification and an option for meeting potential liquidity needs by transferring concentrated equity positions to an exchange fund, their interest in which they can potentially pledge as collateral to receive a securities based loan (SBL)
- Rather than you making a redemption of your exchange fund interest or selling out of the original position, an SBL may potentially offer a more cost effective liquidity measure



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Liquidity and the Barbell Investment Strategy

Certain high net worth individuals maintain a holistic balance sheet investment strategy known as **"Barbell Investing".**

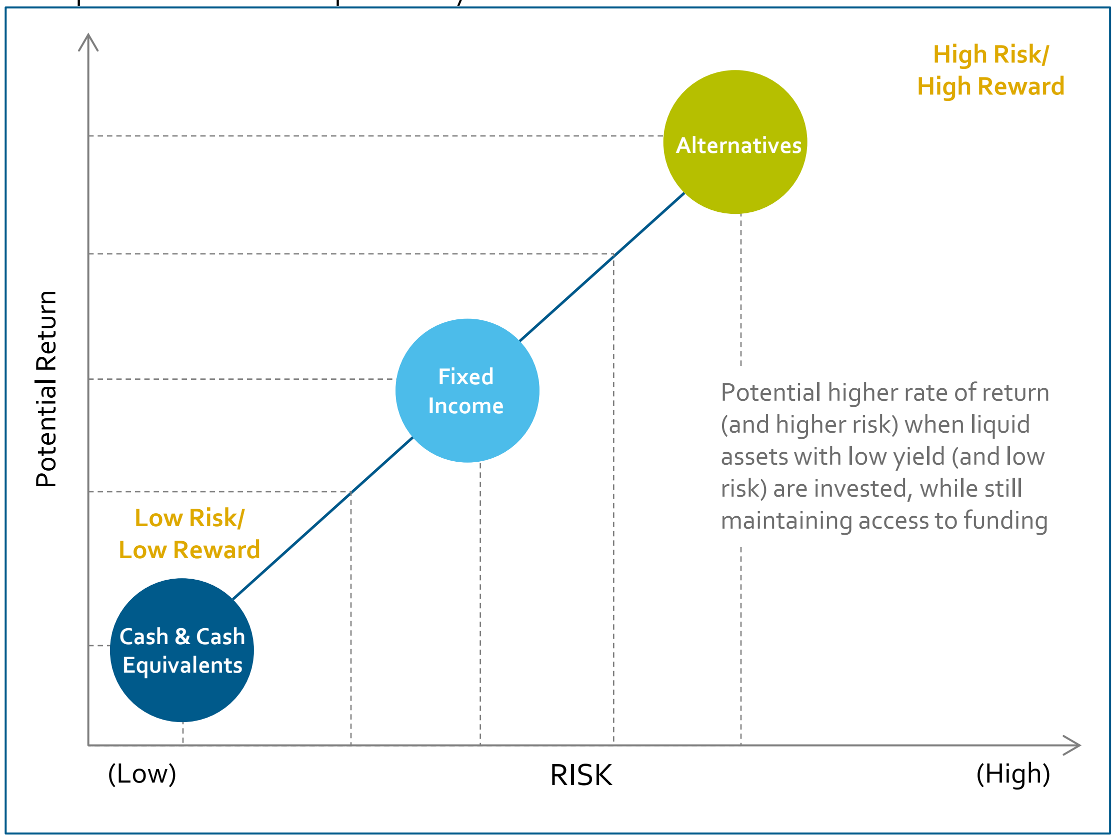
Barbell Investing is where someone, such as Private Equity Principals or Real Estate Investors, holds a **combination of liquid investments – which are often low yielding – alongside a portfolio of illiquid, high risk investments,** such as private equity or real estate.

What may not have been considered is how debt can be used as part of such a strategy. Debt may allow you to:

- Obtain **access to funds,** to potentially meet capital call obligations and other expenses, while maintaining the **flexibility to re-allocate** your existing low yield assets into potentially higher rate of return assets.
- Use **fixed rate advances** to match a private equity or real estate investment time horizon in order to **manage interest rate risk and interim liquidity needs.**

Hypothetical Annualized Risk and Return of Asset Classes Within Client's Balance Sheet

Example for Illustrative Purposes Only



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Investments seeking higher rates of return also involve a higher degree of investment risk. Rates of return will vary over time, particularly for long-term investments. 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. The strategies discussed in this material are meant for clients with a specific need and may not be suitable for all clients. No legal, tax or other advice is being offered herein.

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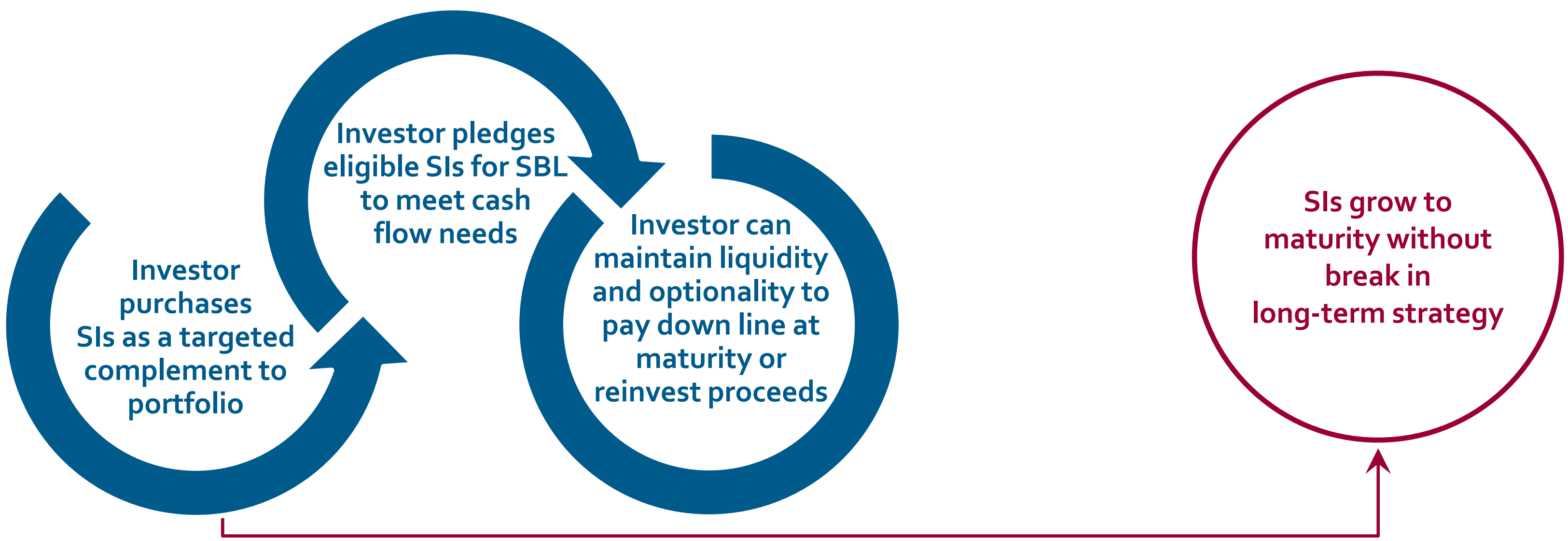
Structured Investments as Collateral for Securities Based Lending

- Structured Investments (SIs) may provide investors with targeted, long-hold, strategy-specific securities to express a specific **long-term market view** with downside protection.
- SIs can combine both **Fixed Income and Equity components** along with exposure (sometimes leveraged) to specific market segments or industries.
- A Securities Based Loan (SBL) may allow an investor to **meet immediate liquidity needs** without the downside risk of liquidating the SIs prior to maturity. An investor may reap the benefit of **targeted exposure** and use the assets as collateral for a loan with the potential of not selling the SIs prior to maturity.



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Structured Investments are complex and not suitable for all investors, and 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. Only SIs from eligible issuers are potentially eligible as collateral. Each SI is subject to review and approval before it may be used as collateral. Additional terms, restrictions, and risks apply when borrowing against SIs.

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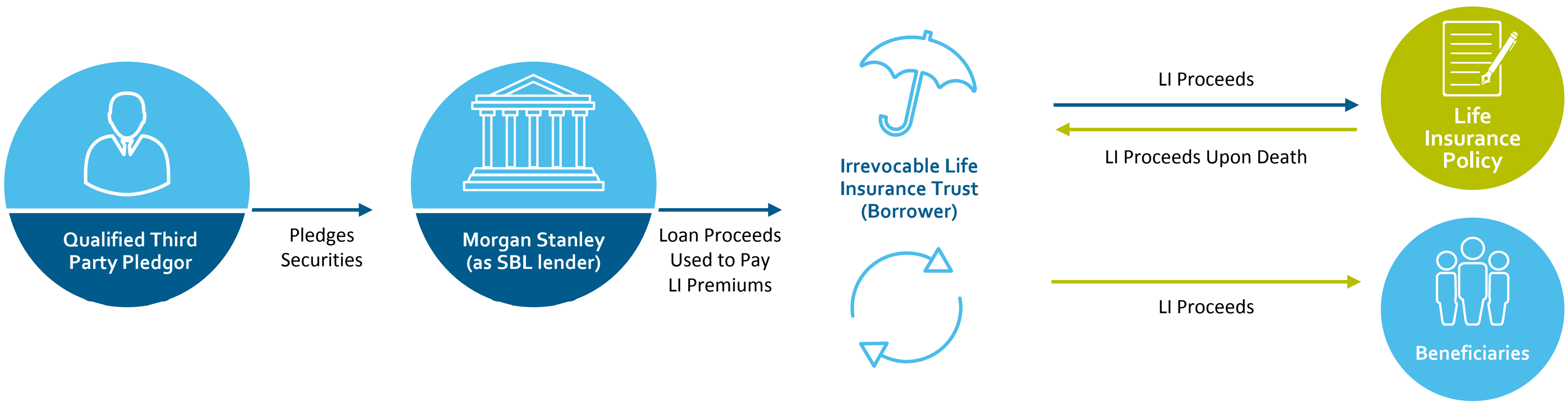
Third Party Pledges and Life Insurance (“LI”) Planning

If you want to minimize your estate tax exposure and provide funding for your family, you may have already established an Irrevocable Life Insurance Trust (“ILIT”). You may fund the premiums with a securities based loan (“SBL”) and a third party pledge as part of your gifting strategy.

- The ILIT is intended to **reduce estate taxes** by keeping life insurance proceeds outside the estate
- Gifting cash or securities to fund the ILIT may be treated as taxable or count towards your lifetime **gift tax exclusion**
- These pitfalls can be avoided if a **qualified third party** (i.e. the insured) pledges eligible securities to collateralize the loan to fund premiums instead of the ILIT
    - At death, LI proceeds flow to the ILIT. Once estate expenses are paid, LI proceeds flow to beneficiaries with **tax strategy advantages** intact



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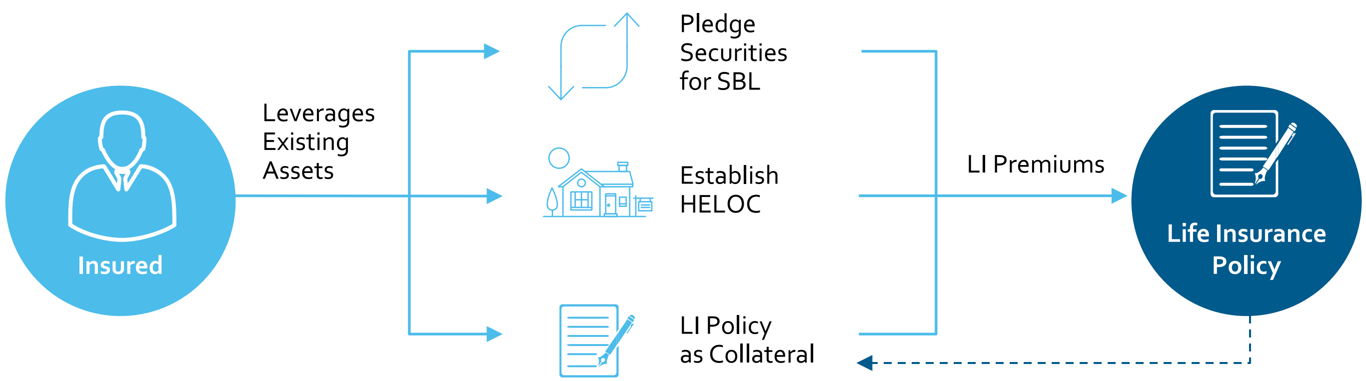
Using Debt to Fund Your Life Insurance Policy

If you are looking to preserve an existing investment strategy and spending pattern while protecting loved ones from bearing large tax or liquidity needs through Life Insurance (LI), you may consider using debt to fund an established policy's premiums.

- Funding LI premiums with cash or through the liquidation of existing assets may not always be desirable. It reduces cash reserves, can interrupt an existing investment portfolio and may have possible negative tax consequences.
- Using debt involves leveraging existing assets such as the LI policy itself, a home, or securities as collateral to raise funding for policy premiums:
  - Obtain premium financing from a traditional third party provider who takes the **LI Policy as collateral.** This is only available with policies that include a cash value component (e.g. established Whole Life or Universal policy) and may require additional collateral in early years, while the cash value builds up.
  - A **HELOC** may offer a potential liquidity source.
  - Pledging your eligible securities as collateral to establish a short-term **securities based loan (SBL)** and using the loan proceeds to cover the LI premiums may allow you to retain your investment strategy without having to potentially liquidate existing assets and keep your current spending pattern in place.



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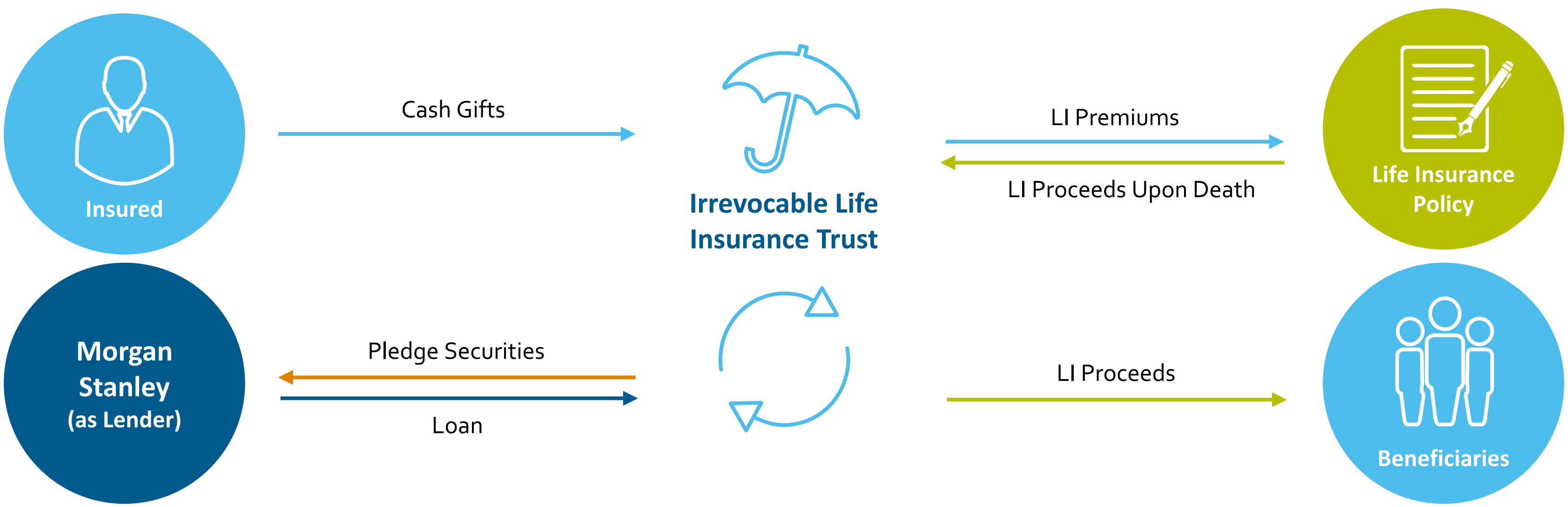
Lending and an Irrevocable Life Insurance Trust

You may have already considered life insurance, among other things, to protect your family by providing funds to pay estate taxes and related expenses.

If you have purchased life insurance through an Irrevocable Life Insurance Trust ("ILIT"), you may want to consider using proceeds from a loan to fund the premiums.

- The ILIT is intended to reduce estate taxes by keeping life insurance proceeds outside the estate. Gifting cash or securities that are expected to appreciate to the ILIT (being mindful of annual gift tax exclusions) is one potential method of funding insurance premiums.
- Using those securities, if eligible, as collateral for loans established by the ILIT, then funding life insurance premiums directly with loan proceeds, may allow you to keep the securities (in particular those purchased at a low cost basis) and keep any potential future appreciation outside the estate.
- Upon the death of the insured, the policy proceeds are paid to the ILIT and used to pay estate tax liabilities, administration expenses, or even outstanding medical or funeral expenses.



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Managing Rising Health Care Costs: The Importance of Long-Term Care Insurance

- Many people, regardless of age, due to a disability or otherwise, will require Long-Term Care at some point in their lives.
- You may have properly planned to generate steady income to fund a desired lifestyle, but may not have planned for rising Health Care costs: **In 30 years, the projected national average cost for 5 years of long-term care is $1,914,006.**[1]
- A common solution for funding costly long-term care is through a Long-Term Care Insurance Policy.
- While payments and features of a policy may be customized to meet your needs and budget, the best method of payment within the boundaries of a broader tax and investment strategy can be more complex.
- If you have a long-term care insurance policy, you may consider funding the policy's premiums with a loan. If you qualify, a securities based loan (SBL) may allow you to **prevent a disruption in your investment strategy.**
- **Using a Long-Term Care Insurance Policy, along with a loan may be an effective strategy for supporting needed care, with the intent of keeping your investment strategy intact.**

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1. http://jhinsurancewebsitedev.azurewebsites.net/long-term-care/cost-of-long-term-care-calculator/index.aspx

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Considerations in Funding Life Insurance Premiums With a Securities Based Loan

If you have already purchased a life insurance policy, you may fund the premiums with a securities based loan. Use the below table as a guideline for available options based on the type of policy you own:

	Term	Whole	Universal	Variable
Common Types and Characteristics of Life Insurance				
General Characteristics	• Protection for term typically not in excess of 30 years • No cash value	• Protection for the entire life of insured • Cash value component that grows tax deferred upon amount until withdrawn • Premiums are typically level for life	• Protection for the entire life of insured • Cash values and level of protection can be adjusted up or down during the term as your needs change	• Protection for the entire life of insured • Cash value allowed to be invested in variable investment choices • Death benefit may fluctuate based on performance of the investment choices
Typical Client Need	• Limited time needed for specific protection	• Seeking guaranteed death benefit no matter how long they live	• Seeking permanent coverage but wants choice of changing premium and death benefit	• Seeking lifetime coverage, but tolerant of risk associated with securities investment
Temporary Coverage	✓			
Permanent Coverage		✓	✓	✓
Potential to Build Cash Value		✓	✓	✓
Growth Potential Based on Investment Performance				✓
Using Securities Based Loan Proceeds to Fund Insurance Premiums				
Portfolio Loan Account or Liquidity Access Line	✓	✓	• With written confirmation of non-variable nature of policy	
Express CreditLine	✓	✓	• With written confirmation of non-variable nature of policy	
Margin	✓	✓	✓	✓

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Considerations in Funding Annuities With a Securities Based Loan

If you have already purchased an annuity, you may consider using a securities based loan to fund the premiums. Use the below table as a guideline for options that may be available based on the type of policy you own:

	Fixed Immediate	Variable Immediate	Deferred Fixed	Deferred Variable	Deferred Indexed
Common Types and Characteristics of Annuities					
Potential Benefits	• Guaranteed lifetime income with steady payments	• Guaranteed lifetime income payments that may have growth potential to help keep pace with inflation	• Guaranteed fixed rate of return	• Wide range of investment portfolios with growth potential options	• Guaranteed minimum accumulation value combined with an interest rate based on a formula that is linked to a market index.
Who Should Consider?	• Clients looking for a guaranteed stream of income	• Clients looking for income that may have the potential to grow over time or investors who can withstand fluctuations in their income based on investment performance	• Clients looking for tax-deferred instruments (after maximum contributions have been made to their 401(k) and other before-tax retirement plans) that offer a guaranteed rate of interest for a set period of time	• Clients who are comfortable with potential earnings that will fluctuate based on investment performance	• Clients who may want certain characteristics from both annuity types and want a minimum guaranteed interest rate combined with an interest rate linked to a market index
Using Securities Based Loan Proceeds to Fund Annuities					
Liquidity Access Line	✓		✓		
Express Credit Line	✓		✓		
Margin	✓	✓	✓	✓	✓

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Trust but Verify – Lending to Entities

Legal Entities

1

Our Wealth Management clients often use legal entities such as trusts, partnerships, limited liability companies or corporations to, among other things:

A. Protect their assets
B. Help run their businesses
C. Create tax efficiencies

Due Diligence

2

Morgan Stanley is typically able to offer suitable securities based lending (SBL) solutions to entities that qualify, **but for the protection of both itself and its clients, needs to conduct a thorough due diligence investigation before extending any loan and/or accepting any proposed collateral.**

Impermissible Actions

3

One of Morgan Stanley's primary concerns is to verify that an entity has the ability to enter into an SBL transaction under both its organizational documents and applicable law. Impermissible actions can threaten the enforceability of Morgan Stanley's loan and also subject the client to third-party liability.

Trust but Verify

4

To mitigate these risks, Morgan Stanley mainly relies on certifications of trustees, officers or other entity representatives. Secondly, we also independently verify an entity's ability to borrow and pledge and attempt to identify any other potential risks by reviewing the entity's organizational documents.

Unintended Consequences

5

While Morgan Stanley does not provide tax or legal advice to its clients, as part of our due diligence review **we also make every effort to help clients avoid potential unintended adverse consequences whenever possible.** These could include, for example, tax or other liability due to (a) a pledge by a not-for-profit entity which is contrary to donor restrictions, or (b) an improper borrowing by a specialized charitable trust.

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Borrowing With Trusts, LLCs, Partnerships and Corporations

A trust, limited liability company (LLC), partnership or corporation may need access to funds to finance various short-term needs. How do you raise them?

- A **trust** may need funds to support estate and/or tax planning, pay life insurance premiums or distributions, or make loans to grantors or beneficiaries
- An **LLC, partnership or corporation** may need funds for working capital purposes, acquisitions or capital expenditures, or to finance dividends or distributions to equity holders
- If you qualify and your organizational documents allow, you may use proceeds from a short-term securities based loan to help meet these funding needs without depleting cash reserves. This strategy may also be used to:
  - Provide assistance to **current lifetime beneficiaries** while preserving assets for remainder beneficiaries
  - **Refinance higher** interest business-related debt secured by illiquid assets
  - Liquidate assets at a potentially **more favorable time**

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Are Foreign Equities Eligible for Margin?

Do you own foreign equity securities but are not sure if they are eligible to be used as collateral for a Margin loan?[1] Generally, at a minimum, each security needs to have a "ready market", satisfied with the below criteria, in order to be potentially eligible:

Quotation

Daily bid and ask quotations are continuously available to broker-dealers in the United States through an electronic quotation system.

Market Capitalization

The aggregate unrestricted market capitalization exceeds $500 million over the preceding 10 business days.

Exchange

The security is listed for at least 90 days on a foreign securities exchange located within a country that is recognized by the FTSE World Index.

Trading Volume

The median daily trading volume is at least 100,000 shares or $500,000.

Other Credit, Legal, Compliance and Risk-related requirements, such as minimum share price, sufficient trading volume relative to loan size, and custody rules, may apply and impact Morgan Stanley's ability or willingness to lend on foreign equities.

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1. The "ready market" test only applies to broker-dealer loans as per SEC Rule 15c3-1(c)(11). Different requirements may therefore apply to Morgan Stanley Private Bank, National Association loans such as Liquidity Access Line.

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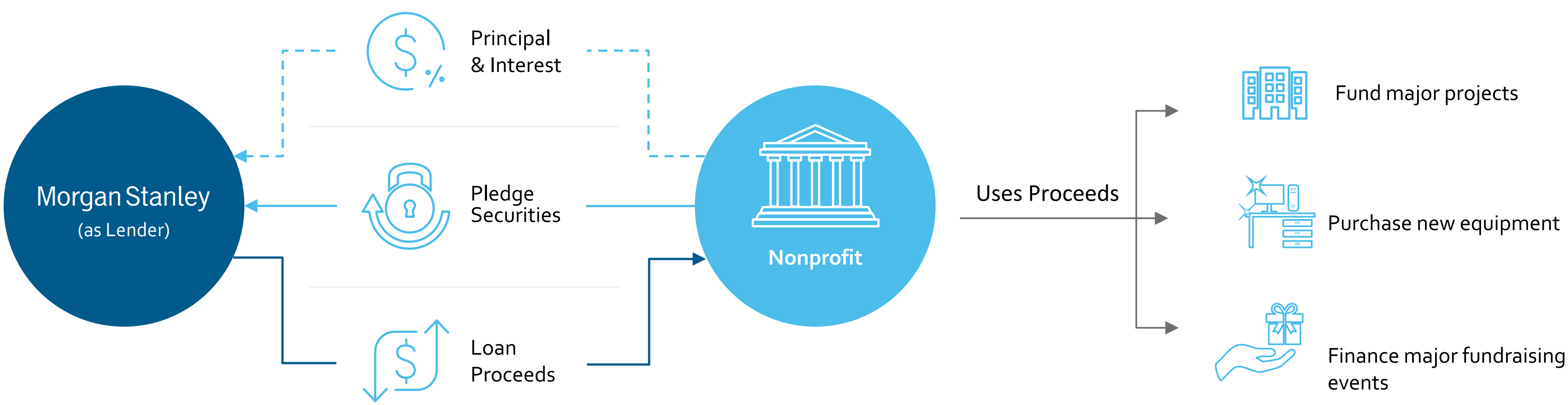
Funding Strategy for Nonprofits

Proactively managing your cash flow and reserves while creating funding for your charitable causes when needed

As a Nonprofit, you may have access to capital through gifts, grants or donations

- Oftentimes these revenues may be received in large and irregular amounts or may be seasonal via signature fundraising events
- If you qualify, a short-term securities based loan may help you overcome these cash flow challenges by providing you **required funds** when needed, while also potentially **preserving your existing investment strategy**
- This strategy, coupled with proactive management of your cash flows, may allow you to **reallocate** your existing portfolio from one that is intended to meet a specific distribution schedule **to a longer duration strategy** to earn a potentially higher return in a normal rate environment. Please note that investing for higher returns may lead to greater risk



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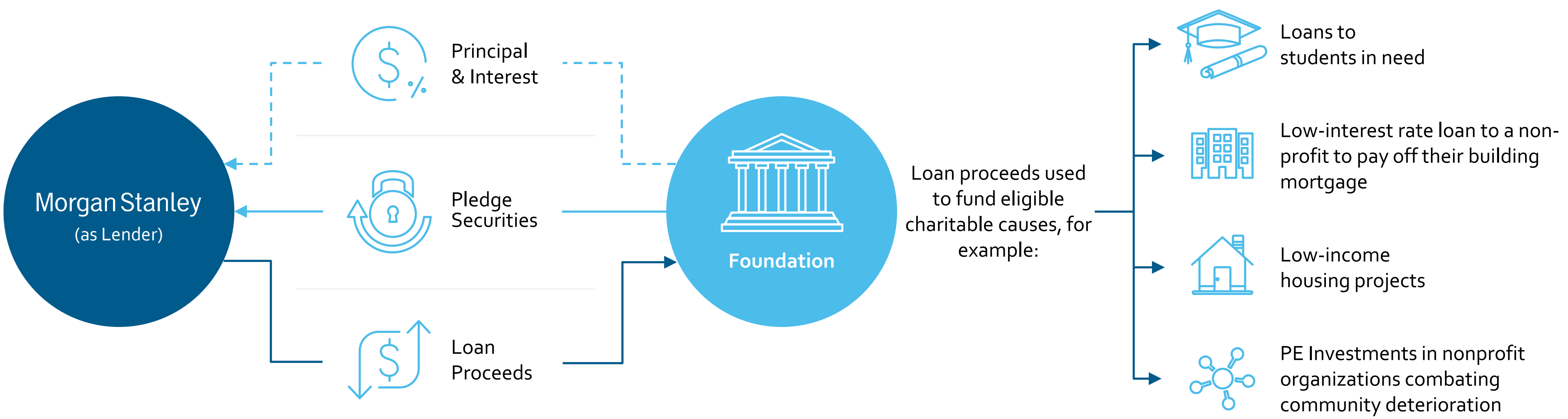
Lending Strategies for the Private Foundation

- Private foundations must make **"qualifying distributions"** each year in the form of grants to charitable causes of at least **5%** of the average fair market value of its includible investment assets for the preceding year
- **Program-Related Investments (PRIs)** are loans and private equity investments made to specifically support a charitable purpose and **may count** as "qualifying distributions"[1]
- Funds for PRIs and grants are typically made available through a **specific investment strategy** and available cash
- As an alternative or supplement to an investment strategy focused on cash generation for grants, **a short-term securities based loan** may have the flexibility of available cash, in the form of loan proceeds, **for PRIs.** As an example, available cash may allow the flexibility to analyze a **longer duration investment strategy** that may impact the foundation's long-term **sustainability** and level of success



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1. https://www.irs.gov/charities-non-profits/private-foundations/program-related-investments

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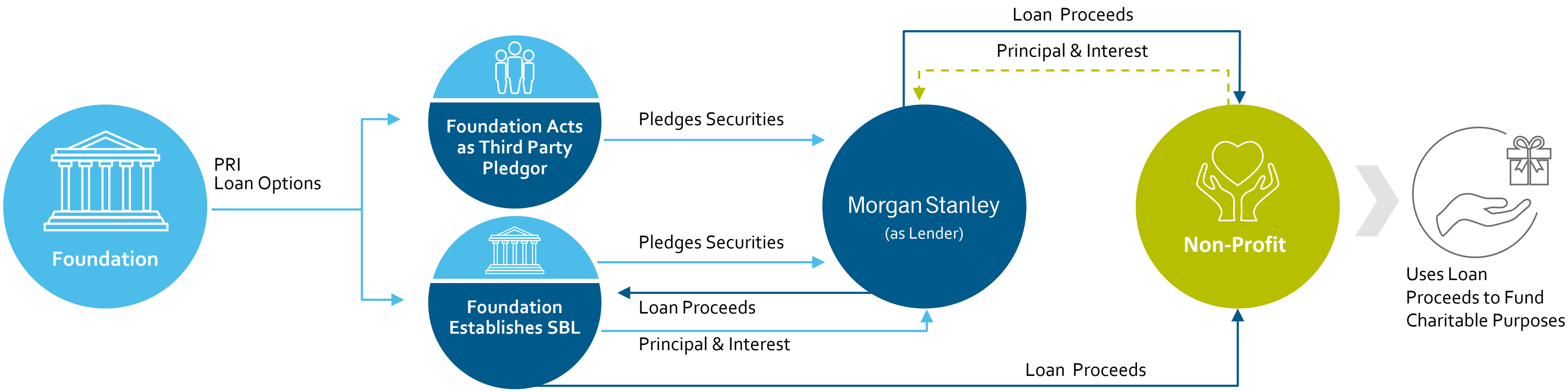
Funding Program Related Investments

A Private Foundation is required to make **"qualifying distributions"** each year in the form of grants to charitable causes of at least **5%** of the average fair market value of its includible investment assets for the preceding year[1]

- Program Related Investments (PRIs) may count towards your distribution requirement and include financing methods such as loans, loan guarantees, linked deposits, and equity investments used for charitable purposes
- **Have you considered using securities based lending (SBL) to fund PRIs?** You can help **provide funding to non-profit organizations** who may otherwise not qualify for a loan or receive less competitive loan terms by:
  - Pledging your eligible securities to establish a loan and provide the loan proceeds to the charitable organization; or
  - Acting as a qualified third party pledgor by pledging eligible securities to collateralize a loan on behalf of the charitable organization
- Potential benefits include **maintaining your existing investment strategy** without having to liquidate securities while also being able to **recycle philanthropic capital** through repayment of the loan and/or return on equity



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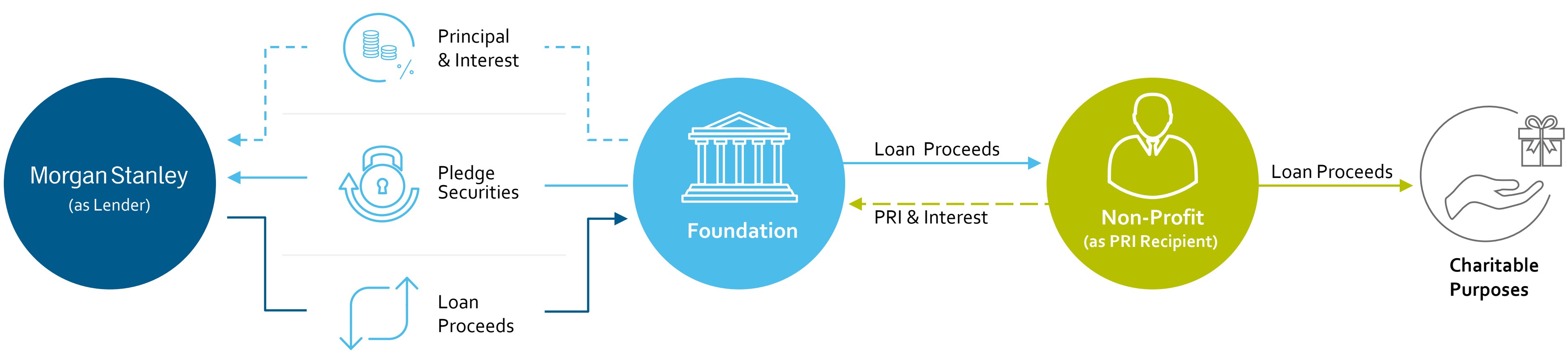
1. https://www.irs.gov/charities-non-profits/private-foundations/program-related-investments

Program Related Investments (PRIs) with Loans

A Private Foundation is required to make **"qualifying distributions"** each year in the form of grants to charitable causes of at least **5%** of the average fair market value of its includible investment assets for the preceding year[1]

- You may want to consider pledging eligible securities in the foundation's portfolio as collateral to establish a loan and use the loan proceeds as a funding source for PRIs
- This strategy may allow you to **maintain your existing investment strategy** without having to liquidate securities. In addition, you may:
  - Receive a potential **return on your Program Related Investment** in form of repayment of the loan from the charitable organization; and
  - **Recycle philanthropic capital** for other charitable causes as PRIs are paid back with interest
- The recipient charitable organization receives necessary funds it may not be able to receive through commercial lenders or with less competitive terms to support its charitable purpose



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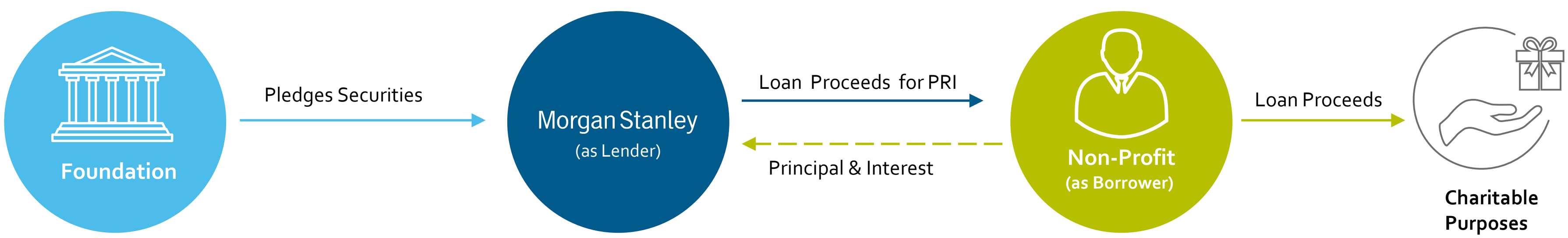
Program Related Investments (PRIs) with a Third Party Pledge

A Private Foundation is required to make **"qualifying distributions"** each year in the form of grants to charitable causes of at least **5%** of the average fair market value of its includible investment assets for the preceding year[1]

- **A third party pledge, which is when an individual or entity pledging securities as collateral for a loan is someone other than the borrower, may count towards your PRI distributions**
- In this scenario, the foundation acts as a qualified third party pledgor by pledging eligible securities as collateral to secure a loan on behalf of a charitable organization
- This strategy may allow you to **maintain your existing investment strategy** without having to liquidate securities for grants or other distributions
  - The recipient charitable organization **receives necessary funds** it may not be able to receive through a commercial lender or with less competitive terms to support its charitable purpose



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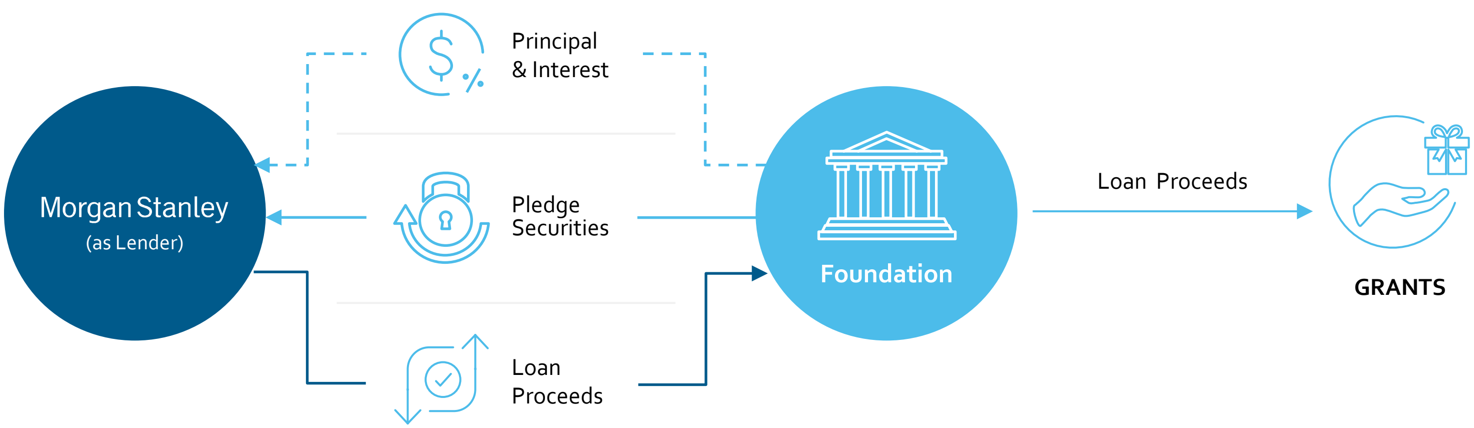
Funding Grants with Debt

A Private Foundation is required to make **"qualifying distributions"** each year in the form of grants to charitable causes of at least **5%** of the average fair market value of its includible investment assets for the preceding year[1]

- To fulfill this requirement in the form of cash grants, you must maintain ample cash, often at a specific time of the year
  - If cash is unavailable, you must sell a portion of your existing securities portfolio which may disrupt your existing investment strategy
- You may consider debt, in the form of a securities based loan, as an alternative to fund the grants
  - In this scenario, you can pledge your existing eligible securities as collateral to establish a loan and use the loan proceeds to fund the grants.
- This strategy may allow you to **maintain your existing investment** strategy while receiving available cash, when needed. Other potential benefits include:
  - Reallocation of existing portfolio that may currently be matched to **meet a specific distribution schedule to a longer duration strategy**



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Tax Deductibility on Non-Purpose Loans

Rules on tax deductibility on non-purpose securities based loans (SBLs) **vary based on your individual situation.** Generally, personal interest is not deductible and the deductibility of other types of interest depends on **how the loan proceeds are used**. Some examples include:

All interest paid during the tax year on SBLs related to your **trades or businesses** if certain criteria are met may be deducted as expenses, including employee compensation, rent, or business-related insurance.

If your modified adjusted gross income is below applicable thresholds, the interest paid on an SBL to pay **for higher education** may be tax deductible up to certain limits.

Interest expense on SBLs used for **capital expenditures** such as purchasing new office equipment may be deductible because the loan is a business loan even though the purchase is a capital expenditure and the collateral consists of assets in your brokerage account.

Interest payments (not principal) on loans used to:
(i) acquire rental property; (ii) to improve rental property; (iii) to refinance credit card debt for goods or services used in a rental activity; or (iv) other expenses related to rental activities (i.e., insurance, cleaning and maintenance, etc.) may be deductible from rental income depending upon your particular circumstances.

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Tax Deductibility on Margin Loans

Rules on tax deductibility on margin loans **vary based on your individual situation.**

What interest may be deductible on a margin loan?

- Interest expense attributable to a loan to finance certain **investments,** such as an annuity, that generate interest, dividends, or have a gain or loss upon sale
- If you borrow for business, personal and investment purposes, only the interest expense on the part borrowed for **investment purposes** may be deductible

What interest may not be deductible on a margin loan?

- Interest expense for **personal uses** such as buying a car or a family vacation
- Interest expense secured by or used to buy **tax-exempt securities** such as tax-exempt bonds

Additional Considerations

- ✓ You may be able to deduct interest expense that is greater than your net investment income and carry forward remaining amounts to future years if you do not have sufficient net investment income in the current year
- ✓ Generally, you may only deduct interest in the year it is paid, not accrued
- ✓ Limits may apply if you borrow to buy treasury bills or market discount bonds
- ✓ Consult with your tax advisor on these matters – Morgan Stanley Smith Barney LLC and its affiliates and their employees (including Financial Advisors and Private Wealth Advisors) may not provide tax or legal advice

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Business Owners: Tax Deductibility on Liquidity Access Line

You have a Liquidity Access Line (LAL) to start a business, support its growth or cover its expenses. Did you know that you may be able to deduct the loan's interest expense?

Rules on tax deductibility depend on how the proceeds are used.
Some examples may include interest on an LAL to fund:

- Employee compensation
- Business-related taxes & insurance
- Patents and franchise rights
- Rent payments related to your business
- Improvements of business assets such as property, machinery and vehicles
- Purchasing new office equipment

Morgan Stanley does not provide any tax/legal advice. Consult your own tax/legal advisor before making any tax or legal-related investment decisions.

Recent tax legislation (the Tax Cuts and Jobs Act) imposes new limitations on the deduction of interest expense. Certain small businesses are not subject to these new limitations. Consult your own tax advisor to understand how and if these new limitations will impact you and your business.

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Investors: Tax Deductibility on Margin

You may use Margin to complement your investment and trading strategies. Did you know that you may be able to deduct the loan's interest expense?

Rules on tax deductibility depend on how Margin proceeds are used. Generally, you may only deduct interest expense related to investments, such as an annuity, that generate interest, dividends, or have a gain or loss upon sale. Examples may include Margin interest paid on:

- ✓ Purchasing and short-selling securities
- ✓ Options trading
- ✓ Speculative trading strategies
- ✓ Arbitrage
- ✓ Diversifying a concentrated position

- Please note that tax-exempt securities generally do not qualify as tax deductible
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Rental Property: Tax Deductibility on Liquidity Access Line

You are using a Liquidity Access Line (LAL) to finance the purchase of a home or other investment real estate solely for the purpose of receiving rental income. Did you know that you may be able to deduct the loan's interest expense?

Rules on tax deductibility depend on how the proceeds are used.
Some examples may include interest on an LAL to fund:

- Acquisition
- Insurance
- Cleaning and maintenance
- Refinancing of credit card debt for goods and services for the property
- Improvements
- Other expenses related to rental activities

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EQUAL HOUSING LENDER

Liquidity Access Line & Standby Letters of Credit

- **A Standby Letter of Credit (SBLOC) is a guarantee of payment issued by a bank, for an issuance fee, on behalf of the applicant to a third party, the Beneficiary**
- Some of the more common reasons clients utilize SBLOCs is to support
  - Lease or Purchase agreements
  - Construction developments
  - Collateral for insurance policies
  - Security Deposits
  - Litigation
- **SBLOCs are established through the Liquidity Access Line ("LAL")** – Once you apply, are approved for, and establish an LAL, you have the ability to request an SBLOC through a separate application process

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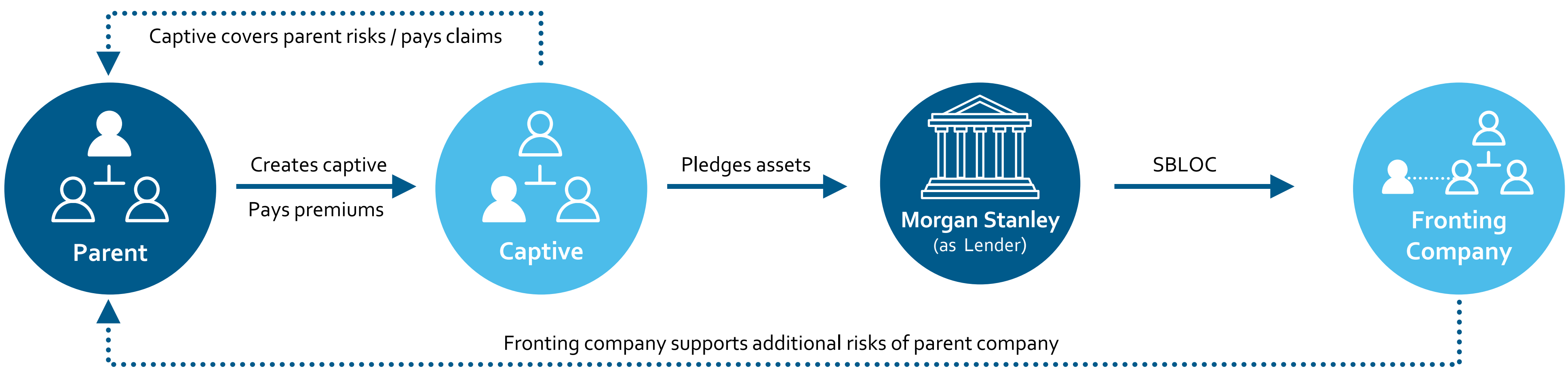
Captive Insurance Companies and Letters of Credit

WHAT IS CAPTIVE INSURANCE?

- If you administer a captive insurance company, you know that they are created to cover risks stemming from a parent group that commercial insurance companies may not cover.
- Risks that may be covered include **casualty lines** and **general liability.**

WHAT YOU NEED TO KNOW ABOUT SBLOC CAPABILITIES FOR THIS TYPE OF BORROWER

- Insurance regulators may not allow a captive to offer certain types of insurance, such as **workers' compensation**, as an employee could suffer if the captive cannot pay the claim.
- In these instances, a captive may use a third party "fronting" insurance company to underwrite that insurance.
- These fronting companies often require collateral to be posted, which can sometimes be accomplished with a Standby Letter of Credit (SBLOC).
- In these scenarios, **the captive could use its eligible assets held at Morgan Stanley as collateral for a Securities Based Loan (Liquidity Access Line, "LAL").** If approved, an SBLOC, which assures the fronting insurance company (the beneficiary) that the captive will pay its share of losses on all claims, may then be requested under that LAL.



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Securities Based Lending (SBL) to Pay Withholding Tax on Stock Awards

OPTION VS. AWARD

Unlike an employer-issued ***stock option*** **where an individual receives the right to purchase a defined number of shares at or below a specific market price, a** ***stock award*** **imparts ownership without a payment from the employee.**

VESTED STOCK

Stock that is awarded to an individual **with no conditions for ownership is considered "vested"** and may be treated by the IRS as ordinary income within the tax year the award is received. Employers that award stock are obliged to withhold an amount consistent with employee income tax regulations.

NONVESTED STOCK AWARDS

Nonvested stock awards are *not* eligible to be used as collateral for an SBL. However, clients with an existing SBL and availability adequate to cover the estimated tax liability associated with a nonvested award, who choose to make such an election, may use their SBL for this purpose.

SBL TO PAY WITHHOLDING TAX

Pledging the awarded stock to an SBL and using the proceeds to pay the estimated withholding at the time of the award **may be an advantageous option versus an employer withholding income or selling awarded shares to cover the incurred tax liability.**

ADDITIONAL CONSIDERATIONS

The awarded securities **must be part of a registered stock award plan** that allows pledging such collateral for a loan. There is no guarantee of eligibility, acceptance or adequacy to cover the commensurate tax liability of the award.

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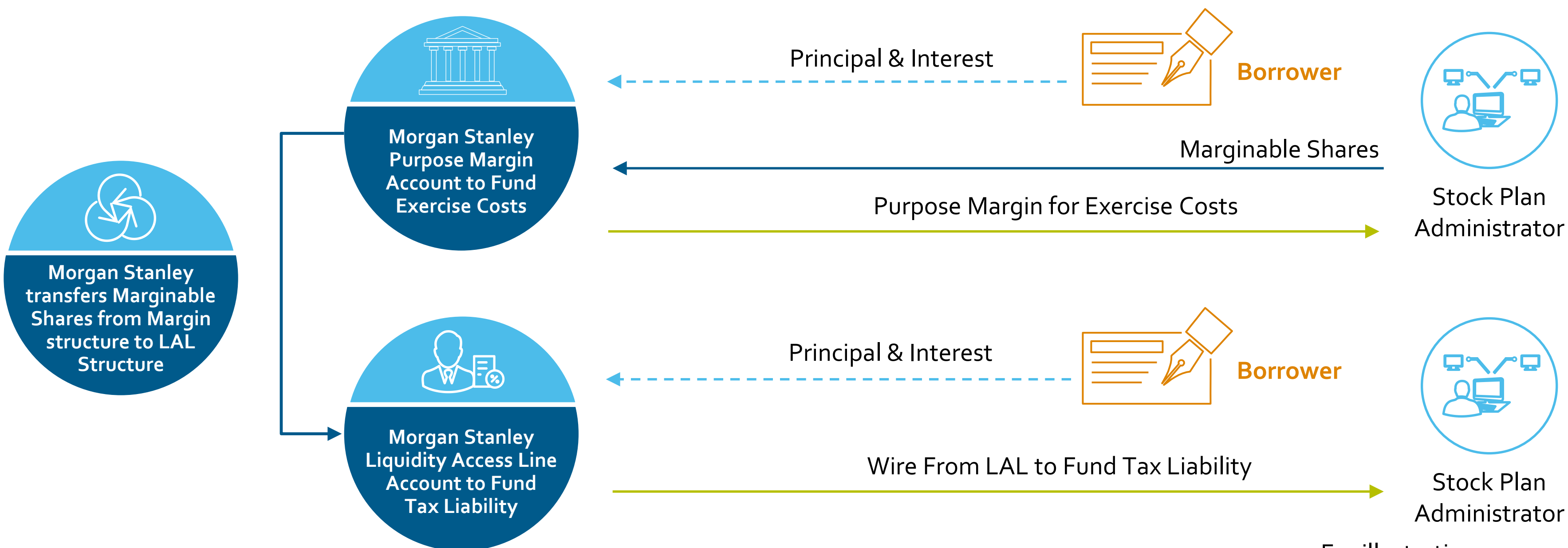
Using a Securities Based Loan to Exercise Stock Options

- **Incentive Stock Options (ISOs)** carry potential tax benefits based on the length of time the owner has held them
- **Non-Qualified Stock Options (NSOs)** carry no inherent beneficial tax treatment. With NSOs the difference between the strike price and the market price at exercise is generally treated as ordinary income and taxed accordingly. **NSOs are thereby subject to tax withholding by the issuer upon exercise**
- **Margin Lending** may be used to pay the **exercise costs** of options with the new shares resulting from the options serving as collateral for the loan. Non-Purpose lending solutions may include using **Liquidity Access Line (LAL)** to cover the **tax withholding payments** back to the issuer using the excess shares that are not collateralized in support of the Margin loan



For illustrative purposes only

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Navigating Rule 144 in Securities Based Lending (SBL)

As a company executive, a majority of your compensation may come in the form of restricted company stock. The below can help you understand Rule 144, allowing you to potentially achieve liquidity for your funding needs without an outright sale.

RESTRICTED SHARES

If you have acquired the shares in an unregistered, private sale, **the shares are Rule 144 "restricted shares" and cannot be sold until a minimum holding period has run.**

CONTROL SHARES

Shares held by Rule 144 affiliates, including senior officers, board members and/or major shareholders of an issuer, **are "control shares" and sales are subject to volume limits.**

HOLDING PERIOD

The minimum holding period is 6 months (or 12 months if the issuer is not current with its public filings). Morgan Stanley as lender is also **subject to this minimum holding period.**

ISSUER RESTRICTIONS

Issuers may impose further restrictions on sale, including vesting schedules, **insider trading policies and lockup arrangements.**

- If the following, among other things, is verified by **Morgan Stanley's Executive Financial Services Group**, you may be able to use your control and/or restricted shares as collateral for an SBL:
  - — The minimum Rule 144 holding period has run;
  - — Morgan Stanley is not a Rule 144 affiliate; and
  - — The issuer permits the pledge

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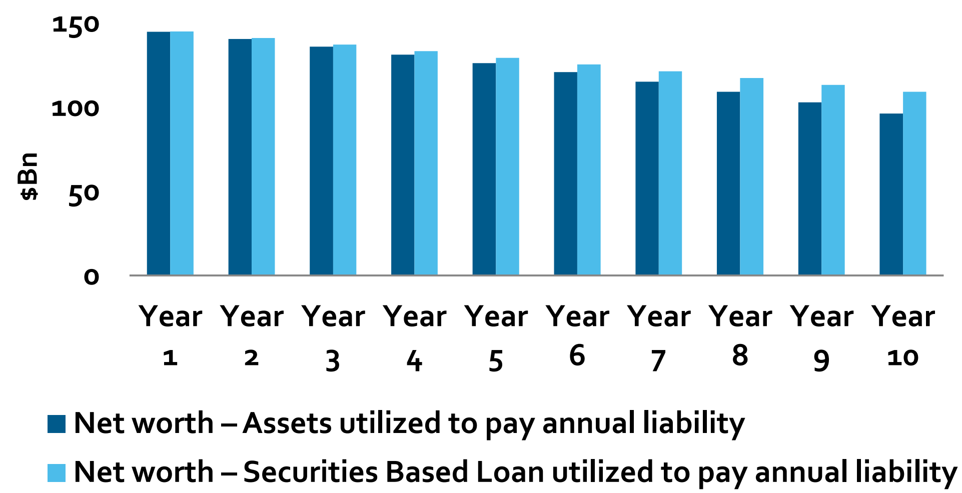
A Strategic Approach to Borrowing and the Overall Balance Sheet

What should I be aware of when contemplating a sale of liquid investments to reduce debt or satisfy liquidity needs?

- Liquidation of assets eliminates volatility associated with those assets but may **impact your long-term investment strategy**
- The opportunity cost of liquidation vs. borrowing is the potential returns forfeited by utilizing assets to support the liquidity need vs. the interest required to support the loan
- If you qualify, a Securities Based Loan (SBL) may provide you with the opportunity to **access capital while seeking to minimize the impact on long-term capital planning and collateral structures**
- Potential benefits of SBL vs. liquidation over time include **flexibility and control.** Other benefits may include:
    - Enhanced cash flow management by capitalizing the SBL's interest requirements
    - Automatically adding interest payments to the loan balance if there is sufficient collateral
    - Flexible repayment schedules
- Risks may include potential maintenance calls and a downturn in the market that can magnify potential losses

The chart below is a hypothetical scenario that outlines the difference over a decade to the investor's net worth when assets are liquidated to support an ***annual*** *liquidity need of $10MM vs. SBL leverage.**



*Assumes 5% annualized return on liquid assets, a 3% return on all other assets, and 3% SBL interest paid annually. Hypothetical results are for illustrative purposes only and are not intended to represent future performance of any particular investment. Your actual results may differ. The principal value and investment return of an investment will fluctuate with changes in market conditions and may be worth more or less than the original cost. Taxes may be due upon withdrawal.

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Using a Securities Based Loan (SBL) for Taxes: Preservation, Modulation, and Smoothing

How one pays taxes is an important strategic consideration and is often directly related to your personal investment strategy. "Should I consider borrowing to pay my Taxes?" – the answer may fall into one or more of the Preservation, Modulation, or Cash Flow Smoothing strategies.

PRESERVATION

If you qualify for an SBL and earn more on your assets than what you pay in interest on that SBL, you are engaged in a Positive Carry Strategy. This is not always the result and you may end up in a maintenance call if you borrow too aggressively, but if successful, this enables you to preserve your investment strategy and a portion of the income that may have been otherwise surrendered in selling assets.

MODULATION

Using SBL proceeds to pay taxes, or a portion of a tax bill, may allow you to modulate the process of selling your taxable securities, or forestall the sale of assets entirely if used as a bridge to other liquidity events.

CASH FLOW SMOOTHING

Tax payments are a liability due in total when presented. Cash Flow Smoothing is the process of refinancing the liability into a structure whereby the balance can be paid over time with the potential for minimal impact to the asset side of the balance sheet.

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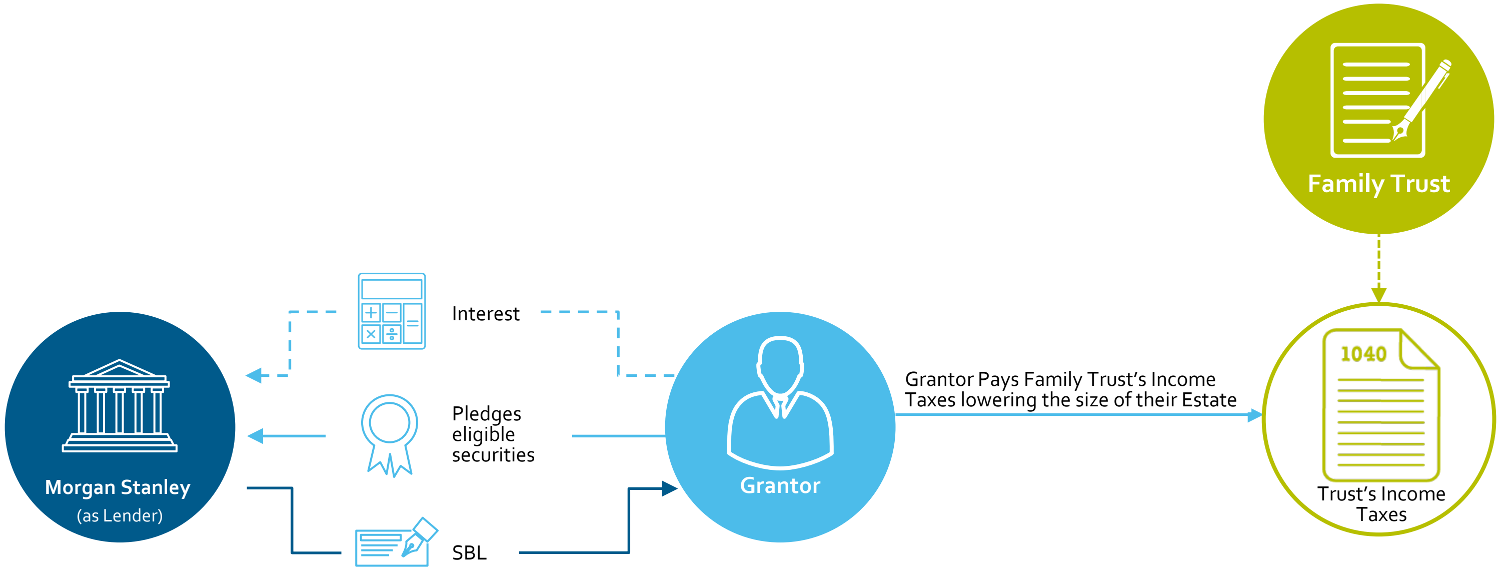
Debt and the "Tax Burn" Strategy

If you are participating in a Tax Burn, you may consider using strategic debt as a funding source

- If you have set up a **family trust**, you may be working with a qualified tax advisor to **"burn off"** your **excess taxable estate** by **paying the trust's income taxes directly.**
- Paying taxes on behalf of the trust may **increase the wealth available to trust beneficiaries without triggering gift taxes.**
- Did you know? If cash is unavailable, you may be able to set up a **securities based loan (SBL)** with eligible securities and use cash proceeds to **fund your tax burn.**



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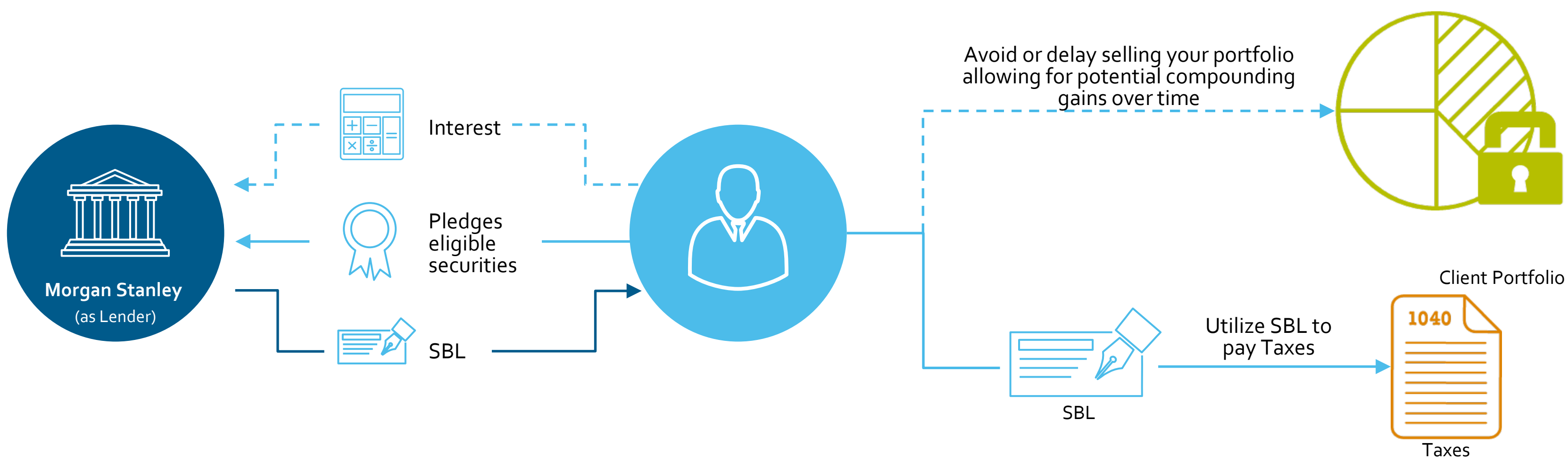
Strategic Debt and Tax Alpha

If you have a large tax bill, you may consider using strategic debt.

- **Tax drag** is the **reduction of returns** in an investment portfolio due to taxable gains.
- **Tax alpha** is the **value created** through **effective tax management** of investments and reduction of tax drag.
- **Strategic Debt** may lead to **tax alpha**.
- Using **strategic debt, including a securities based loan (SBL), to pay taxes** may allow you to:
    - Avoid or delay **selling an appreciated position**, triggering **more tax exposure**.
    - Maintain the **market exposure** on your liquid assets instead of partially depleting them.



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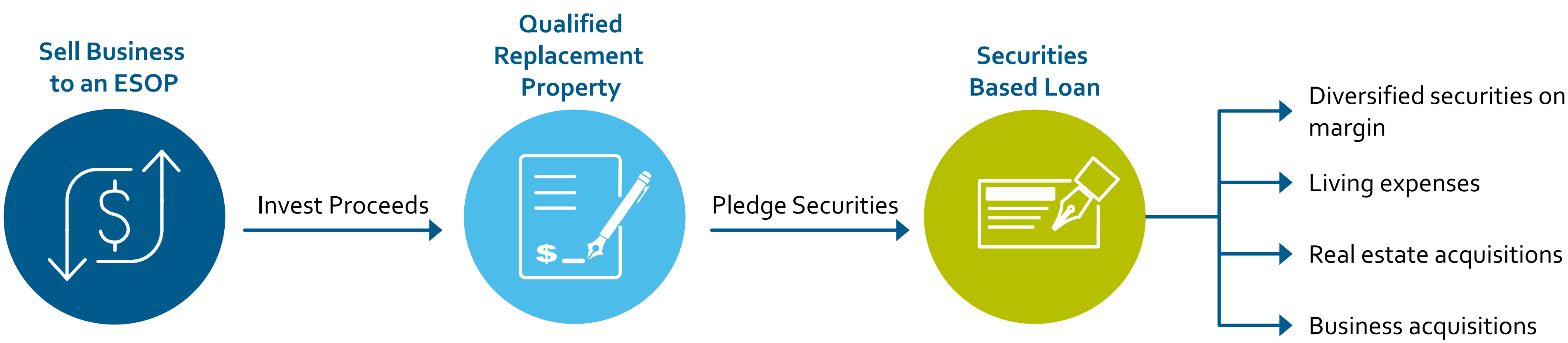
A Tax Deferred Business Succession Solution and Securities Based Lending (SBL)

- If you are selling a business to an Employee Stock Ownership Plan ("ESOP"), you may want to consider using an **SBL to monetize the ESOP or business** which may offer a ready market to sell all or a portion of the company, thereby providing the owner with necessary funds.
- An ESOP is a **tax-deferred mechanism** to issue an **interest in stock of a company to its employees.** Monetizing an ESOP provides you with funds after the 1042 Rollover occurs and allows you to use the working capital for living expenses, real estate acquisitions, or other business acquisitions.
- To take advantage of the **tax deferral**, the seller must purchase **qualified replacement property**, often floating rate notes (FRNs), within a specified time frame.
- FRNs may be eligible to serve as **collateral for a Margin loan or Express CreditLine** (SBL) at Morgan Stanley Smith Barney LLC.



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Using a Liquidity Access Line (LAL) Prior to Applying for a Residential Mortgage

Do you need to meet quick closing deadlines on a residential property, or are you trying to negotiate better terms with an "all-cash" offer?

- You may want to **consider an LAL as a short-term vehicle to purchase the property** and then pay it off with mortgage proceeds after closing. If you qualify, this may allow you to meet quick closing deadlines and/or negotiate terms as an "all-cash" offer
- By pledging eligible securities to establish an LAL instead of selling securities, you may have the flexibility of gaining access to funds while **keeping your investment strategy intact**
- Using residential mortgage financing to pay down the LAL may be a favorable option because:
    - If you opt for a fixed rate mortgage, there is **no risk of interest rate volatility**
    - Securities based loans are at **risk of being called for repayment** due to declines in the market value of the pledged collateral
    - You may have access to a variety of mortgage products, including fixed rate mortgages and ARMs, which could mean **greater choice** around what best suits your needs and financial situation
- Consult with your tax and legal counsel about potential advantages for obtaining mortgage financing within a certain number of days of the closing

Step 1

If eligible, Step 2

Apply for a mortgage and if approved, use the mortgage loan proceeds to pay down the LAL

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A Securities Based Loan (SBL) in Lieu of Withdrawing Cash From a Tax-Deferred Account

Seeking liquidity through the sale of securities may come with downsides

Withdrawing cash from a tax-deferred account or selling appreciated assets in a taxable account in order to generate liquidity **could trigger a taxable event.**

Liquidation of securities may cause a **disruption in your overall investment strategy** and potentially result in a decrease of continued investment income.

An SBL collateralized by eligible securities in your taxable account, if structured responsibly, may help achieve some financing needs

If you qualify, an SBL can potentially help **supplement cash flow** during such periods of need.

An SBL is designed to keep your **investment strategy intact** without having to potentially liquidate investments.

Securities receive a **stepped-up basis to fair market value** at the time of death.

Outstanding loans upon death may also **reduce the value of your taxable estate.**

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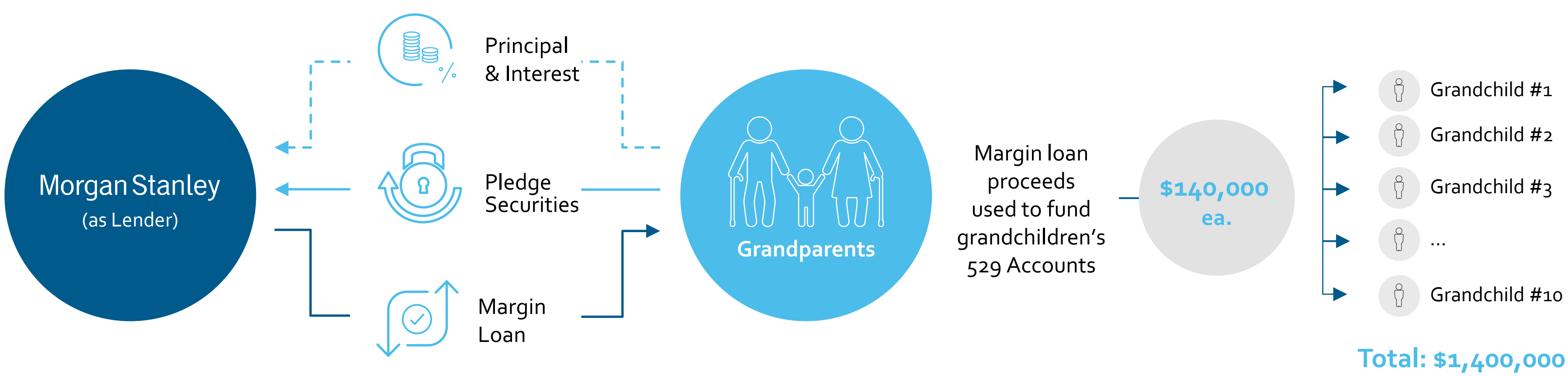
Superfunding a 529 Plan With a Margin Loan

- If you are making contributions to 529 college savings plans, you may know that annual contributions in excess of $14,000 may be subject to gift taxes. However, **an exemption allows one-time "superfunding" of up to $70,000 per recipient once every five years.**
- Rather than selling investments to facilitate a 529 superfunding strategy, if you qualify, you may consider a **margin loan to finance contributions, using eligible securities as collateral.**
- If suitable, a margin loan for this purpose may provide you **access to funding with the potential to keep your current investment strategy intact.** This strategy can also potentially quickly establish an educational fund for family or friends while simultaneously maintaining control of gifted assets.

The example below is for illustrative purposes only, and assumes two grandparents superfunding 529 plans for 10 grandchildren, contributing the maximum amount under five year election.



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Margin is not suitable for everyone. You should examine your investment objectives, financial resources and risk tolerance to determine whether borrowing against securities, and trading on Margin in particular, is appropriate for you. The strategies discussed in this material are meant for clients with a specific need and may not be suitable for all clients. No legal, tax or other advice is being offered herein.

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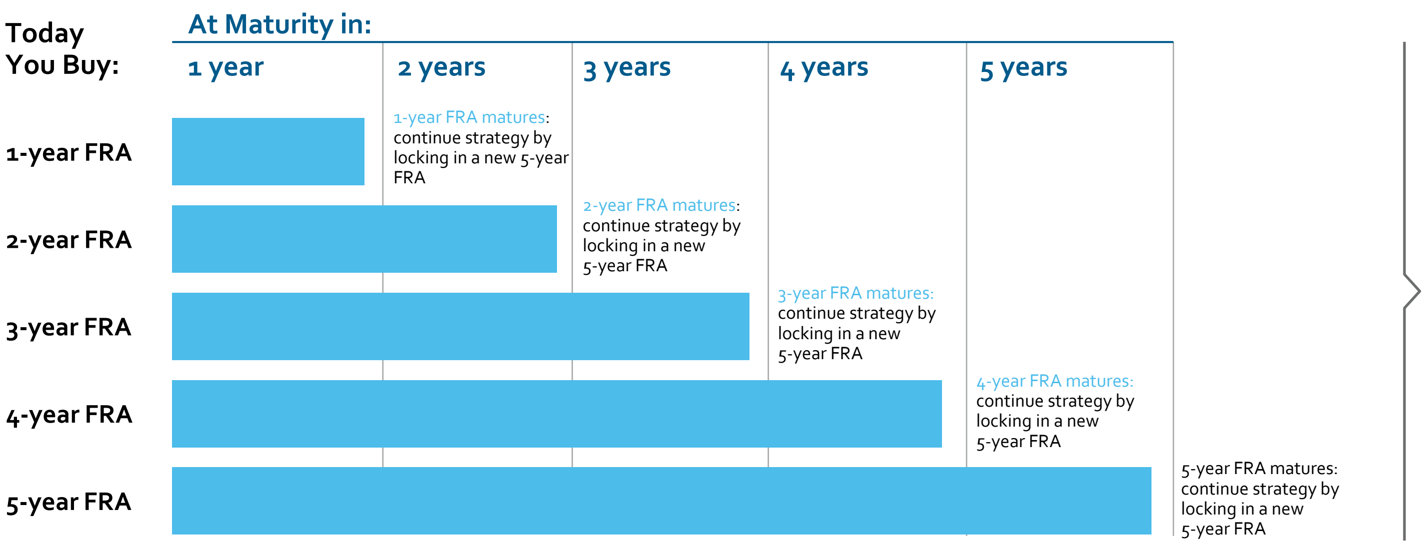
Laddering Your Liquidity Access Line (LAL)

Do you want to raise funds for upcoming expenses, but also want to manage interest rate risk connected with long-term debt?

- **Fixed rate advances (FRAs) on your LAL** can be an effective way to **manage interest rate risk** while providing **predictability of future interest rate payments**
- **Did you know?** If you qualify to ladder your LAL via **multiple FRAs** with varying maturity dates, you may create a liability structure with known interest payments while also
  - Maintaining a higher degree of **flexibility** to periodically pay down the debt, continue the strategy, or explore other financing options
  - **Lengthening the average duration** and interest rate exposure on the debt
  - Allowing you to **match,** or customize, the potentially variable **payout dates** of your capital expenditure with your loan repayments

The chart below shows a hypothetical example of a 5-year fixed rate LAL laddering strategy and is for illustrative purposes only. It assumes an initial purchase of 1-year, 2-year, 3-year, 4-year and 5-year FRAs.



- When **each FRA matures,** you may:
  - lock in another FRA;
  - pay off the debt; or
  - roll the balance onto your variable line
- To continue the strategy, lock in a new 5-year FRA every time an FRA matures

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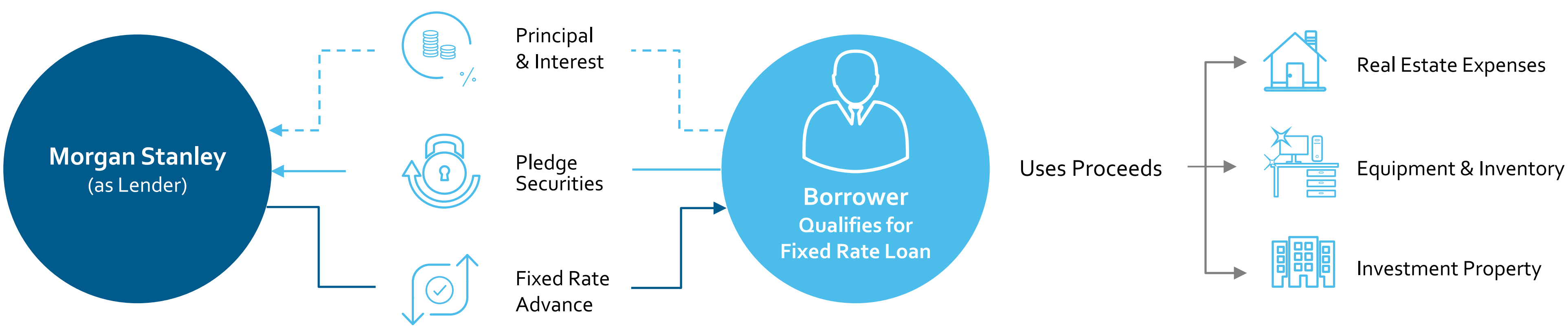
Liquidity Access Line (LAL) & Fixed Rates

Do You Need Access to Liquidity But Want to Manage Interest Rate Risk at the Same Time?

- LAL offers short- and longer-term fixed rate advances that may help you to **manage interest rate risk** while providing flexibility to **customize your repayment schedule**
- In addition to 30 day LIBOR variable interest rate advances, the following **fixed rate options**[1] may be available:
  - **Short-term**: 1, 3, 6 and 12 month
  - **Long-term**: 18 month; 2 – 7 years
- Did you know? You may be able to customize your repayment strategy on the long-term fixed rate advances with **interest only** or **amortization options**



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1. If you prepay fixed rate draws (other than through planned amortization), standard breakage fees apply.

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A Basic Formula to Remember When Borrowing

Did you know using this formula can help you anticipate risks associated with market volatility?

- Whether you already have a Securities Based Loan (SBL), or are thinking of applying for one, **a basic formula can help you understand:**

  1. **How market stress might impact your pledged portfolio**
  2. **How changes in pledged collateral and debt levels affect the risk profile**

$$\boldsymbol{mcp}\% = \mathbf{1} - [\boldsymbol{ltv}\% \div (\mathbf{1} - \boldsymbol{mm}\%)]$$

mcp% = maintenance call percentage; the percentage decline in pledged asset(s) to reach a maintenance call

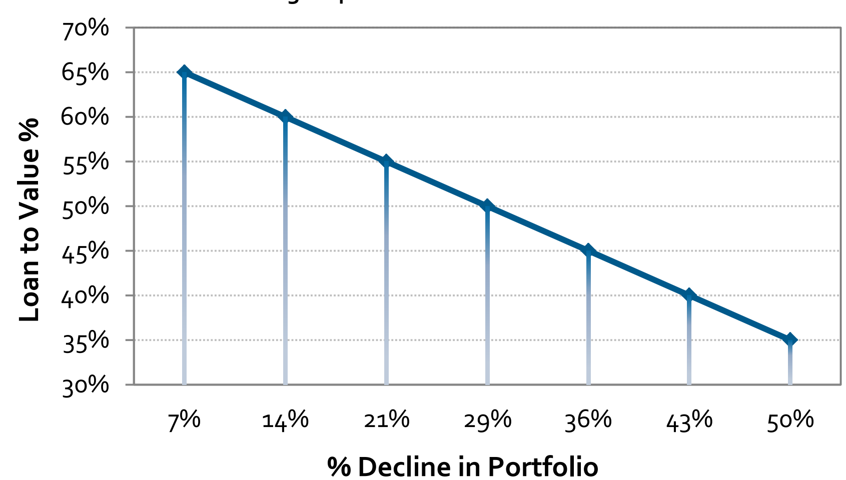
ltv% = Loan-to-value percentage; the percentage actually borrowed against the pledged asset(s)

mm% = maintenance margin percentage; the maintenance requirement percentage on the pledged asset(s)

- A maintenance call is when the net portfolio value (gross portfolio value less drawn balance) has fallen below the minimum maintenance requirement.

For example, a diversified equities portfolio of eligible securities could **withstand an overall decline of 50%** (mcp%) by limiting your loan amount to 35% (ltv%) of the market value of the portfolio, assuming standard maintenance margin requirements of 30% (mm%):

Lower Leverage Equates to Lower Risk of Maintenance Calls



This chart is for illustrative purposes only: Your actual results may differ. Maintenance margin requirements may change and without prior notice. Securities based loans are demand loans that may be called at any time

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Understanding Regulation T and Regulation U in Securities Based Lending

Client need determines Securities Based Lending (SBL) product – key question is whether loan is "purpose credit" under applicable margin regulation (Reg T/ Reg U)

PURPOSE CREDIT

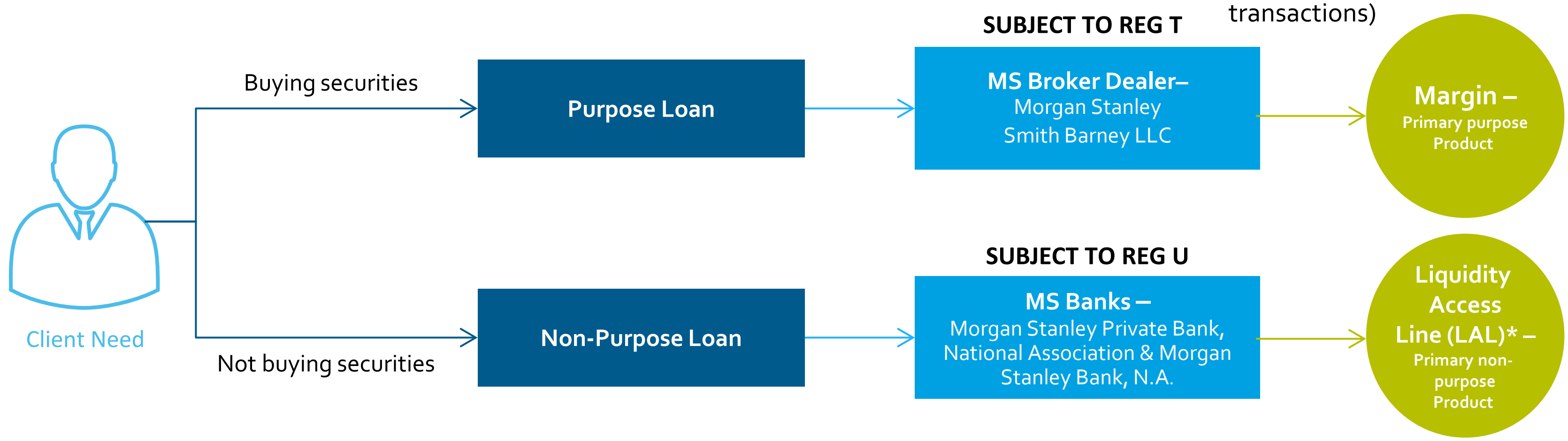
- If a loan is "purpose credit" under Reg T or U, advance limits apply to certain collateral
- A loan is purpose credit (1) under Reg T if loan proceeds are used to purchase or carry securities of any kind and (2) under Reg U if loan proceeds are used to purchase or carry margin stock AND the loan is secured by margin stock

REG T VS. REG U

- Morgan Stanley offers SBL solutions through 2 platforms – broker/dealer and bank
- Reg T governs loans on broker/dealer platform – incl. Express CreditLine ("ECL") and Margin
- Reg U governs loans on bank platform – incl. Liquidity Access Line ("LAL")

OTHER CONCEPTS

- Reg U margin stock = publicly-traded equity and related convertible instruments
- Reg T securities = margin stock, bonds, private equity, other securities (very broadly defined)
- Carrying = paying off debt originally used to purchase securities/margin stock
- Other regulations may further limit LAL use of proceeds (e.g. Reg W limits on affiliate transactions)



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* Express CreditLine, a legacy Reg T non-purpose product formerly offered through Morgan Stanley Smith Barney LLC, may also be available on an exception basis in limited circumstances until further notice

Considerations for International Tax Payers

- Non-U.S. citizens (resident and non-resident aliens) with taxable income are sometimes required to file U.S. tax returns. This includes foreign workers, students, teachers, and trainees who are engaged in a trade or business, even on temporary visas.[1]
- Taxable events may include scholarships, fellowships, partially or totally tax exempt income under the terms of a tax treaty or any other income taxable under the Internal Revenue Code.
- In such cases, have you considered financing your tax liabilities with a securities based loan (SBL)[2]? If you qualify, you can pledge your existing securities to establish a loan and use the loan proceeds to finance your tax liability. Potential benefits include:
  - Preserving your existing investment strategy
  - Quick access to available funds for making tax payments on time to avoid penalties and interest
  - Saving on borrowing costs with a competitive rate when compared to alternative loan options

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1. https://www.irs.gov/uac/newsroom/irs-reminds-international-taxpayers-of-tax-obligations-clarifies-rules-for-tax-withholding-agents
2. Loans may be subject to jurisdictional and other restrictions. Consult your FA for details.

Replacing a Zero Balance Express CreditLine (ECL) With a Liquidity Access Line (LAL)

If you have an ECL facility with no outstanding balance, you may want to consider closing it and replacing it with an LAL.

Potential benefits of LAL vs. ECL include:

COMPETITIVE PRICING

LAL may be able to offer more competitive interest rates than ECL.

FIXED RATE ADVANCE OPTIONS

In addition to variable interest rates, LAL offers the following fixed rate borrowing options, which may help you manage interest rate risk and customize your repayment schedule:

- Short-term: 1, 3, 6 and 12 month
- Long-term: 18 month; 2–7 years

GREATER LENDING VALUE

LAL may provide higher advance rates on certain mutual funds based on their underlying holdings. In addition, LAL can provide lending value against cash.

FEWER RESTRICTIONS

LAL is generally less restrictive as to use of proceeds than ECL. For example, unlike with ECL, you may be able to use your LAL facility to meet private equity capital calls or invest in a privately held business.

In some circumstances, retaining your ECL facility may make more sense. For example, if you (1) are an international client, (2) are not eligible for the minimum LAL size of $100K, (3) hold Morgan Stanley affiliate collateral, and (4) have complicated multiple-loan structures.

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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 suitable 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.

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. In most Morgan Stanley Wealth Management investment advisory accounts, fees are deducted quarterly and have a compounding effect on performance. For example, on an advisory account with a 3% annual fee, if the gross annual performance is 6.00%, the compounding effect of the fees will result in a net performance of approximately 3.93% after one year, 1 after three years, and 21.23% after five years. **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. 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.

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 a client-specific suitability analysis or recommendation, or offer to participate in any investment. Therefore, clients should not use this profile 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 suitability 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 a suitable asset allocation for you, whether CGCM is a suitable 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.

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.**

An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at $1.00 per share, it is possible to lose money by investing in the fund.

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 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."

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**. **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. The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments ("ESG")** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not suitable 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. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases shares of a closed-end fund, shares may have a market price that is above or below NAV. 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.

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 suitable 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; and Risks associated with the operations, personnel, and processes of the manager. 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. 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 regarding Alternative Investments 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 NASD Conduct Rule 2711 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 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. 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. 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. 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 suitable for all investors. 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. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

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.

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

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

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

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

Tax laws are complex and subject to change. Morgan Stanley Smith Barney LLC ("Morgan Stanley"), its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors do not provide tax or legal advice and are not "fiduciaries" (under ERISA, the Internal Revenue Code or otherwise) with respect to the services or activities described herein except as otherwise provided in writing by Morgan Stanley and/or as described at www.morganstanley.com/disclosures/dol. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a retirement plan or account, and (b) regarding any potential tax, ERISA and related consequences of any investments made under such plan or account.

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

Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustration purposes only and do not show the performance of any specific investment. Reference to an index does not imply that the portfolio will achieve return, volatility or other results similar to the index. The composition of an index may not reflect the manner in which a portfolio is constructed in relation to expected or achieved returns, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility, or tracking error target, all of which are subject to change over time.

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 form the primary basis for any investment decision by you, or an investment advice or recommendation for either ERISA or Internal Revenue Code purposes. Morgan Stanley Private Wealth Management will only prepare a financial plan at your specific request using Private Wealth Management approved financial planning signature.

We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act 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 Private Wealth Advisor, may vary by product and over time.

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

Adverse Active Alpha (AAA) is a patented screening and scoring process designed to help identify strong stock picking equity 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 suitable 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 suitable 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 Consulting Group Capital Markets 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. Depending upon which advisory program you choose, you will pay an asset-based wrap fee every quarter ("the Fee"), which may be up to 2.5%. In general, the Fee covers investment advisory services, the execution of transactions through Morgan Stanley, custody of the client's assets with Morgan Stanley, and reporting. In addition to the Fee, you will pay the fees and expenses of any funds in which your account is invested. Fund fees and expenses are charges directly to the poos 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 will not be included in the Fee amount in your account statements. 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 Consulting Group Capital Markets Funds, visit the Funds' website at www.morganstanley.com/cgcm. Consulting Group is a business of Morgan Stanley.

TRAK CGCM Program Asset Allocation Models There are model portfolios corresponding to five risk-tolerance levels available in the TRAK CGCM 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. **TRAK CGCM** is a mutual fund asset allocation program. In constructing the TRAK CGCM 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 TRAK CGCM Program Model Portfolios are specific to the TRAK CGCM program (based on program features and parameters, and any other requirements of Morgan Stanley Wealth Management's Consulting Group).The TRAK CGCM 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.

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.

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.

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.

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.

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

A **LifeView Financial Goal Analysis or LifeView Financial Plan ("Financial Plan")** is based on the methodology, estimates, and assumptions, as described in your report, as well as personal data provided by you. It should be considered a working document that can assist you with your objectives. Morgan Stanley Smith Barney LLC ("Morgan Stanley") makes no 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.

Since **life and long-term care insurance** are medically underwritten, you should not cancel your current policy until your new policy is in force. A change to your current policy may incur charges, fees and costs. A new policy will require a medical exam. Surrender charges may be imposed and the period of time for which the surrender charges apply may increase with a new policy. You should consult with your own tax advisors regarding your potential tax liability on surrenders. **The Morgan Stanley Global Impact Funding Trust, Inc. ("MS GIFT, Inc.")** is an organization described in Section 501(c) (3) of the Internal Revenue Code of 1986, as amended. MS Global Impact Funding Trust ("MS GIFT") is a donor-advised fund. Morgan Stanley Smith Barney LLC provides investment management and administrative services to MS GIFT.

Margin Loans are investment products offered through Morgan Stanley Smith Barney LLC. Margin Loans are securities based loans, which can be risky, and are not suitable for all investors. **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. **Tailored Lending** is a loan/line of credit product offered by Morgan Stanley Private Bank, National Association, an affiliate of Morgan Stanley Smith Barney LLC.

Express CreditLine ("ECL") is a securities based loan/line of credit product offered by Morgan Stanley Smith Barney LLC. A Tailored Lending credit facility may be a committed or demand loan/line of credit. All LAL and Tailored Lending loans/lines of credit are subject to the underwriting standards and independent approval of Morgan Stanley Private Bank, National Association (or, for LAL, Morgan Stanley Bank, N.A., as applicable). All ECL loans/lines of credit are subject to the underwriting standards and independent approval of Morgan Stanley Smith Barney LLC. LAL, Tailored Lending and ECL loans/lines of credit may not be available in all locations. Rates, terms, and programs are subject to change without notice. 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.

Important Risk Information for Securities Based Lending: You need to understand that: (1) Sufficient collateral must be maintained to support your loan(s) and to take future advances; (2) You may have to deposit additional cash or eligible securities on short notice; (3) Some or all of your securities may be sold without prior notice in order to maintain account equity at required maintenance levels. You will not be entitled to choose the securities that will be sold. These actions may interrupt your 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") reserves the right not to fund any advance request due to insufficient collateral or for any other reason except for any portion of a securities based loan that is identified as a committed facility; (5) Morgan Stanley reserves the right to increase your 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.

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.

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. A **conforming loan** means a residential mortgage loan offered by Morgan Stanley Private Bank, National Association that is saleable to Fannie Mae or Freddie Mac because it conforms to these entities' guidelines, including, for example, loan amount limits that range from $424,000 to $636,150 for one unit properties, depending on location (and even higher in Hawaii). 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. Thus in deciding whether the pledged-asset feature is appropriate, a Client should consider 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.

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

1-Month Interest only ARM loan is based on 1-Month LIBOR. 1-Month Interest only ARM loan is not available in Maine. The Active Assets Account is a brokerage account offered through Morgan Stanley Smith Barney LLC. The **Morgan Stanley Mobile App** is currently available for iPhone® and iPad® from the App StoreSM and AndroidTM on Google PlayTM. Standard messaging and data rates from your provider may apply. The **Morgan Stanley Credit Card** from American Express or the Platinum Card® from American Express exclusively for Morgan Stanley is only available for clients who have an eligible Morgan Stanley Smith Barney LLC brokerage account ("eligible account"). Eligible account means a Morgan Stanley Smith Barney LLC brokerage account held in your name or in the name of a revocable trust where the client is the grantor and trustee, except for the **following** accounts: Charitable Remainder Annuity Trusts, Charitable Remainder Unitrusts, irrevocable trusts and employer-sponsored accounts. 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. Morgan Stanley Smith Barney LLC may compensate your Financial Advisor and other employees in connection with your acquisition or use of either the Morgan Stanley Credit Card from American Express or the Platinum Card® from American Express exclusively for Morgan Stanley. The **Morgan Stanley Cards from American Express** are issued by American Express Bank, FSB, 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. The **Morgan Stanley Debit Card** is currently issued by UMB Bank, n.a., 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.

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