

Private Real Estate

An Important Alternative for Your Asset Allocation

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The Alternative Investments Landscape: Private Real Estate

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In addition to the general risks associated with real estate investments, REIT investing entails other risks such as credit and interest rate risk. Real estate investment risks can include fluctuations in the value of underlying properties; defaults by borrowers or tenants; market saturation; changes in general and local economic conditions; decreases in market rates for rents; increases in competition, property taxes, capital expenditures, or operating expenses; and other economic, political or regulatory occurrences affecting the real estate industry.

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Investing in Real Estate Beyond Owning a Home



Private Equity offers participation in portfolios of commercial real estate through limited partnerships or other private investment structures. These investments may have limited liquidity and higher minimum investments, but return potential is often greater and returns have been typically less correlated to returns from traditional investments.



Private Debt can include senior loans to individual developers, financing for specific projects and high-yield commercial mortgage-backed securities. These securities may offer higher income than public debt, but less liquidity and diversification and often a higher minimum investment.

		Means of Access	
		PRIVATE	PUBLIC
Type of Security	EQUITY	<ul style="list-style-type: none"> • Private REITs • Limited Partnership / Closed-end Funds • Open-ended Funds • Separate Accounts • Direct Investment 	<ul style="list-style-type: none"> • Real Estate Investment Trusts (REITs) • Real Estate Operating Companies (REOCs)
	DEBT	<ul style="list-style-type: none"> • 1st Mortgage Loans • Mezzanine Loans • Bridge Loans • Construction Loans 	<ul style="list-style-type: none"> • Commercial Mortgage-backed Securities (CMBS) • Collateralized Debt Obligations (CDOs)



Public Equity consists of stocks of publicly traded real estate operating companies (REOCs)—companies that develop, manage or finance real estate projects—and real estate investment trusts (REITs)—funds that invest in real estate, or loans secured by real estate, and issue shares in their investments. Both REOCs and REITs offer ready liquidity and may have low investment minimums, but as publicly traded securities, returns can be more highly correlated to the overall stock market than private equity investments.



Public Debt consists of securitized residential and commercial mortgages built for investors seeking income. These securities may offer a fixed rate, floating rates or a combination of both, and come with embedded interest rate risk and the potential for faster or slower repayments, which can alter the expected yield to maturity.

Source: Morgan Stanley Wealth Management GIMA, REIT.com. Note: These investments are only appropriate for long-term investors willing to forgo liquidity and put capital at risk for an indefinite time. Since direct private equity and fund of funds invest over multiple years, vintage year diversification is achieved. Vintage year is defined as the first year that a private equity fund draws down or "calls" committed capital. Private equity valuations are generally estimates until there is a realization event.

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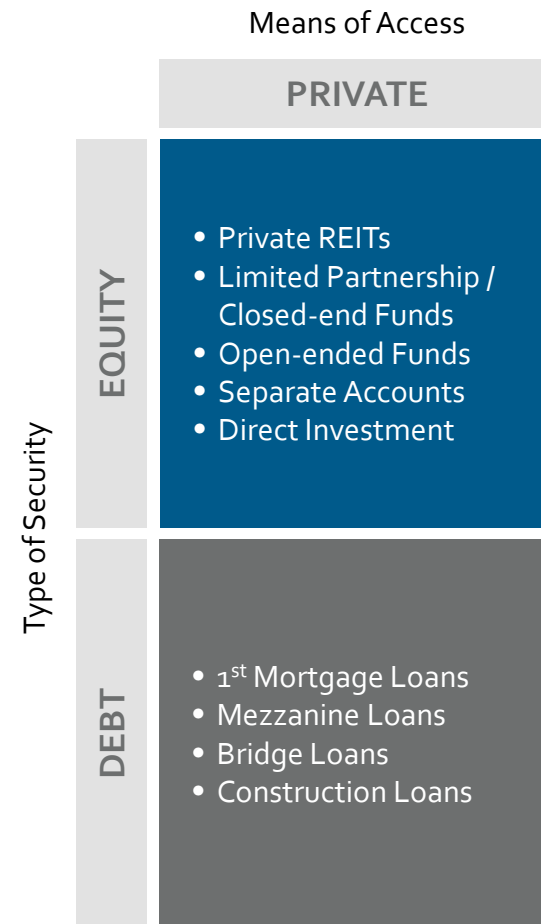
What is Private Real Estate?

Private real estate is an investment in the active management of institutional quality real estate properties for the purpose of generating current income and/or long-term appreciation.

Investors have broad choices, as the investable real estate market – excluding single-family properties – amounts to \$20 trillion or 22% of US investable assets, according to industry estimates.

Investment in private real estate is typically structured in open-ended and closed-end funds, private REITs, separate accounts and through direct investment in properties.

Private real estate is diversified primarily among four primary property types: office, multifamily apartments, industrial and retail.



Source: Morgan Stanley Wealth Management GIMA, updated December 2018. REIT.com. Note: These investments are only appropriate for long-term investors willing to forgo liquidity and put capital at risk for an indefinite time. Since direct private equity and fund of funds invest over multiple years, vintage year diversification is achieved. Vintage year is defined as the first year that a private equity fund draws down or "calls" committed capital. Private equity valuations are generally estimates until there is a realization event.

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In What Kinds of Properties Do Private Real Estate Funds Invest?



OFFICE

- Vacancies and rental rates generally follow the business cycle and regional economic conditions
- Lease terms typically seven to 12 years
- Property valuations generally linked to employment growth
- Considered more volatile than other property types
- 36% weighting in NCREIF Property Index (NPI)



MULTIFAMILY HOUSING

- Vacancies, rental rates, and new construction follow demographic trends
- Lease terms typically 12 months
- Considered more defensive than other property types
- 24% weighting in NPI



RETAIL

- Includes grocery-anchored shopping centers, retail condos, retail centers with large anchor stores
- Lease terms typically five to 10 years
- Highly correlated to changes in consumer spending and inflation
- 23% weighting in NPI



INDUSTRIAL

- Includes warehouses and distribution centers; demand fueled by the growth in eCommerce and globalization
- Lease terms typically five to seven years
- Production facilities demand tied to manufacturing and import/export trends
- Considered less volatile than the office sector
- 16% weighting in NPI



As of September 30, 2018.

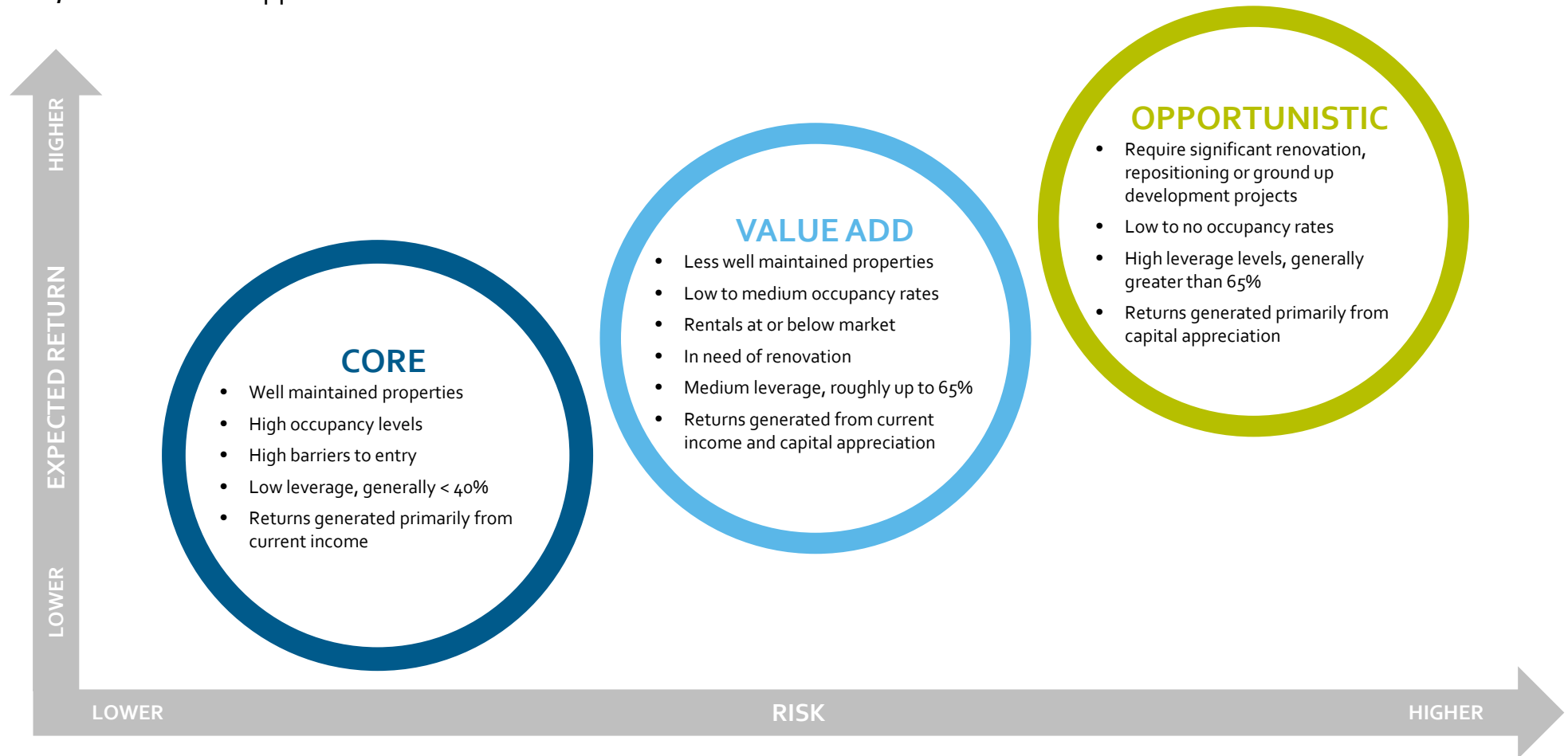
Source: NCREIF, Morgan Stanley Wealth Management GIMA.

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What Are the Various Private Real Estate Investment Strategies?

Private real estate investment strategies are generally classified into three categories that reflect varying risk/return profiles — core, value add and opportunistic.



Source: Morgan Stanley Wealth Management GIMA.

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What is the Lifecycle of a Typical Closed-End Real Estate Investment?

The J-curve illustrates the tendency of closed-end real estate funds to deliver negative returns in early years and investment gains in later years. In the early years, fund fees and expenses are incurred before investments have had time to mature and accrete value. As investments are realized and expenses are amortized over a greater time period, funds typically exit the J-curve.

1. Portfolio Construction
(Investment / Commitment Phase)

The private investment lifecycle begins with investors, or a Limited Partner (LP), making a capital commitment to a fund
Once a fund is closed to new commitments, the General Partner (GP) will begin to allocate capital to appropriate investments

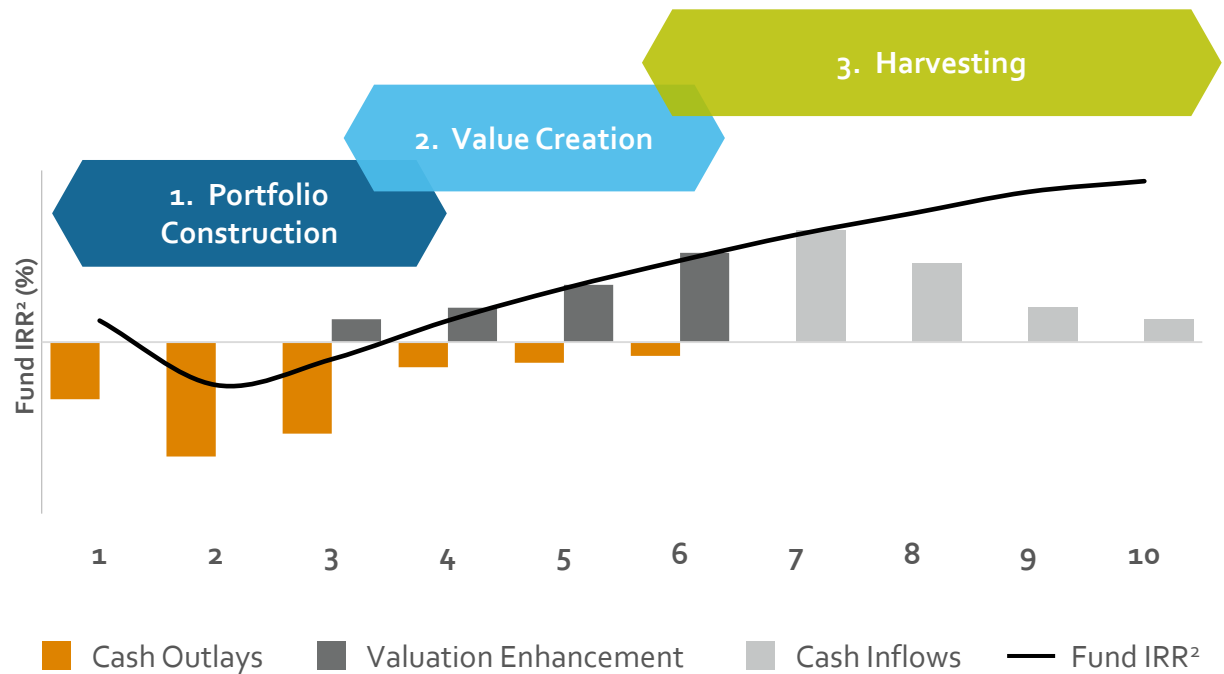
2. Value Creation

Upon making an investment, the goal of the GP is to effect change on each company; during the value creation phase, the GP provides active support through various strategic improvements such as revenue enhancements and cost reductions

3. Harvesting
(Distribution Phase)

As investments mature, the GP shifts more into "harvest" mode where the GP actively seeks to monetize investments and return capital to investors in the form of principal and capital gains

HYPOTHETICAL ILLUSTRATION OF THE J-CURVE¹



Source: Morgan Stanley Wealth Management GIMA. For illustrative purposes only.

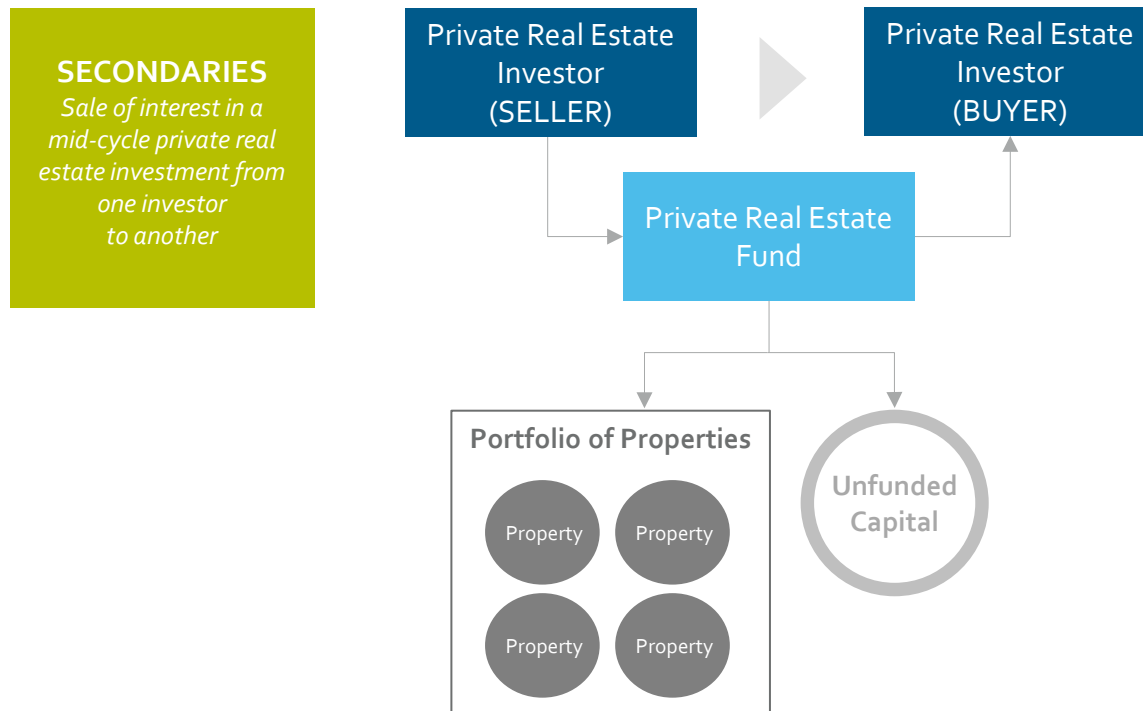
- The J-curve effect refers to a "J" shaped section of a time-series graph in which the curve falls into negative territory and then gradually rises to a higher level than before the decline.
- Internal rate of return (IRR) is a metric used in capital budgeting measuring the profitability of potential investments. IRR is a discount rate that makes the net present value (NPV) of all cash flows from a particular project equal to zero.

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What are Secondary Real Estate Transactions?

In addition to single manager funds and funds of funds, real estate investments can also be made in secondary funds. These funds offer participation in a portfolio of real estate assets that were sold by their original real estate managers.



WHY SECONDARY REAL ESTATE?

Additional Diversification

Secondary funds may offer multiple strategies as well as properties that are located in different geographies and vary greatly in stage of development.

A "Flatter" J-Curve

In other words, secondary fund managers bypass the initial selection and capitalization period that generates negative returns in traditional private real estate funds. More of your assets will go to work for you in a shorter time frame.

Pre-identified Assets

When purchased on the secondary market, the underlying funds will be related to specific properties that likely have already demonstrated the ability or potential for value-add and appreciation.

Shorter Time Horizon

Elimination of the initial selection and capitalization period could decrease the lifespan of your fund by several years. As a result, you may receive distributions more quickly than you would from a traditional private real estate fund.

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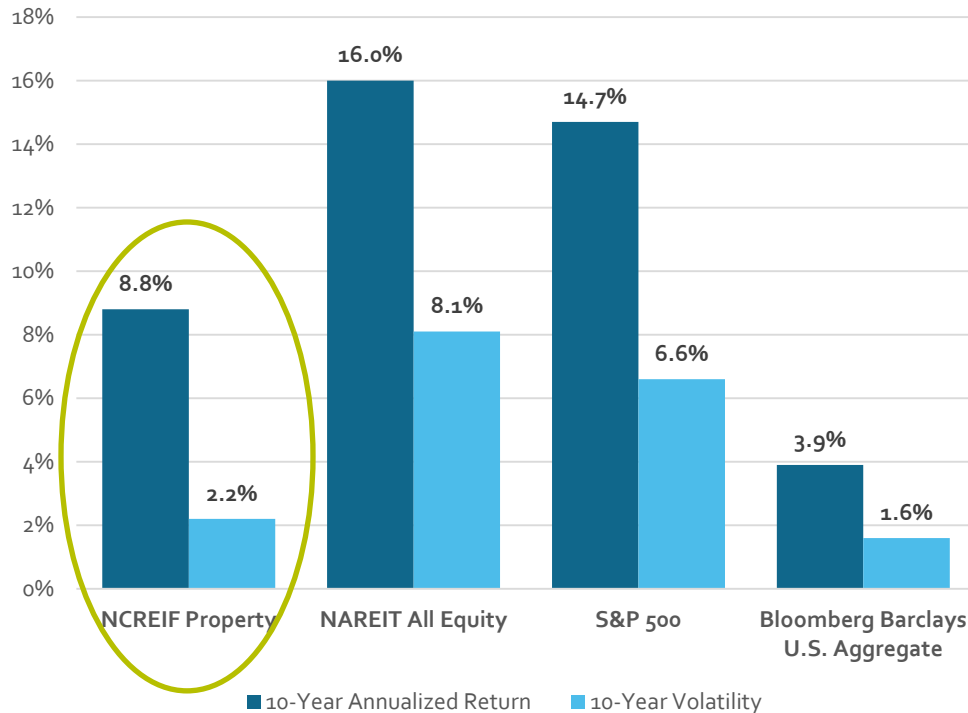
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Why are Investors Interested in Private Real Estate?

The benefits of private real estate in a multi-asset portfolio include: diversification with a low correlation to stocks and bonds; the potential for a reliable current income stream; and a potential inflation hedge.

HOW PRIVATE REAL ESTATE COMPARES WITH STOCKS AND BONDS

As of June 30, 2019



PRIVATE REAL ESTATE EXHIBITS LOWER CORRELATIONS, WHICH AID IN THE DIVERSIFICATION OF PORTFOLIOS

As of March 31, 2019 (trailing 10 years)

	NCREIF Property	NAREIT All Equity	S&P 500	Bloomberg Barclays U.S. Aggregate
NCREIF Property	1.00	-0.55	-0.35	-0.14
NAREIT All Equity	-0.55	1.00	0.73	0.32
S&P 500	-0.35	0.73	1.00	-0.16
Bloomberg Barclays U.S. Aggregate	-0.14	0.32	-0.16	1.00

Source: Morgan Stanley Wealth Management GIMA.Bloomberg. Reported returns and volatility are based on data from the above-mentioned indices. The NAREIT All Equity and S&P 500 indices reflect total returns. In addition to the general risks associated with real estate investments, REIT investing entails other risks such as credit and interest rate risk. Real estate investment risks can include fluctuations in the value of underlying properties; defaults by borrowers or tenants; market saturation; changes in general and local economic conditions; decreases in market rates for rents; increases in competition, property taxes, capital expenditures, or operating expenses; and other economic, political or regulatory occurrences affecting the real estate industry.

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How is Private Real Estate Performance Measured?

The two most common measures of performance are the Internal Rate of Return (IRR) and Multiple on Invested Capital (MOIC). Returns for real estate investments are typically calculated and stated not as the annual returns of any particular year, but as compounded returns from a certain year (typically, the year of formation of the fund) to the current reporting period. Unlike IRR, MOICs are not impacted by the timing of cash flows.

	DPI <i>Distributions to Paid-In Multiple</i>	RVPI <i>Residual Value to Paid-In Multiple</i>	TVPI <i>Total Value to Paid-In Multiple</i>	IRR <i>Internal Rate of Return</i>
How it's calculated	$\frac{\text{Cumulative Distributions}}{\text{Paid-In Capital}}$	$\frac{\text{Residual Value}}{\text{Paid-in Capital}}$	$\frac{(\text{Cumulative Distributions} + \text{Residual Value})}{\text{Paid-In Capital}}$	$NPV = \sum_{t=1}^T \frac{C_t}{(1+r)^t} - C_0$
Why it matters	Shows how much of the fund has been realized, or paid out, to investors.	Shows how much of the fund's return is yet unrealized and therefore how sensitive it is to market values.	TVPI is a core performance metric and shows the fund's total value as a multiple of an investor's cost basis. Its primary limitation is that while it tells an investor how much the investment returned as a function of dollars invested, it does not take into account how long it took to generate these returns.	IRR is the discount rate that sets the net present value of all cashflows related to the private real estate investment to zero. It tells investors how much an investment returned while taking into account how long it took to generate the return.

CONSIDER THIS: Two private real estate investments each return twice the total paid-in capital to investors. Private Real Estate Fund A took ten years to generate these returns, while Private Real Estate Fund B generated these returns in only 5 years. Both funds would have the same investment multiple (2.0X), but Fund B would have a higher IRR than Fund A.

Source: Morgan Stanley Wealth Management GIMA.

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How Important is Real Estate Manager Selection?

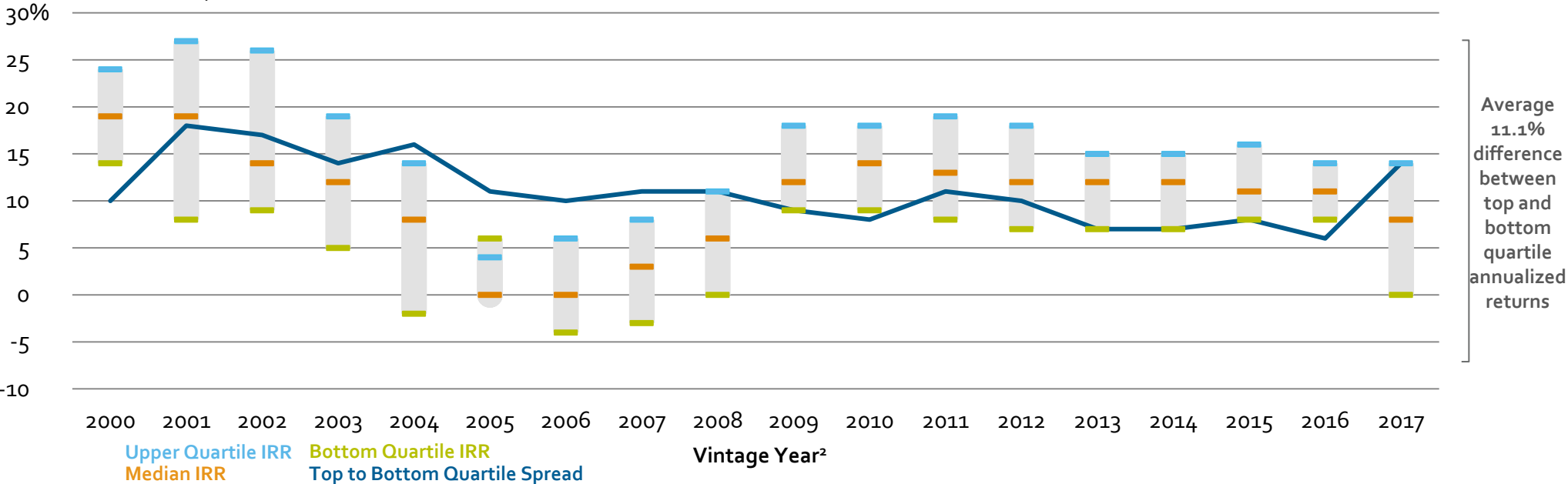
In many prior years, the performance spread between top and bottom quartile real estate managers has been large. Even the difference between top-performing managers and the median has often been substantial. When selecting a private real estate fund, manager selection is one of the most important criteria.

With the average difference between top and bottom quartile annualized returns at 11.1%, comprehensive manager due diligence can provide a meaningful difference in investor returns.

GOAL IS TO CAPTURE THE UPSIDE OF SELECTING TOP-QUARTILE MANAGERS

Closed-End Private Real Estate: Median Net IRRs and Quartile Boundaries by Vintage Year¹

As of Q1 2019; Last updated October 2019



1. Thomson One and Cambridge Associates LLC. Data represents net IRR quartiles for the combined private real estate value-add and opportunistic universe inclusive of all geographies. March, 2019. Data from funds established in 2018 & 2019 is considered not meaningful due to the early stage of investment. The performance information is net of fees, expenses and carried interest of the fund manager.
 2. Vintage year is defined as the first year that a private real estate fund draws down or "calls" committed capital.

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Alternative Investment Manager Due Diligence at Morgan Stanley

The Global Investment Manager Analysis (GIMA) team engages with a broad array of investment managers to identify high-quality strategies for your portfolio. Before managers are selected for inclusion on the platform, GIMA employs a thorough and rigorous due diligence process.

IDENTIFYING HIGH-QUALITY MANAGERS

~25 investment and operational due diligence analysts provide product-agnostic advice

Decisions are governed by experienced committee(s)

Funds are continuously evaluated to reaffirm manager conviction

RIGOROUS MANAGER ANALYSIS



~130 ALTERNATIVE FUNDS OPEN FOR INVESTMENT

Source: Morgan Stanley Wealth Management Global Investment Manager Analysis. As of December 31, 2019.

A majority of investments reviewed and selected by GIMA pay or cause to be paid an ongoing fee to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase such investments. Please see the disclosures at the end of this presentation for more information.

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Our Real Estate Platform

Real estate can be a compelling addition to your portfolio. Real estate investments can offer attractive risk-adjusted returns and also can serve as a hedge against inflation.



FLEXIBLE ACCESS TO REAL ESTATE

Morgan Stanley offers a range of public and private real estate investment options and equity and debt solutions that can be used to create a diversified real estate portfolio or address a specific need in an existing investment strategy.



EXTENSIVE DUE DILIGENCE

Morgan Stanley due diligence professionals visit managers, interview key personnel and conduct in-depth reviews of investment approaches, portfolio composition, risk management techniques, and organizational depth and stability.



DIVERSE PLATFORM OFFERINGS

Morgan Stanley offers an open architecture platform of proprietary and nonproprietary real estate funds and funds of funds that represent the complete spectrum of investment approaches, from core to opportunistic.



GLOBAL REACH

Morgan Stanley offers both domestic and global real estate investment opportunities across the Americas, Europe and Asia to help investors tap into dependable income streams as well as high-growth opportunities.



PLATFORM OVERVIEW

Offerings

Morgan Stanley offers a broad selection of real estate funds through an open architecture platform of proprietary and nonproprietary managers specializing in a wide variety of strategies:

- Morgan Stanley Real Estate Investing
- Third-Party Managers

Investment types

- Single Manager Real Estate Funds (Primary Investment)
- Funds of Real Estate Funds (Primary Investment, Secondary Opportunities)
- Non-Traded REITs
- 1031 Exchange Program

Investment strategies

- Real estate is appropriate to core, value-added and opportunistic investing strategies:
 - Potential inefficient pricing in private marketplace
 - Steady cash income return with potential value appreciation

Source: Morgan Stanley Wealth Management Alternative Investments Group.

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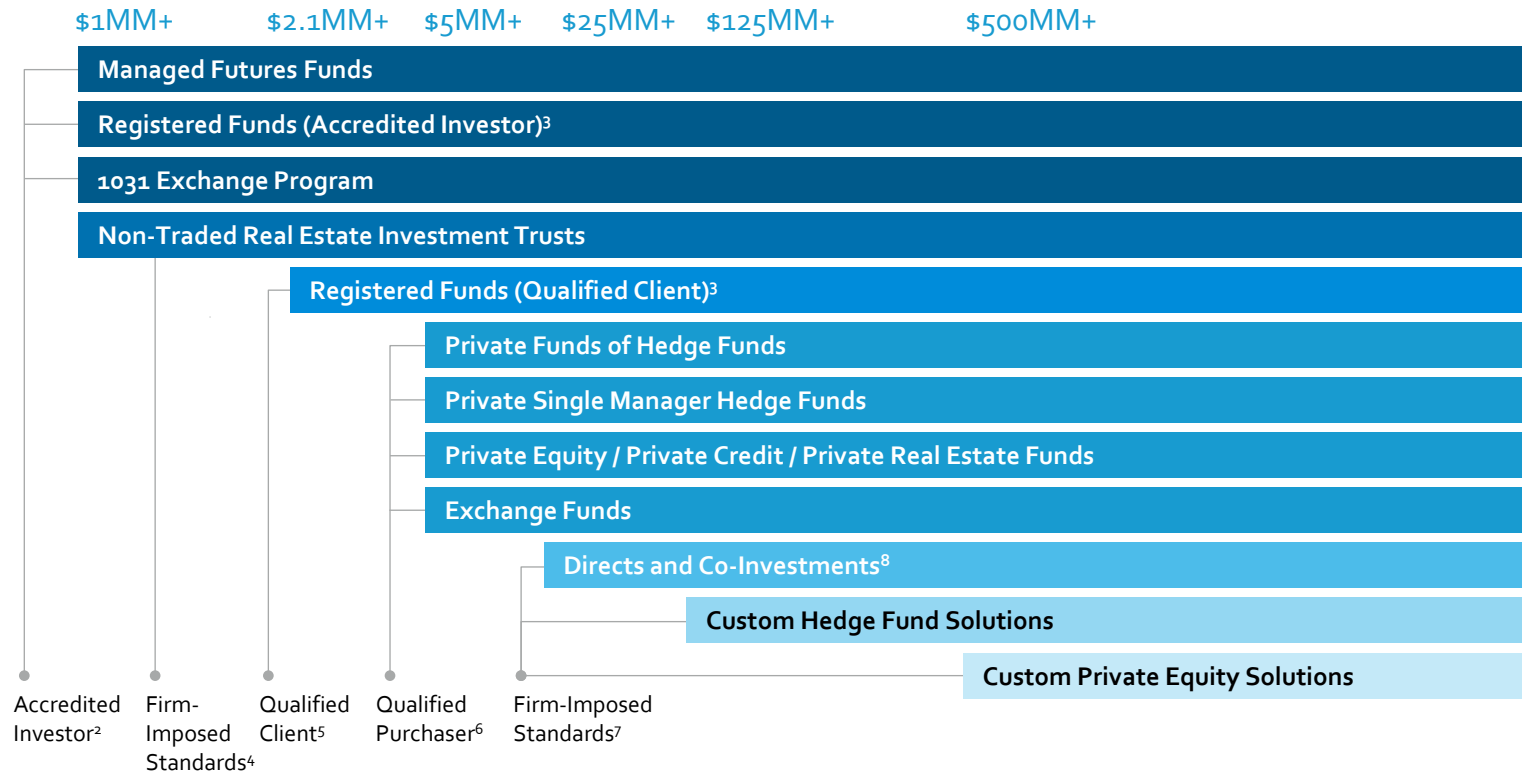
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Alternative Investments Eligibility

CLIENT NET WORTH/NET INVESTABLE ASSET MINIMUMS

Investors participating in alternative investments offered through Morgan Stanley must meet certain SEC and/or state standards depending on the structure of the fund or service. Morgan Stanley may impose a qualification standard that is higher than those required to meet SEC/state standards. Additionally, individual funds or services may have their own investment minimum and eligibility criteria.

Alternative investments are offered only to qualified investors. Client eligibility¹ to purchase alternative investments is typically based on the client's net worth, or as applicable, net investable assets, as shown:



1. Eligibility on its own does not satisfy all requirements and guidelines, nor does it imply appropriateness. Speak with your Financial Advisor or Private Wealth Advisor to help determine if alternative investments may be appropriate for you. Please see the Important Disclosures at the end of this publication for additional information and the applicable offering documents for specific eligibility requirements.
2. Funds that rely on an Accredited Investor standard generally require a minimum net worth of \$1 million for an individual (excluding primary residence), and \$5 million for an entity.
3. The specific Registered Fund structure will determine eligibility standards. Funds that rely on an Accredited Investor standard and/or a Qualified Client Standard generally include Registered Funds of Hedge Funds, Registered Single Manager Hedge Funds, Registered Private Equity Funds, Interval Funds and Private Business Development Companies.
4. Non-Traded Real Estate Investment Trusts generally require a minimum net worth of \$1 million or income of \$200K and \$250K net worth for an individual, and \$5 million for an entity, and must meet specific liquid net worth requirements. Please see applicable offering documents.
5. Funds that rely on a Qualified Client standard require an individual or entity to have a minimum net worth of \$2 .1 million, exclusive of primary residence, or have at least \$1 million invested under management with the manager of the fund.
6. Funds that rely on a Qualified Purchaser standard must also meet Accredited Investor standards, and require minimum net investable assets of \$5 million for an individual, and \$25 million for an entity.
7. In addition to meeting Accredited Investor and Qualified Purchaser standards, these funds are subject to firm-imposed higher eligibility standards.
8. Eligibility is reviewed on a case-by-case basis and is subject change.

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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 appropriate for you. Please see the Morgan Stanley Smith Barney LLC program disclosure brochure (the "Morgan Stanley ADV") for more information in the investment advisory programs available. The Morgan Stanley ADV is available at www.morganstanley.com/ADV. **Sources of Data.** Information in this material in this report has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness or timeliness. Third-party data providers make no warranties or representations relating to the accuracy, completeness or timeliness of the data they provide and are not liable for any damages relating to this data. All opinions included in this material constitute the Firm's judgment as of the date of this material and are subject to change without notice. This material was not prepared by the research departments of Morgan Stanley & Co. LLC or Morgan Stanley Smith Barney LLC. Some historical figures may be revised due to newly identified programs, firm restatements, etc.

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

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

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

Adverse Active AlphaSM 2.0 is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be

appropriate for all investors.

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

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

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

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

Strategy May Be Available as a Separately Managed Account or Mutual Fund Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account ("SMA") and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program. 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.

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

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

Consider Your Own Investment Needs: The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this 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 determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether CGCM is an appropriate program for you.

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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 fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund’s investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund’s essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or “leverage.”

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KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be 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 appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. 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 appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; Risks associated with the operations, personnel, and processes of the manager; and Risks associated with cybersecurity. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment

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These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown). The HFRI indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Composite index results are shown for illustrative purposes and do not represent the performance of a specific investment. Individual funds have specific tax risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Wealth Management and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley Wealth Management or any of its affiliates, (3) are not guaranteed by Morgan Stanley Wealth Management and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Wealth Management is a registered broker-dealer, not a bank. 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Investment products in this category may employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. Alternative investments are not appropriate for all investors. As a diversified global financial services firm, Morgan Stanley 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.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

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

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report

returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

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

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

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

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

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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. Back office administration provided by RenPSG, an unaffiliated charitable gift administrator.

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.

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

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

Residential mortgage loans/home equity lines of credit are offered by Morgan Stanley Private Bank, National Association, an affiliate of Morgan Stanley Smith Barney LLC. With the exception of the pledged-asset feature, an investment relationship with Morgan Stanley Smith Barney LLC does not have to be established or maintained to obtain the residential mortgage products offered by Morgan Stanley Private Bank, National Association. All residential mortgage loans/home equity lines of credit are subject to the underwriting standards and independent approval of Morgan Stanley Private Bank, National Association. Rates, terms, and programs are subject to change without notice. Residential mortgage loans/home equity lines of credit may not be available in all states; not available in Guam, Puerto Rico and the U.S. Virgin Islands. Other restrictions may apply. The information contained herein should not be construed as a commitment to lend. Morgan Stanley Private Bank, National Association is an Equal Housing Lender and Member FDIC that is primarily regulated by the Office of the Comptroller of the Currency. Nationwide Mortgage Licensing System Unique Identifier #663185. **The proceeds from a residential mortgage loan (including draws and advances from a home equity line of credit) are not permitted to be used to purchase, trade, or carry eligible margin stock; repay margin debt that was used to purchase, trade, or carry margin stock; or to make payments on any amounts owed under the note, loan agreement, or loan security agreement; and cannot be deposited into a Morgan Stanley Smith Barney LLC or other brokerage account.**

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

Interest-only loans enable borrowers to make monthly payments of only the accrued monthly interest on the loan during the introductory interest-only period. Once that period ends, borrowers must make monthly payments of principal and interest for the remaining loan term, and payments will be substantially higher than the interest-only payments. During the interest-only period, the total interest that the borrower will be obligated to pay will vary based on the amount of principal paid down, if any. If a borrower makes just an interest-only payment, and no payment of principal, the total interest payable by the borrower during the interest-only period will be greater than the total interest that a borrower would be obligated to pay on a traditional loan of the same interest rate having principal-and-interest payments. In making comparisons between an interest-only loan and a traditional loan, borrowers should carefully review the terms and conditions of the various loan products available and weigh the relative merits of each type of loan product appropriately.

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.

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

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

Morgan Stanley Private Bank, National Association or Morgan Stanley Bank, N.A, each a national bank, Member FDIC.

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.

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 appropriate for all clients. No legal, tax or other advice is being offered herein.

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