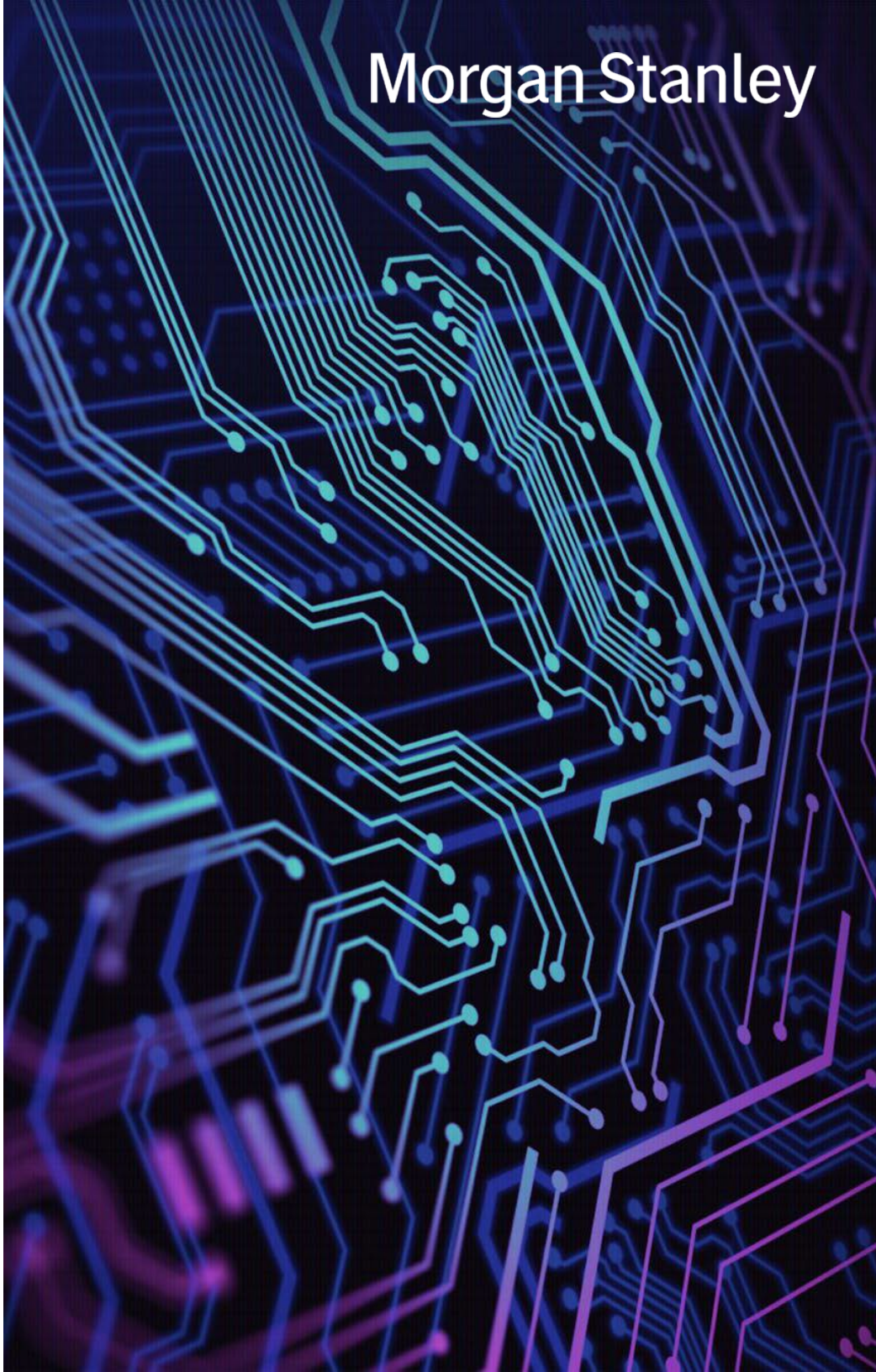
WEALTH MANAGEMENT

Morgan Stanley

Private Equity

An Important Alternative for Your Asset Allocation



The Alternative Investments Landscape: Private Equity

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Private equity funds typically invest in securities, instruments, and assets that are not, and are not expected to become, publicly traded and therefore may require a substantial length of time to realize a return or fully liquidate. They typically have high management, performance and placement fees which can lower the returns achieved by 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 with significant lock-up periods and no secondary market, 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.
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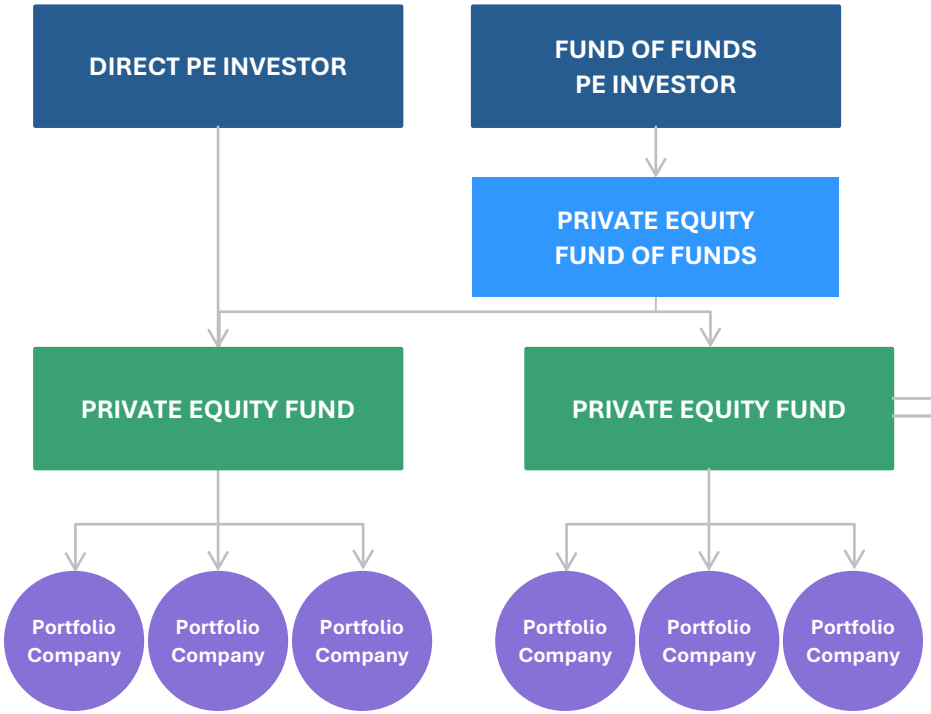
What is Private Equity?

With investment opportunities, generally in privately held companies, that are not available through traditional public markets, private equity may offer both attractive long-term return potential and the opportunity for diversification through historically low correlation to traditional strategies.

DIRECT FUNDS VS. FUND OF FUNDS



MEANS OF PRIVATE EQUITY ACCESS

PRIMARY FUNDS

Private equity funds are typically based on a 'GP-LP' structure, whereby investors (the limited partners, or LPs) commit funds to the private equity fund (the general partner, or GP). The GP pools LP commitments and draws down capital to invest in underlying assets. Once the investments are realized, capital distributions are made back to the LPs.

SECONDARY FUNDS

Secondary transactions refer to the buying and selling of pre-existing limited partnership interests in private equity funds. The purchasing of secondary fund interests provides several benefits to investors, including mitigation of the J-curve and manager diversification.

CO-INVESTMENTS

Invest alongside GPs in individual deals which are typically offered to larger existing LPs in the fund. Co-investments are increasingly prevalent in the current market environment where investors see the benefit of investing in single direct deals.

Source: Morgan Stanley Wealth Management GIMA. 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.

Private equity funds typically invest in securities, instruments, and assets that are not, and are not expected to become, publicly traded and therefore may require a substantial length of time to realize a return or fully liquidate. They typically have high management, performance and placement fees which can lower the returns achieved by 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 with significant lock-up periods and no secondary market, 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.
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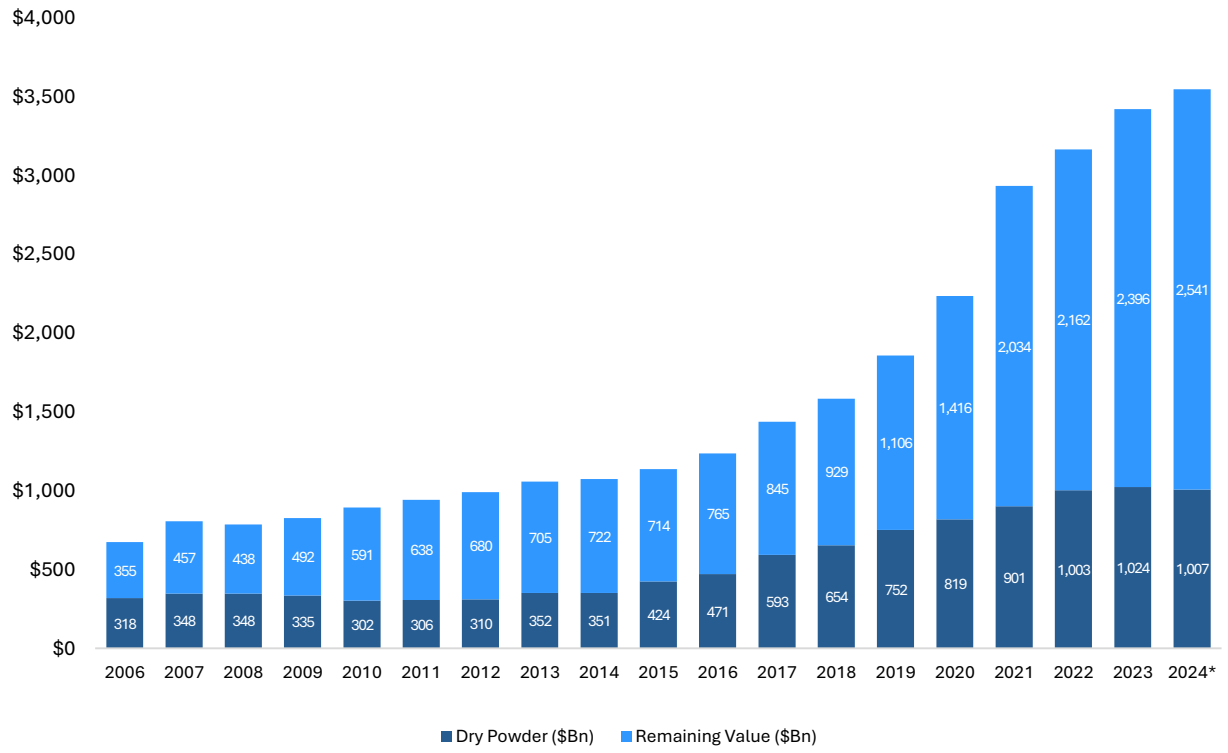
What does the Private Equity Landscape Look Like Today?

THE RISE IN PRIVATE EQUITY

- While private equity has been a source of investment capital for decades, it has been expanding rapidly over the past several years
- The private equity industry is now a large, global and developed industry. Its popularity is evident in the growth in PE assets under management (AUM), as shown in the graph, which combines the amount of new funds committed to future private equity investments (dry powder), and the amount invested in private equity (unrealized value)
- As illustrated in the graph, global private equity AUM has grown to $3.5 trillion as of June 2024
- Along with other alternative investments, the private equity industry has evolved to include a variety of strategies, and now appeals to a greater variety of investors as a result

PRIVATE EQUITY ASSETS UNDER MANAGEMENT HAVE SOARED[1]

As of June 30, 2024* ($ in billions)



1. PitchBook. *Data as of June 30, 2024 and includes global buyout, growth equity and venture capital. Inc. Morgan Stanley Wealth Management GIMA.

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How Does Private Equity Differ from Traditional Investments?

Unlike the stocks of publicly owned companies, private equity is not subject to day-to-day market fluctuations. As a result, private equity managers can invest the capital that you provide with a longer-term time frame that offers the potential to ride out difficult markets, build revenues and exit the investment via strategic sale or initial public offering at a more advantageous time.

DRIVERS OF ALPHA	PUBLIC MARKETS	PRIVATE MARKETS	WHY DOES IT MATTER?
Random events	✓	✓	
Manager skill	✓	✓	
Company selection	✓	✓	Picking the best portfolio companies is a key skill for successful managers
Incentive alignment		✓	GP investment alongside LPs ensures that both parties' interests are aligned
Access to better information		✓	GPs generally have more information for their privately held companies than they would as public market investors
Long-term perspective		✓	GPs generally don't have quarterly pressure to report strong earnings to the market and can instead focus on making necessary long-term improvements
Capital structure improvement		✓	GPs typically have the ability to pay down or take on debt, refinance, or issue equity
Strategic influence		✓	GPs are often able to set and improve the strategic direction of a portfolio company's management team
Ability to drive improvement		✓	GPs are often able to find efficiencies and synergies that improve the value of the underlying company

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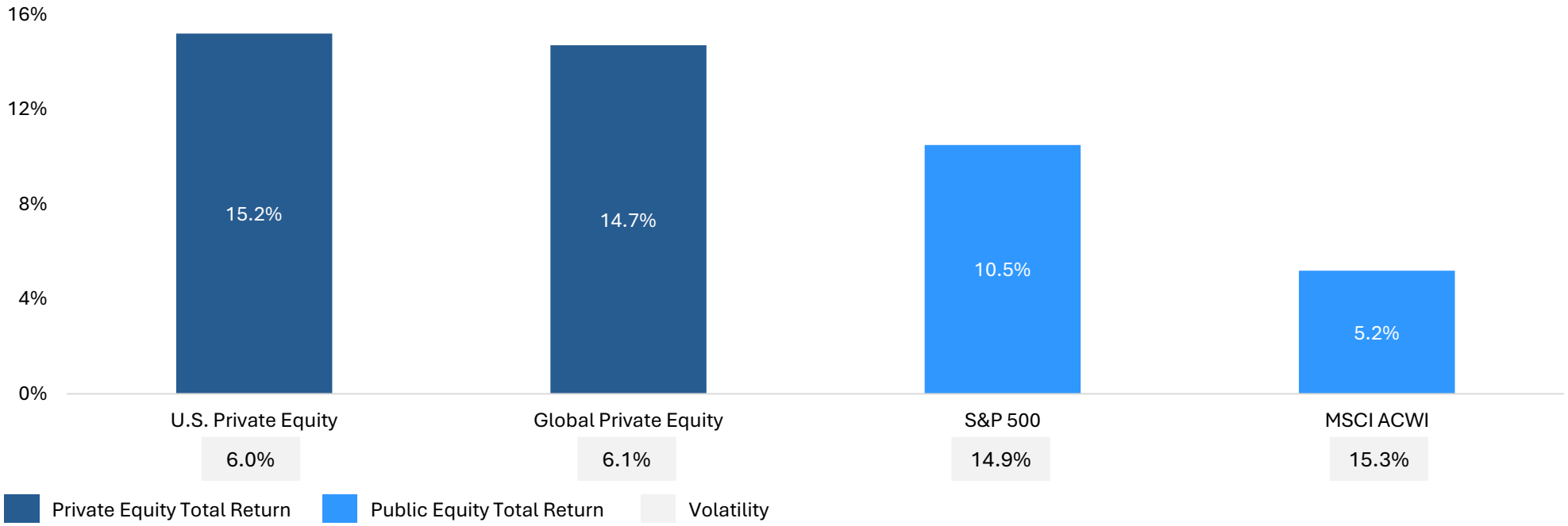
Why are Investors Interested in Private Equity?

Private Equity Has Historically Offered Attractive Long-term Returns vs. Public Equity Markets. Investors Have Been Rewarded for Taking on Less Liquidity.

PRIVATE EQUITY[1] VS. PUBLIC EQUITY: (1990 - 2024)

Annualized Total Returns as of June 30,2024[2]



Source: FactSet, Morgan Stanley Wealth Management.

1. U.S. Private Equity Index Data: The Cambridge Associates Private Equity Index tracks the returns of buyout and growth equity. The data is updated quarterly using the Cambridge Associates Benchmark Calculator, with a lag of several months. Global Private Equity sourced from Cambridge Associates Private Equity Index Total Return Index and includes buyout and growth equity.
2. U.S. and Global Private Equity data subject to 5-month lag; therefore, all asset classes are depicted as of displayed date for consistency. Private equity returns are net to limited partners. MSCI ACWI returns are based off of price, not total return in order to get a full data set starting in 1990.

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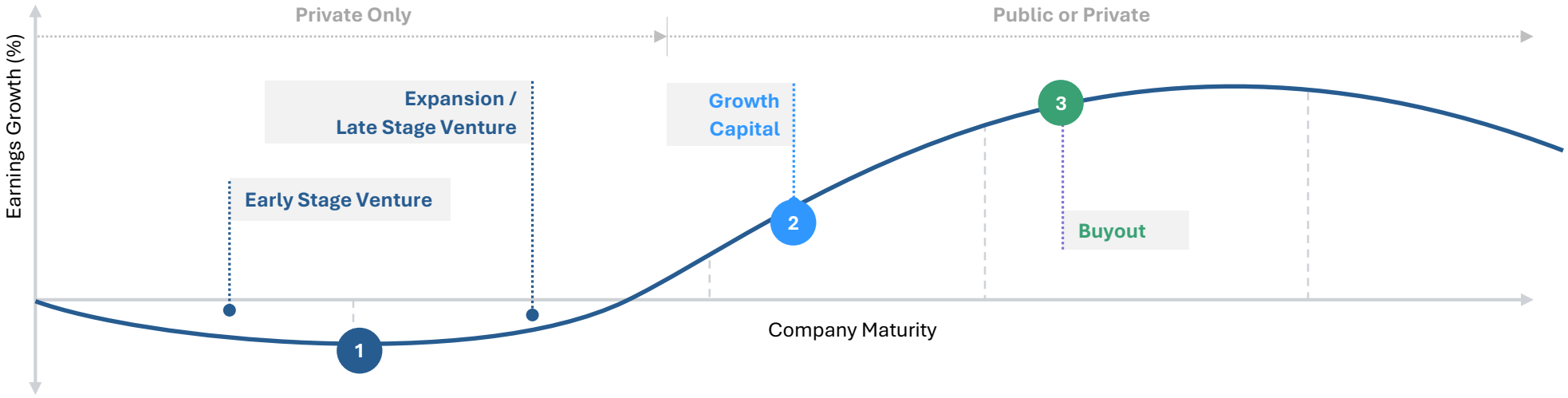
In What Kinds of Companies Do Private Equity Funds Invest?

PRIVATE EQUITY DRAWS VALUE FROM ALL STAGES OF THE COMPANY LIFECYCLE:



1. Venture Capital

- Seed or start-up equity in private companies that may not be generating revenue or profits, pre-IPO
- Most often found in the application of new technology, new marketing concepts and new products
- Often sub-divided by the stage of development, ranging from early-stage to late-stage venture

2. Growth Capital

- Equity investments in companies to provide funding for growth and expansion
- Usually provided to later-stage companies with products and services that are already generating significant revenue
- Companies that seek growth capital will often do so in order to finance transformative events in their life cycle

3. Buyout

- Equity investments to acquire a controlling interest in a company, typically with the use of financial leverage
- Usually categorized from small/mid to large/mega capitalization funds
- Investors in buyout strategies are interested in more mature companies with demonstrated cash flow

Source: Morgan Stanley Wealth Management GIMA.

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What is the Lifecycle of a Typical Private Equity Investment?

The J-curve illustrates the tendency of private equity 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

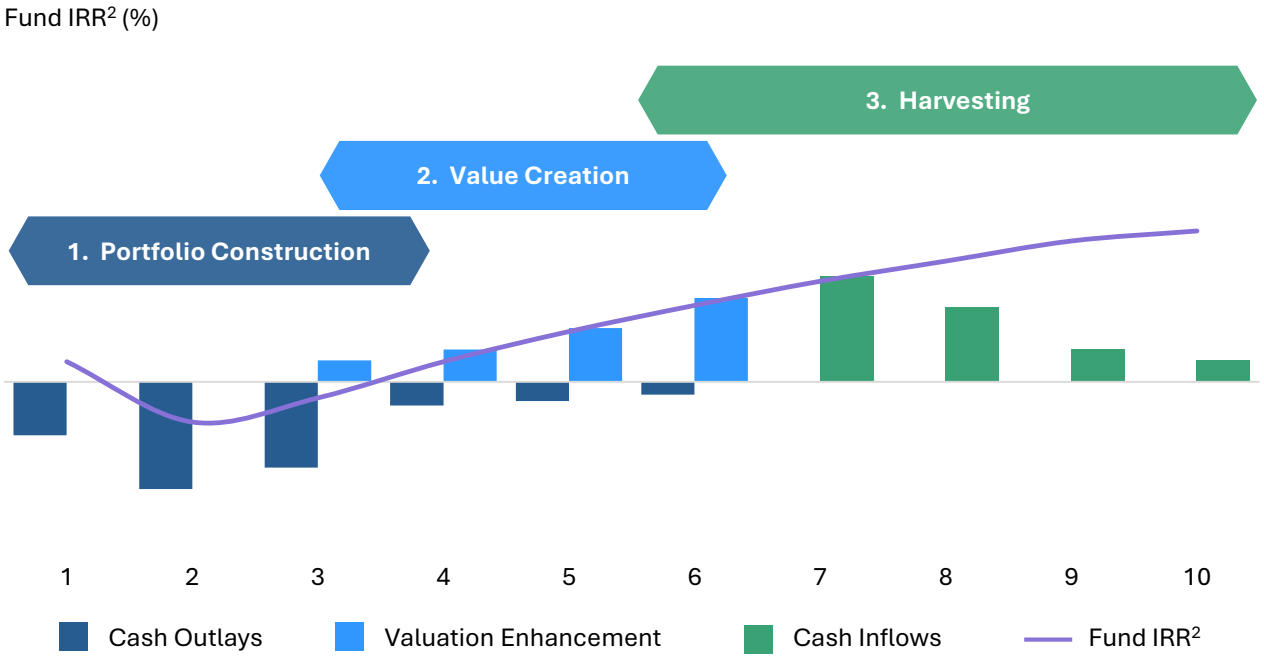
2 Value Creation

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-CURVE[1]



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

1. 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.
2. Internal rate of return (IRR), a metric used in capital budgeting, measures profitability of potential investments. IRR is a discount rate that makes the net present value (NPV) of all cash flows from a project equal to zero.

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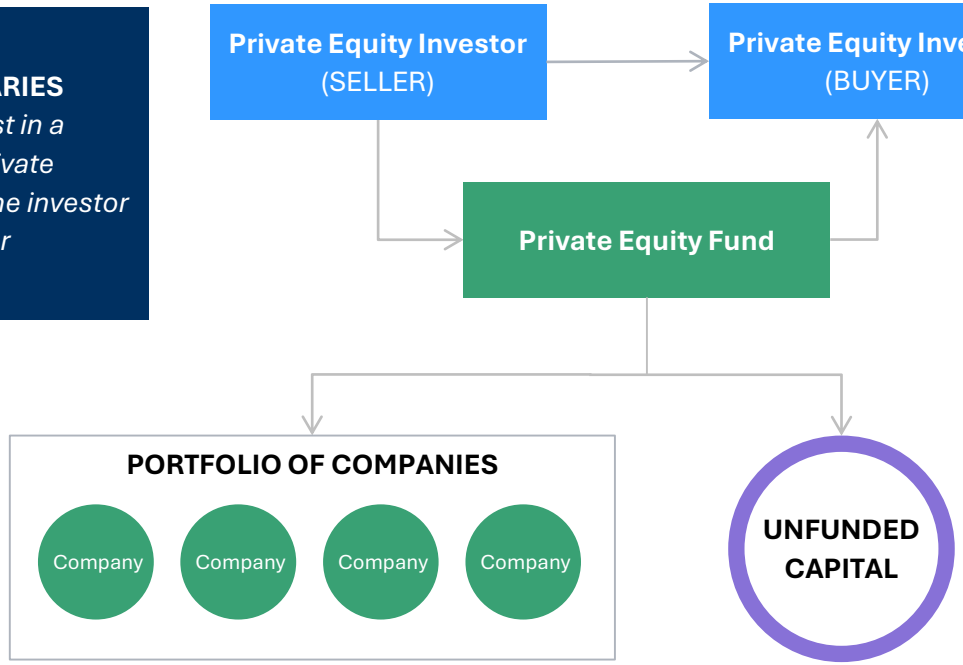
What are Secondary Private Equity Transactions?

In recent years, the secondary market for private equity fund limited partnership interests has deepened. As a result, a number of private equity funds dedicated to the acquisition of secondary interests has proliferated.

LP SECONDARIES
Sale of interest in a mid-cycle private equity fund from one investor to another



WHY SECONDARY PRIVATE EQUITY?

"J-CURVE" MITIGATION

Secondaries are typically purchased after a private equity fund has invested a substantial portion of its capital and entered its value creation phase. That means secondary private equity investors may experience earlier capital distributions with a more evenly distributed pattern of returns, or smoothing of the J-curve, than primary private equity funds. Further, secondary interests are often purchased at a discount to Net Asset Value.

REDUCED "BLIND-POOL RISK"

Investors in secondary funds possess information about its holdings, and managers of secondary private equity portfolios can examine and analyze existing funds and their respective portfolio companies.

INVESTMENT STRATEGIES

Managers can diversify to a greater extent across a variety of factors, including strategy type, fund, manager and vintage. This diversification can benefit smaller investors who have not invested in, or do not have a long-term commitment to, private equity. Therefore, an investment in secondary private equity could promptly establish a core, diversified portfolio.

Source: Morgan Stanley Wealth Management GIMA. Note: These investments are only appropriate for long-term investors. 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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How is Private Equity Performance Measured?

The two most common measures of performance are the internal rate of return (IRR) and multiple on invested capital (MOIC). Returns for private 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 Distributions to Paid-In Multiple	**RVPI** Residual Value to Paid-In Multiple	**TVPI** Total Value to Paid-In Multiple	**IRR** Internal Rate of Return
HOW IT'S CALCULATED	$\frac{\text{Cumulative Distributions}}{\text{Paid-In Capital}}$	$\frac{\text{Residual Value}}{\text{Paid-in Capital}}$	$\frac{\text{(Cumulative Distributions + Residual Value)}}{\text{Paid-In Capital}}$	$NPV = \sum_{t-1}^{T} \frac{C_t}{(1+r)^t} - C_o$
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 equity 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 equity investments each return twice the total paid-in capital to investors. Private Equity Fund A took ten years to generate these returns, while Private Equity 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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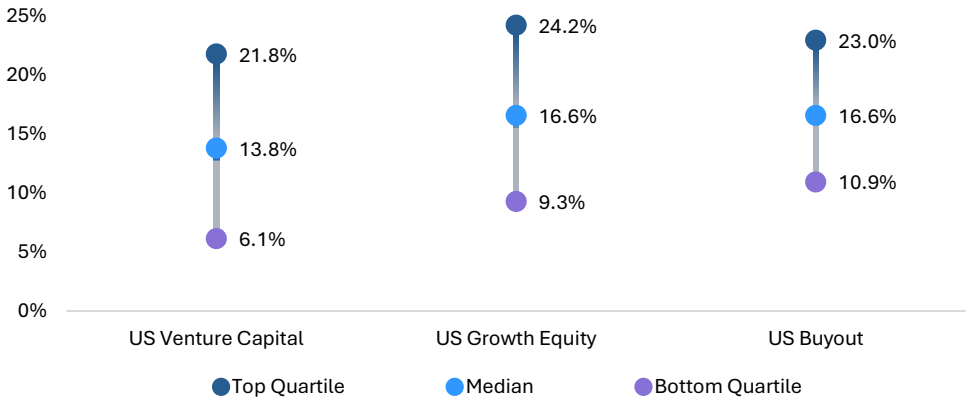
What Qualities are Critical for Successful Private Equity Investing?

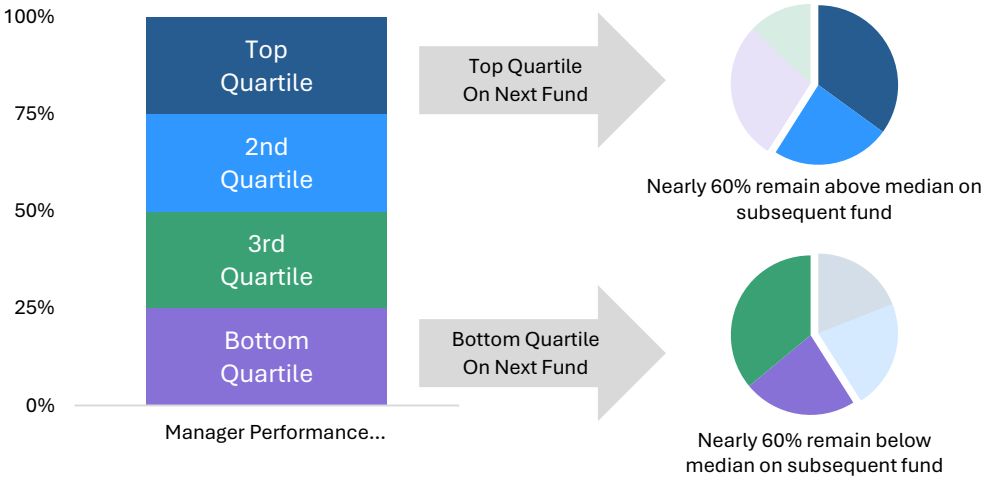
Private investments, unlike other asset classes, are somewhat unique in that manager outperformance tends to be consistent without reversion to the mean. Due to the high dispersion between top and bottom quartile performing funds, manager selection is critical when choosing private investments, as is diversification across vintage years.

WIDE PERFORMANCE DISPERSION MAKES MANAGER SELECTION CRITICAL...

Private equity median net IRRs[1] and quartile boundaries by vintage year[2]
As of March 31, 2024, for vintage years 2005-2019



... WHICH IS FURTHER REINFORCED BY PERSISTENCE OF RETURNS[3]



Morgan Stanley Wealth Management GIMA; Private Equity index data sourced from Thomson ONE's Cambridge Associates benchmarking database. Private Equity is represented by Buyout, Growth Equity, Mezzanine, and Private Equity Energy. Private equity returns are net to limited partners. Performance illustrated does not reflect fees or expenses, actual investor returns would be lower if these were deducted. Investors cannot invest directly in an index.

1. 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. The x-axis only goes up to 2015 because the performance of private equity funds with 2016-2020 vintage years is deemed "not meaningful." The structure of PE means that funds of those vintage years are still in the early stages of the investment period, so performance is not very indicative of what ultimately will be around a 10-year fund.
2. Vintage year is defined as the first year that a private equity fund draws down or "calls" committed capital. Many returns may still be negative because of the J-curve effect. 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.
3. Morgan Stanley Wealth Management GIMA, Blackstone; Steven N. Kaplan, Robert S. Harris, Tim Jenkinson, Rudiger Stucker, "Has Persistence Persisted in Private Equity? Evidence from Buyout and Venture Capital Funds," (February 2014). Darden Business School Paper: 2304808. Vintages from 1984-2008; more recent vintages may still be investing and have few realizations.

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Our Private Equity Platform

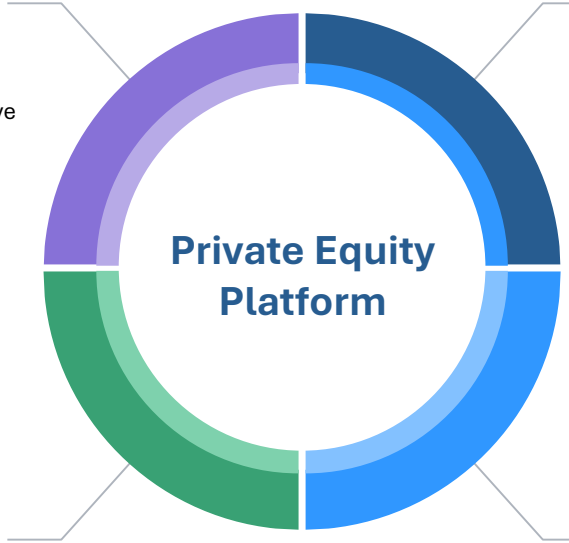
Private equity funds may offer both attractive long-term return potential and the opportunity for diversification, as private equity historically has a low correlation to public markets.

ACCESS

Extensive industry relationships providing access to unique private equity investments, including exclusive opportunities

CHOICE

A broad set of private equity investment strategies to choose from to tap a range of value creation opportunities



SUPPORT

Dedicated Investor Relations and Sales teams that provide ongoing support through continuous oversight, timely updates and performance reporting

OVERSIGHT

Robust investment and operational due diligence processes to help ensure a high standard for funds on the Morgan Stanley platform

PLATFORM OVERVIEW

OFFERINGS

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

- Morgan Stanley Investment Management direct and multi-manager investment funds
- Third-Party Managers

INVESTMENT TYPES

- Single Manager Private Equity Funds (Primary Investment and Co-investment Opportunities)
- Funds of Private Equity Funds (Primary Investment, Secondary Opportunities and Co-investment Opportunities)

INVESTMENT STRATEGIES

- Venture Capital
- Growth Equity
- Buyout
- Secondaries
- Co-investments

Source: Morgan Stanley Wealth Management Alternative Investments Group.

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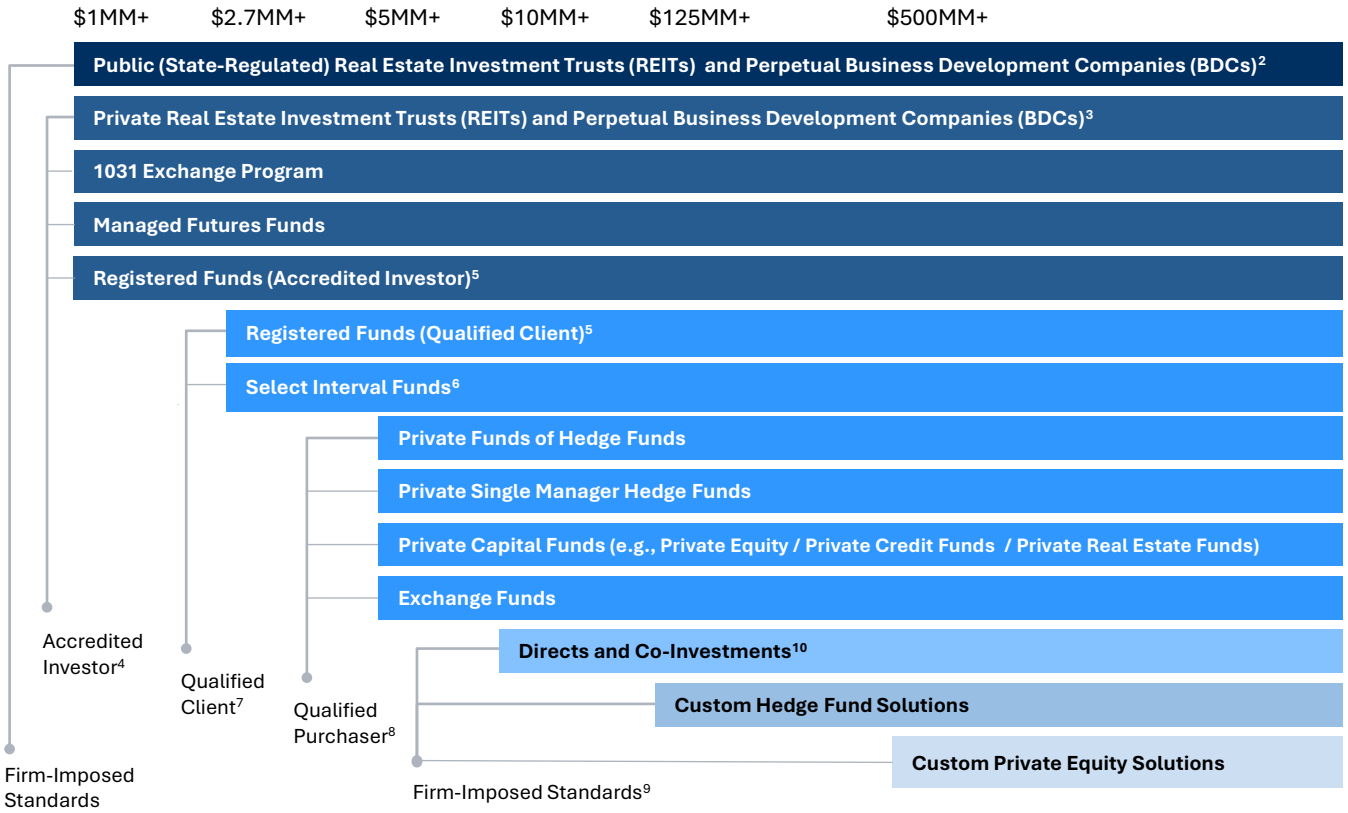
Alternative Investments Eligibility

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 eligibility[1] 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. Public (State-Regulated) Real Estate Investment Trusts and Perpetual Business Development Companies generally require a minimum net worth of $1 million, or income of $200K and net worth of $250K for an individual, and $5 million for an entity, and must meet specific liquid net worth requirements.
3. Private Real Estate Investment Trusts & Perpetual Business Development Companies generally do not have state-regulated liquid net worth requirements.
4. Funds that rely on Accredited Investor standard generally require a minimum net worth of $1 million for an individual (excluding primary residency), and $5 million for an entity.
5. 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, Registered or Private Real Asset Funds and Private Business Development Companies.
6. Internal Funds have varying eligibility requirements. Please consult applicable offering documents.
7. Funds that rely on a Qualified Client standard require a client to have a net worth (together, in the case of a natural person, with assets held jointly with a spouse) of more than $2.7 million, excluding primary residence and related debt, at the time the contract is entered into with the fund (the "net worth test"). 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.
8. In addition to meeting Accredited Investor and Qualified Purchaser standards, these funds are subject to firm-imposed higher eligibility standards.
9. Eligibility is reviewed on a case-by-case basis and is subject to change.

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General Disclosures

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Asset allocation, diversification, rebalancing and dollar cost averaging do not guarantee a profit or protect against loss in declining markets. Past performance is no guarantee of future results and actual results may vary. Rebalancing strategies may also have tax consequences; investors should consult a qualified tax advisor before implementing such strategies.

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Indices are unmanaged and cannot be invested in directly. For index, indicator and survey definitions referenced in this report, please visit: www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

For more information, please refer to additional General Disclosures here: www.morganstanley.com/wealthbooks#general-disclosures.

Risks Associated With Investing

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. **Please carefully consider the investment objectives, risks, charges and expenses of investment fund(s) before investing. The fund prospectus contains this and other information about the fund(s). To obtain a prospectus, contact your financial advisor. Please read the prospectus carefully before investing.** There is no assurance that investment funds will achieve their investment objectives. 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. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in emerging markets and frontier markets. Some funds also invest in foreign securities, which may involve currency risk. **Equity securities** may fluctuate in response to news on companies, industries, market conditions and general economic environment Companies paying dividends can reduce or cut payouts at any time. 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. **Growth investing** does not guarantee a profit or eliminate risk. Growth stocks can trade at relatively high valuations which may increase risk compared with an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies deemed value stocks are able to turn around their business or successfully execute corrective strategies, and their stock prices may not rise as initially expected.

The value of **fixed income securities** will fluctuate and, upon a sale, may be worth more or less than their original cost or value at maturity. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. Yields may change with economic conditions and should be considered alongside other factors when making investment decisions. Credit ratings are subject to change. **High yield bonds** carry additional risks, including increased risk of default and greater volatility due to lower credit quality of the issues. In the case of **municipal bonds**, income is generally exempt from federal income taxes, though 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)** adjust coupon payments and underlying principal to compensate for inflation in line with the consumer price index (CPI). While the real rate of return is guaranteed, TIPS typically offer lower returns and may significantly underperform conventional U.S. Treasuries during periods of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The **Ultrashort-term fixed income** asset class consists of high-quality securities with very short maturities and is therefore still subject to the risks associated with debt securities such as credit and interest rate risk.

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

Investing in **Commodities:** Commodity prices may be affected by factors such as supply and demand, government policies, domestic or international political and economic events (including war or terrorism), changes in interest and exchange rates, trading activity in commodities and related contracts, pestilence, technological developments, weather, price volatility, and liquidity constraints. Physical precious metals are speculative, non-regulated products that may experience short- and long-term price volatility. Precious metals do not make interest or dividend payments and therefore may not be appropriate for investors who require current income. Precious metals must be stored, which may impose additional costs on investors.

Master Limited Partnerships (MLPs): Investments in MLPs are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity price fluctuations, supply

and demand imbalances, resource depletion and exploration risk. MLPs also carry interest rate risk and may underperform in rising interest rate environments. In addition, MLP funds accrue deferred income taxes on net operating gains and capital appreciation; as a result their after-tax performance could differ significantly from that of its underlying assets.

Exchange Funds are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification.

Alternative investments are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They are appropriate only for eligible, long-term investors willing to forgo liquidity and put capital at risk for an indefinite period. They are often illiquid, may employ leverage, short-selling, or other speculative practices that increase volatility and risk of loss, and may require large minimum investments and initial lock-ups. Alternative investments may also involve complex tax structures, tax-inefficient investing, and delays in distributing important tax documents. Clients should consult their own tax and legal advisors, as Morgan Stanley Wealth Management does not provide tax or legal advice. They also typically carry higher fees and expenses than traditional investments, which can reduce overall returns.

Sector investments, due to their narrow focus, tend to be more volatile than broadly diversified investments. **Non-diversified portfolios:** Portfolios that hold a concentrated number of securities may experience greater overall declines when those securities lose value compared with more diversified portfolios. Portfolios that invest heavily in one or a few industry sectors are more vulnerable to price fluctuations than those diversified across a wider range of sectors.

Environmental, Social and Governance (ESG) investments in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. Certain issuers of investments may have inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. ESG designations are as of the date of this material, and no assurance is provided that the underlying assets have maintained or will maintain any such designation or any stated ESG compliance. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. Investors should also independently consider whether the ESG investment product meets their own ESG objectives or criteria. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results.

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to: Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, and investors could lose their entire investment. Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset. Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

For more information, please refer to additional Risks Associated With Investing here: www.morganstanley.com/wealthbooks#risks-associated-with-investing.

Investment Advisory Programs

The sole purpose of this material is to inform, and it in no way is intended to be an offer or solicitation to purchase or sell any security, other investment or service, or to attract any funds or deposits. Investments mentioned may not be appropriate for all clients. MSWM offers investment program services through a variety of investment programs, which are opened pursuant to written client agreements. Each program offers investment managers, funds and features that are not available in other programs; conversely, some investment managers, funds or investment strategies may be available in more than one program. For more information, please see the Morgan Stanley Smith Barney LLC MSWM program disclosure brochure (the "Morgan Stanley ADV"). The Morgan Stanley ADV is available at www.morganstanley.com/ADV.

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

Generally, investment advisory accounts are subject to an **annual asset-based fee** (the "Fee") which is payable monthly in advance (some account types may be billed differently). In general, the Fee covers Morgan Stanley investment advisory services, custody of securities with Morgan Stanley, trade execution with or through Morgan Stanley or its affiliates, as well as compensation to any Morgan Stanley Financial Advisor.

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

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

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's SMA programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported

on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the **Morgan Stanley ADV** or contact your Financial Advisor / Private Wealth Advisor.

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MSWM, managers, MS & Co., and their affiliates receive compensation and fees in connection with these services. MSWM 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 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.

For more information, please refer to additional Investment Advisory Programs disclosures here: www.morganstanley.com/wealthbooks#investment-advisory-programs.

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Residential mortgage loans and home equity lines of credit are offered by MSPBNA, Member FDIC an Equal Housing Lender. 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 MSSB or other brokerage account.** The pledged-asset feature allows eligible securities to be used as a substitute for a cash down payment. The pledged-asset feature allows eligible securities to be used as an alternative to a cash down payment. Clients must maintain collateral levels and may be subject to liquidation if requirements are not met. Interest-only and adjustable-rate mortgages (ARMs) carry specific risks, including payment increases and higher total interest costs. ARMs are based on the SOFR 30-Day Average. Relationship-based pricing is available based on eligible household assets held at the Firm.

Cards and Cash Management: Debit Cards offered through the Firm are issued by MSPBNA under license from Mastercard. American Express Cards offered through the Firm include the Platinum Card®, Blue Cash Preferred®, and the Morgan Stanley Credit Card. Eligibility requires an "Eligible Account" at the Firm. Cards are issued by American Express National Bank. Terms, conditions, and restrictions apply. The Greenlight App and Debit Card is provided by Greenlight Financial Technologies, not the Firm or any of its affiliates. The Morgan Stanley CashPlus is a brokerage account offered through MSSB. Conditions and restrictions apply. For more information, see the CashPlus Disclosure Statement.

Deposit Products and FDIC: Under the Bank Deposit Program, free credit balances held in an account(s) at Morgan Stanley Smith Barney LLC are automatically deposited into an interest-bearing deposit account(s) at FDIC-insured banks. Certain conditions must be met. For more information, view the Bank Deposit Program Disclosure Statement. The Savings and Preferred Savings Programs offer FDIC-insured deposit accounts at Morgan Stanley Private Bank, National Association, Member FDIC or Morgan Stanley Bank, N.A., Member FDIC. The Savings programs are not intended for clients who need to have frequent access to funds and those funds will not be automatically accessed to reduce a debit or margin loan in your brokerage account. Withdrawals are limited to 10 per calendar month, and excess withdrawals may incur fees. Promotional rates may be offered from time to time and are subject to change at any time.

Morgan Stanley Smith Barney LLC is a registered Broker/Dealer 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.

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