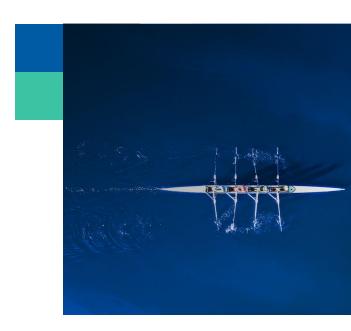
Morgan Stanley

INVESTMENT MANAGEMENT

Portfolio Solutions Group: Outlook

January 2024



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INVESTMENT MANAGEMENT

Macro Recap & Public Market Outlook

SECTION 1

Overview

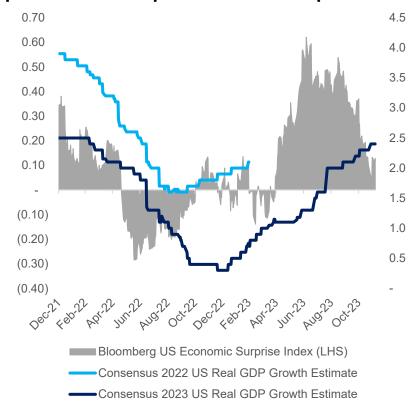
- The data in 2H2023 has supported a "Goldilocks" outcome. The ideal soft landing scenario rests on convincing disinflation in the absence of major growth disappointment, allowing policy to ease. During the second half of 2023 we have seen clear progress in disinflation even as growth surprised to the upside. A dovish Fed message in December takes this further, offering greater visibility to rate cuts.
- Further disinflation progress is the linchpin of the soft-landing scenario. Disinflation progress allows for policy normalization, which reduces risk scenarios. The central variable is wage growth as a driver of both service and shelter inflation. Jolts data has shown labor demand normalizing, while a rising participation rate and increased immigration have helped supply.
- Monetary policy headwinds are dissipating. Markets started to price policy tightening beginning in 2H2021 and policy tightening was fully price by the end of 2022. GDP growth headwinds peak two to three quarters after tightening and then headwinds continue but dissipate sequentially thereafter. Policy related growth headwinds are fading (if not already fully faded) as we enter 2024. Other related risks are mitigated once policy begins to ease.
- A dovish policy pivot in December, a shift in risk scenarios. Fed communication in December signaled somewhat less conservatism than previously expected in evaluating disinflation progress and somewhat more emphasis on offsetting a rise in real rates as inflation falls. The market reacted by pricing a lower policy path. The easing in financial conditions should serve to further reduce downside growth risks scenarios, while to some extent increasing the risk that disinflation stalls at too high of level.
- The market has pulled forward 2024 returns. The valuation and growth implications of falling rates lifted asset prices heading into 2024. This leaves us searching for a new additional catalyst for good news in 2024 to keep valuations rising. This may require stronger growth and earnings, which may be harder to achieve. As a result, we moving back to a neutral position on equities. We currently see the most attractive risk/reward opportunities within credit, specifically high yield and EM hard currency debt.

The views and opinions expressed are those of the portfolio management team at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass.

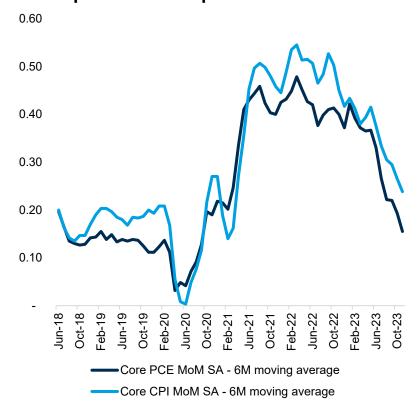
Macro Data Has Thus Far Supported a "Goldilocks" Outcome

The ideal soft-landing scenario rests on disinflation progress with growth resilience

Positive GDP growth estimate revisions reflect positive data surprise relative to expectations



Disinflation progress is clear even as growth has surprised to the upside

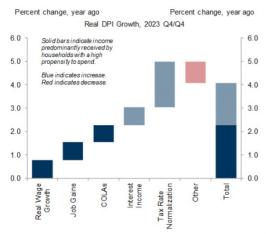


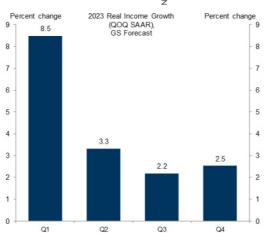
Source: Bloomberg, Morgan Stanley Investment Management.

Consumption Was the Key Positive Driver of 2023 Growth Surprise

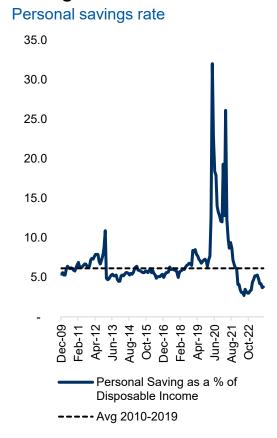
Drivers included strong job market, low savings rate, and minimal floating rate debt

Job market / Income

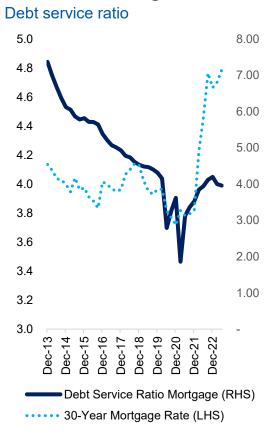




Savings rate remained low



Shielded from higher rates



Source: Goldman Sachs.

Source: Bloomberg, Morgan Stanley.

Source: Bloomberg, Morgan Stanley.

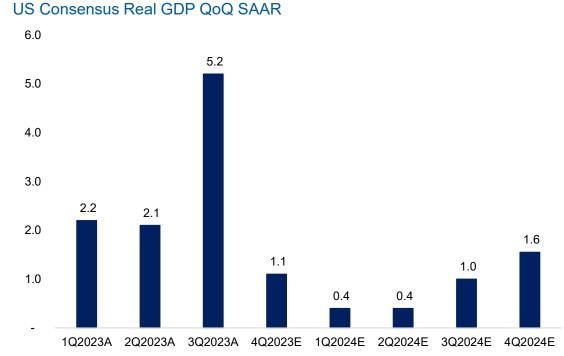
Growth Is Expected To Slow In 2024 (But Not Collapse)

Growth is expected to slow heading into 2024 – labor market remains a key focus

2024 Growth Drivers:

- Consumption growth decelerates principally on a softer labor market and lower wage pressures, with some additional impact from a higher savings rate.
- Government spending contribution decelerates as anomalous drivers in 2023 disappear with deficit expanding only marginally.
- Business fixed investment sees crosscurrents with less government subsidies and headwinds from bank lending, but the potential for reduced recession fears to drive investment.
- Residential investment sees an ongoing headwind from affordability but could see a lift as mortgage rates fall.

Trough growth seen ahead, but this has been a moving target



	1Q2023	2Q2023	3Q2023	4Q2023	1Q2024	2Q2024	3Q2024	4Q2024
12/30/2022	-	(0.6)	-	0.9	1.5	1.8		
3/31/2023	1.3	0.2	(0.5)	0.4	1.0	1.6	1.8	2.4
6/30/2023	2.2	1.3	-	(0.5)	0.7	1.3	1.7	1.9
9/29/2023	2.2	2.1	3.0	0.5	0.1	0.6	1.4	1.8
12/7/2023	2.2	2.1	5.2	1.1	0.4	0.4	1.0	1.6

Source: Bloomberg, Morgan Stanley Investment Management.

Looking Back: Explaining Growth Resiliency Despite Tighter Policy

No single answer is obvious, but there are several explanations to consider

Potential explanations:

- In the rear view: The negative growth impulse was felt primarily in 2022 and has been dissipating through 2023.
- 2. Offset: The negative growth impulse was present in 2023 but overwhelmed by positive demand shocks higher government spending, the spend down of excess savings, the lagged effect accommodative policy maintained too long, the ongoing post-pandemic normalization process.
- Not enough: The Fed did not tighten enough with the neutral rate higher than assumed.
- Economy now less rate sensitive: The economy is less interest rate sensitive than in the past.
- Slow to develop but coming: It is taking longer than in the past for policy to have an impact on growth but these headwinds will eventually materialize.

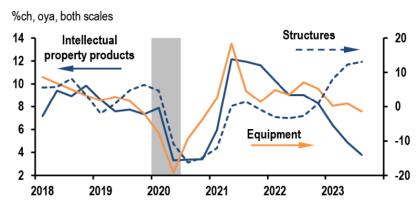
GS sees impact primarily in 2022



MS highlights consumers insulated



JPM highlights how the IRA and Chips Act drove investment in manufacturing structures despite higher cost of capital

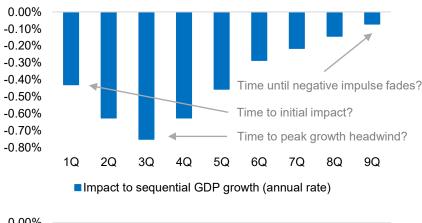


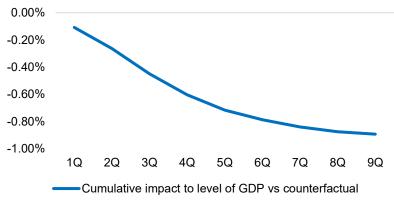
Sources: Goldman Sachs, JPMorgan, Morgan Stanley Research.

Negative Growth Impulse From Tighter Policy Is Likely Dissipating

Much can be debated, but it is likely the peak growth (not level) impact is behind us

Representative "Impulse Response Function"





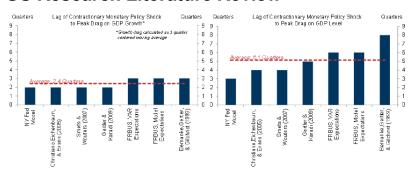
Fed Governor Waller: "the hump-shaped response means there are no "cliff effects"—a policy change is not associated with a long period of no effect that is then followed by an abrupt change in the variable."

MS Research Literature Review

Paper	Quarters after shock when GDP decelerates	Statistically significant deceleration	Variable	Sample
Christiano, Eichenbaum and Evans (1999)	1	2	GDP	1965q3-1995q3
Romer and Romer (2004)	2	3	IP	1970m1-1996m12
Bernanke, Boivin and Eliasz (2004)	2	2*	IP	1959m1-2001m7
Barakchian and Crowe (2010)	4	5	IP	1988m12-2008m6
Boivin etal (2010)	3	not stat. signif.	GDP	1984q1-2008q4
Coibion (2011)	2	2	IP	1970m1-1996m12
Gertler and Karadi (2015)	2	5	IP	1979m7-2012m6
Amir, Ahmadi, Uhlig (2015)	1	3	IP	1960m2-2010m6
Anzoategui and Kim (2021)	2	2	GDP	1950q2-2008q4

^{*} statisitcally insignificant in many model specifications

GS Research Literature Review



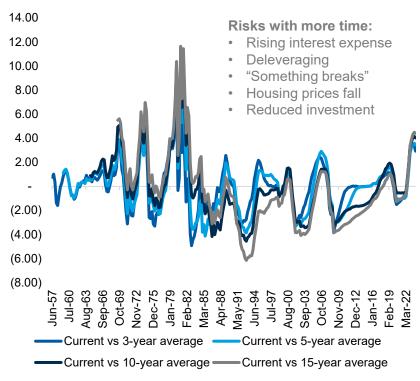
Sources: Morgan Stanley Investment Research, Goldman Sachs, MSIM.

The End of Lower Highs and Lower Lows For Rates Carries Risk

But the policy risks still present see relief with lower inflation and policy easing

Persistence of higher rates risks pain as some adjustments cannot be delay in perpetuity

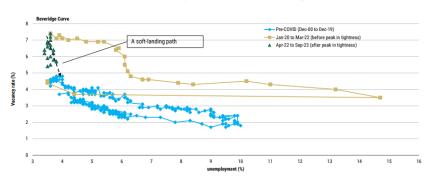
Current policy rate vs preceding period avg



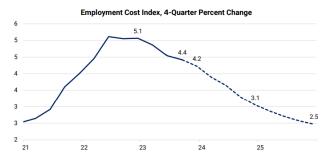
But disinflation and "soft landing" labor market progress offer path to some relief

MS Research labor market views





Wage growth peaked in 4Q22 and declines through our forecast horizon



Source: Bloomberg, MSIM.

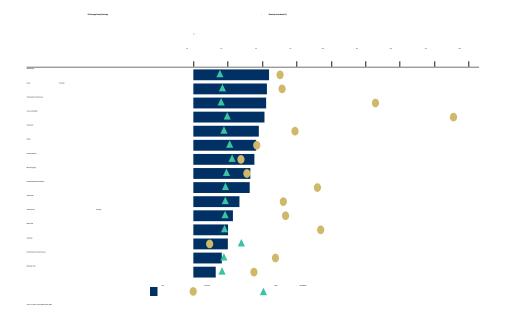
Source: Bloomberg, Morgan Stanley Research.

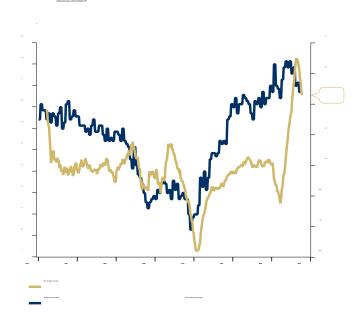
We Expect Disinflation Progress to Continue

Continued disinflation without recession is the key to the soft-landing story

Inflation pressures are fading as pandemic supply and demand shocks fade. Wage pressures ease as demand has softened (JOLTS data) and supply has improved (participation and immigration).

Downward pressure on shelter CPI to be driven by 1) lagged effect of falling rents; 2) weaker wage growth. Supply is rising to address housing shortage.





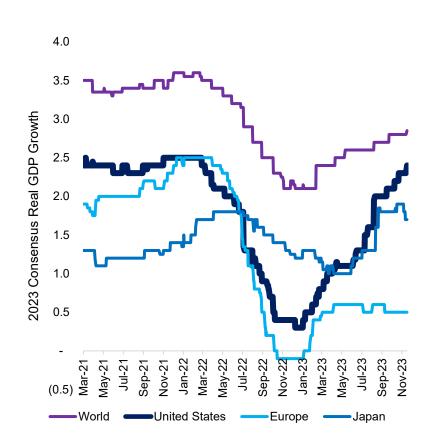
Source: Federal Reserve Bank of Atlanta, U.S. Bureau of Labor Statistics (BLS), MSIM. Data as of 18 December 2023. The views and opinions expressed are those of the portfolio management team at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

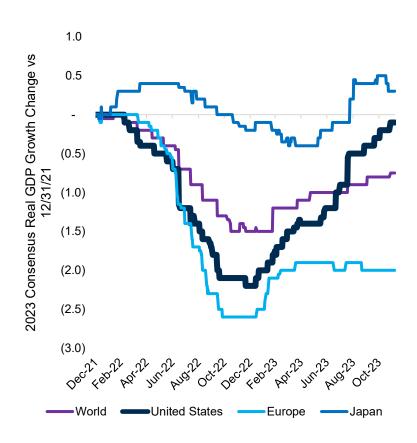
Global Growth: Our Regional Views Align With the Growth Picture

US most 2023 surprise, Japan least policy headwind, Europe least recent revision

2023 Consensus Real GDP Growth Estimates

2023 Growth Estimate Change Vs 12/31/2021





Source: Bloomberg, Morgan Stanley Research.

Duration: See 10-Year Yield Gravitating to 4% Level In 2024

Still see US 10-year in 3.5% to 5.5% range for coming cycle (intermediate term range)

The market is now pricing in meaningful 2024 cuts – some term premium to balance cuts



Decomposition of our 3.5% to 5.5% view for the coming cycle – policy path and term prem.

10Y UST Decomposition Scenarios

Rate Expectation Component (%)											
		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
(%)	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	25	3.0	3.5
Component	-1.0	-0.5	0.0	0.5	1.0	1.5	2.	2.5	3.0	3.5	4.0
one	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
π	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
S	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
Premium	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
i.E	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
Term	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
Te	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
	•	-									

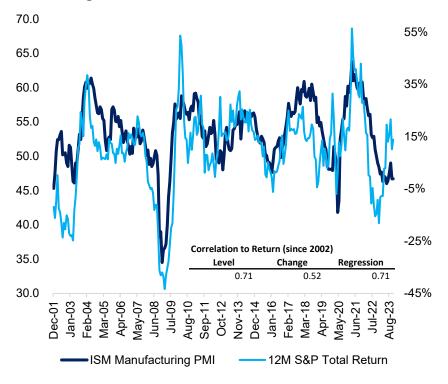
post-GFC cycle today next cycle?

Source: Bloomberg, Morgan Stanley.

Equities: Translating Growth View To Returns

Below trend but still-positive growth implies positive but muted returns historically

Translating PMI Index to returns – 12M view



	ISM PMI in	12M PMI Chg	Implied	Less	Plus	
	12M	vs Curent	Return	1 STDev	1 STDev	
	40	-7	-22%	-33%	-10%	
	41	-6	-19%	-31%	-8%	
	42	-5	-17%	-29%	-5%	
	43	-4	-14%	-26%	-3%	
	44	-3	-12%	-24%	0%	
	45	-2	-10%	-21%	2%	
_	46	-1	-7%	-19%	5%	
I	47	0	-5%	-16%	7%	
ı	48	1	-2%	-14%	9%	
ı	49	2	0%	-12%	12%	
l	50	3	3%	-9%	14%	
I	51	4	5%	-7%	17%	
I	52	5	7%	-4%	19%	
	53	6	10%	-2%	22%	
	54	7	12%	1%	24%	
	55	8	15%	3%	26%	

Contextual notes:

Median PMI is 53, so below trend sub-53 but above recessionary levels.

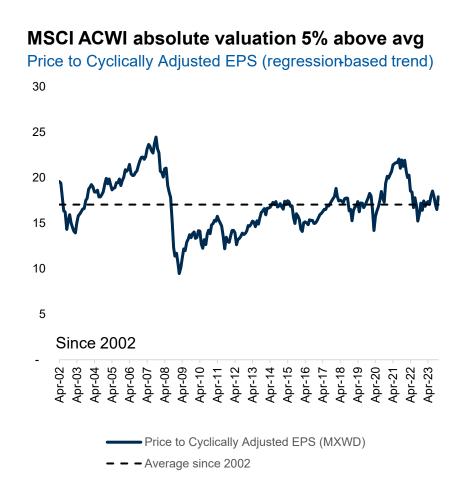
Average 12M PMI change is 5.5

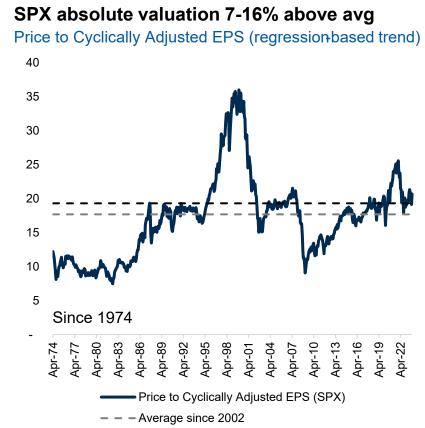
Average 12M S&P return is 9.4%

Source: Bloomberg, Morgan Stanley.

Equities: Absolute Valuation Not Extended

Absolute valuation is not too extended, but relative valuation (ERP) a constraint



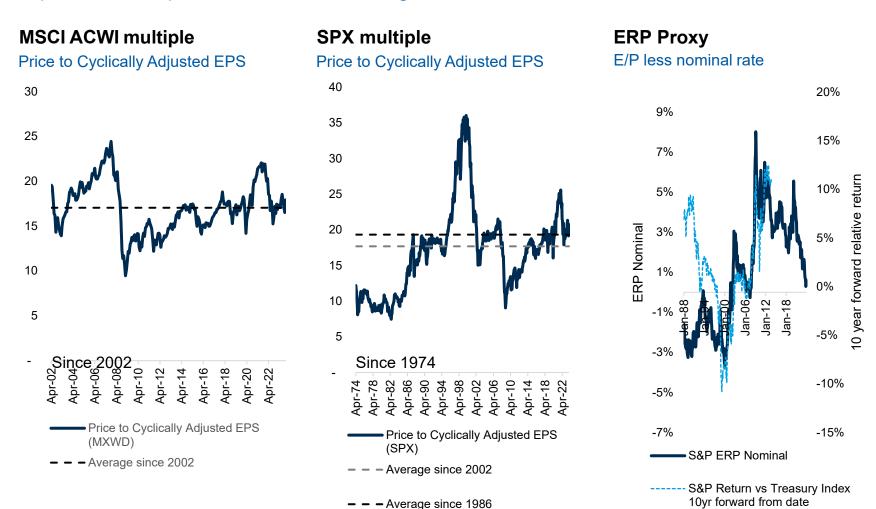


- Average since 1986

Source: Bloomberg, Morgan Stanley

Equities: Absolute Valuation Is Fine, But ERP a Constraint

Equities look expensive relative to the high current level of rates



Source: Bloomberg, Morgan Stanley

Positioning Focus Areas

CASH

Overweight to neutral

Time to reduce cash; Use cash as a funding source rather than an investment for 2024.

Inflation has likely peaked and policy rates may decline in the quarters ahead. Cash may be a drag on performance relative to carry and income strategies that have potential to add price return in addition to yield. We moved our portfolio duration target from 3-years to 5-years, which is nearing neutral levels.

HIGH YIELD

Neutral to Overweight

High Yield can rival equity returns in 2024 on carry advantage. While tight spread levels are already discounting good news for (US) high yield markets, European spreads look more attractive. High valuations and ambitious (but achievable) earnings expectations will limit equity gains in 2024. With central banks in pre-emptive cutting mode supporting carry assets, slightly tighter spreads and lower short rates should be the return drivers for high yield.

EM DEBT HARD CURRENCY

Neutral to Overweight

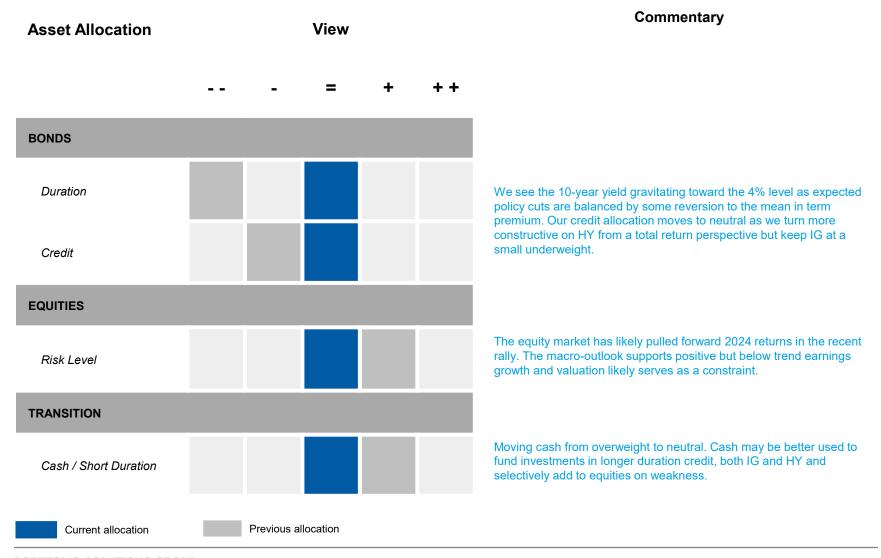
Spreads *and* **rates to support total EM HC debt returns.** The Fed Put, now clearly in place, has reinforced an environment of low inflation, lower funding costs and stronger growth. The macro and market environment should skew spreads towards stable and tightening, while losses on rates are unlikely in a disinflationary environment.

US EQUITIES

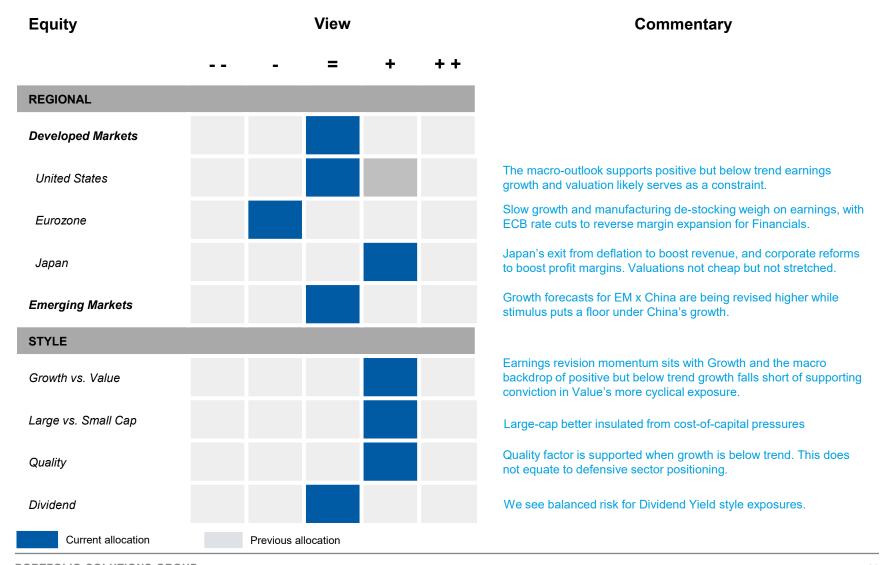
Overweight to Neutral

Moving to Neutral. We have been OW US equities during 2023 but shifting toward neutral to start 2024 as we believe much of the good news of falling inflation and lower policy rates has greatly pulled forward 2024 returns into late 2023. However, we still think there is potential for positive returns in equities, but it is likely to come from a more balanced portfolio structure that has a diversified mix of value and growth and a broadening of the market. We think portfolio positioning and a more balanced approach will be very beneficial in 2024.

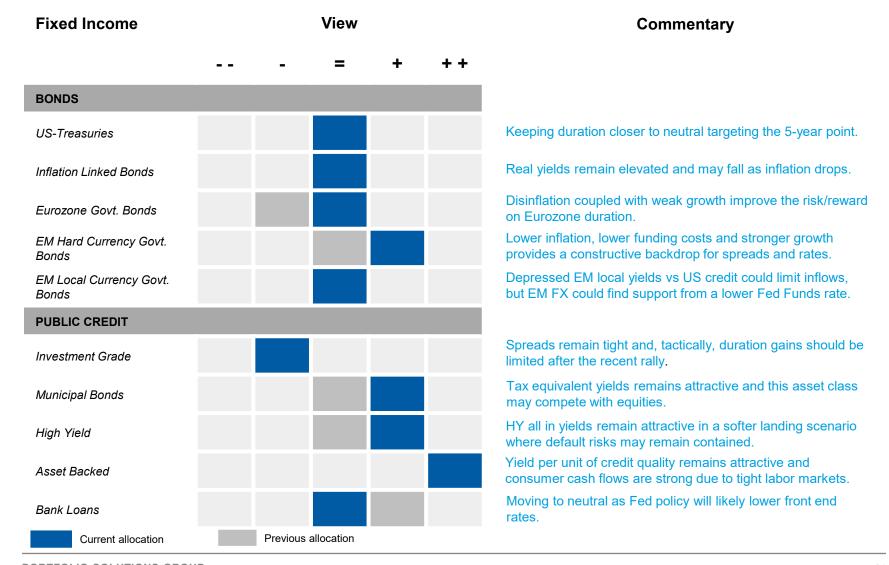
Public Market Positioning Views



Global Equity Positioning Views



Fixed Income Positioning Views



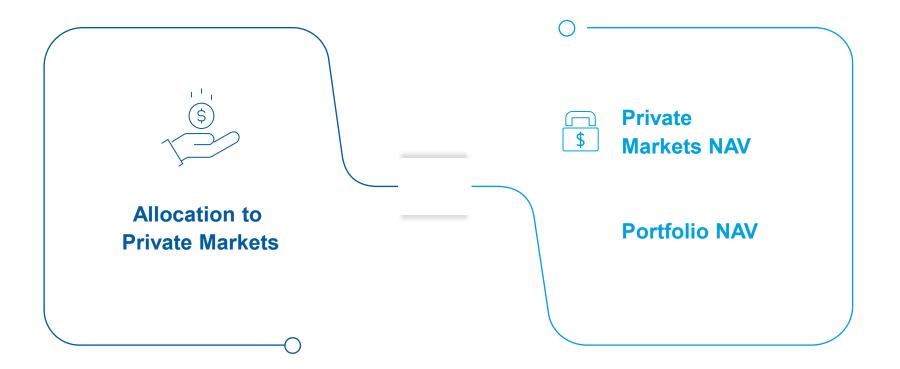
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INVESTMENT MANAGEMENT

Private Market Outlook

SECTION 2

The "Denominator" Effect



Factors Contributing to the Denominator Effect

Public Market Downside Stress and Volatility The magnitude of the stress to public markets and the associated

volatility can impact

the denominator.



The lag and smoothing effect in the performance of private markets can affect the *numerator*.

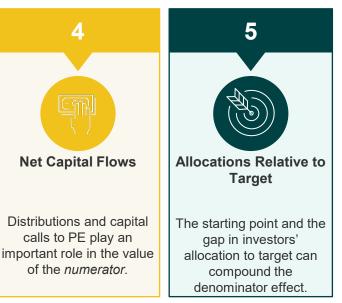


In relative terms, outperformance of private over public markets can impact the *numerator*.



calls to PE play an

of the *numerator*.



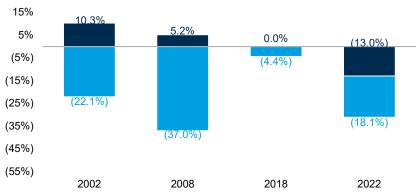
- Three factors have already occurred, significantly impacting investors' allocations in 2022
 - 1: Correlation between public asset classes both equity and fixed income declined
 - 3: Private equity significantly outperformed public equity in 2020 and 2021...
 - 5: ... taking investors to close to or above target at the beginning of 2022
- Two factors are yet to fully realize, with a potential net relief impact to the denominator effect
 - 2: The lagged effect of private equity valuation is significantly higher than in previous crisis likely adjusting once final audited Q4 marks are out
 - 4: Net capital flows (with more capital called than distributions) could slightly weigh on the denominator effect

The above represents the views and opinions of the Team as of the date hereof and not as of any future date.

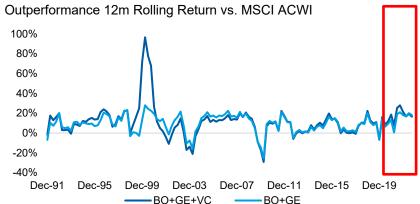
Denominator Effect: Contributing Factors

Bond Returns in Years Stocks were Down

Calendar Year Total Returns (%)

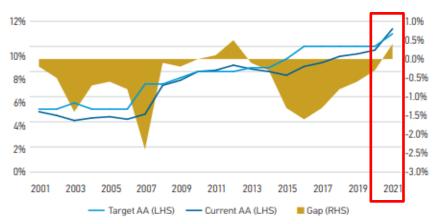


Relative Performance¹



Investor Allocations

Figures for 200 US Public Pension Plans



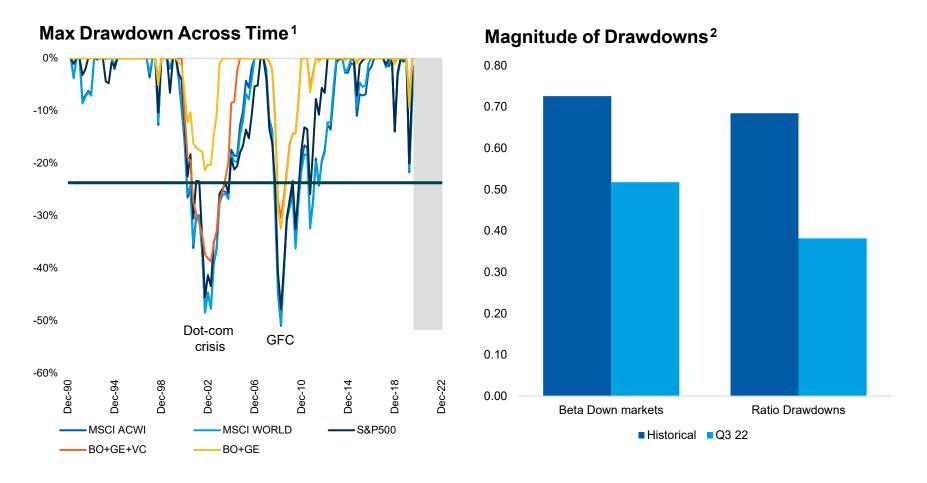
Net Capital Flows²

Source: Cambridge Associates, as of September 30, 2022; Bloomberg, as of December 31, 2022. BO+GE+VC is a Cambridge Associate benchmark for private markets that includes buyouts (BO), growth equity (GE) and venture capital (VC). BO+GE is a narrower index, excluding venture capital.

^{2.} Source: Preqin, as of June 30, 2022 (H2 2022 data for called and distributed capital in line with Morgan Stanley estimates).

Denominator Effect: Lagged Effect of Private Equity Valuations

2022 private equity valuations are an outlier thus far



^{1.} Source: Cambridge Associates, as of September 30, 2022; Bloomberg, as of December 31, 2022. BO+GE+VC is a Cambridge Associate benchmark for private markets that includes buyouts (BO), growth equity (GE) and venture capital (VC). BO+GE is a narrower index, excluding venture capital.

^{2.} Source: Historical data MSCI ACWI and CA benchmarks. Beta down markets from Q2 1991 to Q3 2022. Historical drawdowns Q3 2002 and Q1 2009

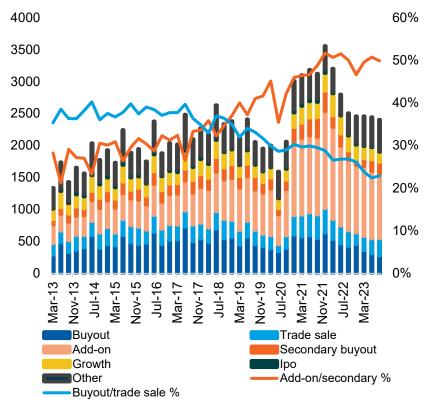
Emerging Dynamics within Private Markets

Deal and fundraising dynamics changing post-COVID:

- GPs prolonging deal life (secondaries/ add-ons) with traditional exits declining as a % volumes
- LPs starting to capitalize on better terms with GPs after a prolonged time of longer fundraising (although not for the highest quality GPs)

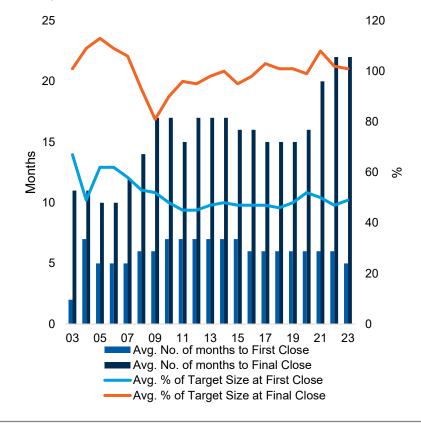
Buyout Nature - Deal Numbers

Post-Covid the transaction nature is changing towards more add-on and GP-led secondaries, increasing deals lifecycle



Fundraising Timing – All Private Markets

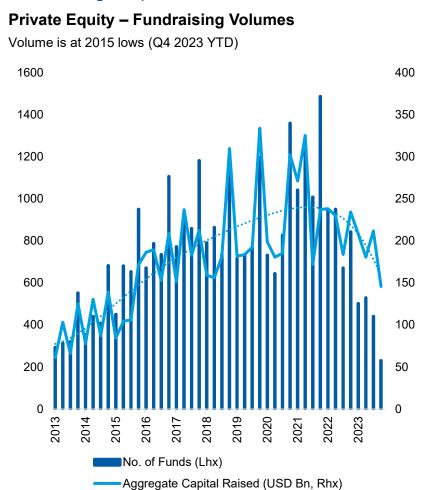
For the last two years most GPs are taking 50% more time to raise. Only infrastructure and private debt are now seeing a decrease from previous peaks



Source: Pregin, as of December 2023

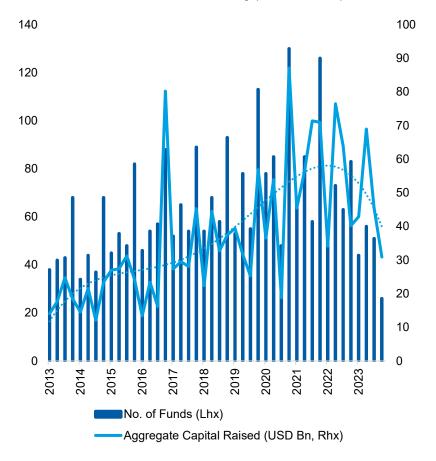
Fundraising Environment within Private Markets

Fundraising continues to slow down in **private equity** post-denominator effect, but remains skewed towards large cap funds. **Private debt** remains more seasonal and skewed towards U.S.



Private Debt – Fundraising Volumes

Volumes remain volatile but down trending (Q4 2023 YTD)



Source: Pregin, as of December 2023

Fundraising environment within Private Markets (cont'd)

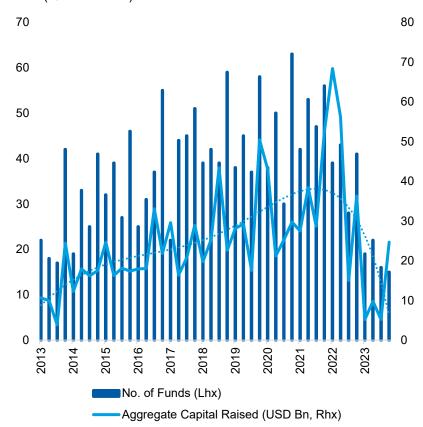
Infrastructure volume remains volatile but healthy due to large volumes of interim closes in the pipeline. **Real Estate** continues to be the most challenged asset class with 30% investors planning to deploy less going forward and a record number of GPs in the market

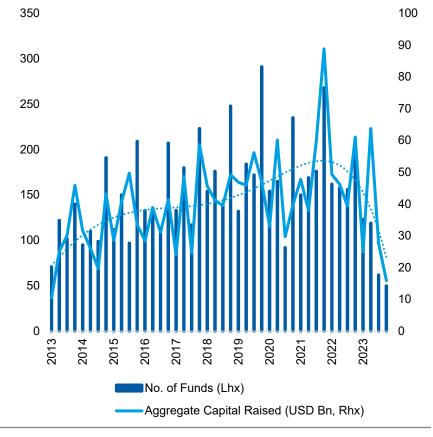
Private Infrastructure – Fundraising Volumes

Volume is recovering but it remains a lumpy profile skewed by mega funds (Q4 2023 YTD)

Private Real Estate – Fundraising Volumes

Extremely challenging environment (Q4 2023 YTD)





Source: Preqin, as of December 2023

The Retailization of Private Markets

Challenged return environment Access to differentiated sources of return is key Catering for the **Recognized benefits** unique requirements of private assets of individual investors **Exploring incremental** Importance of access, shifts to SAA simplicity, performance and liquidity

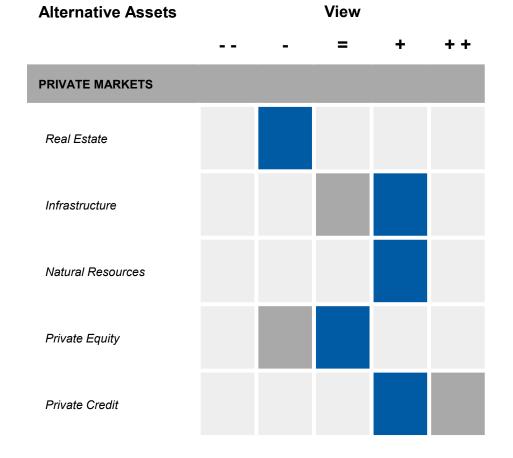
INDIVIDUAL CLIENT ADOPTION

Individuals are expected to allocate an additional \$1.5 trillion to private markets by 2025.1

The above represents the views and opinions of the Team as of the date hereof and not as of any future date.

^{1.} EY Investor Survey, 2022.

Private Market Positioning Views



Commentary

Patience is required while refinancing to higher debt costs gradually triggers valuation adjustments across the asset class

Upgrade <u>infrastructure</u> and private equity to overweight and equal weight respectively, reflecting an increased opportunity set with defendable entry valuations. In <u>private equity</u>, this is focused on middle market opportunities. In infrastructure, investments related to the energy transition and digitization are experiencing demand that will support current asset prices. Select markets within <u>natural resources</u> are benefiting from strong long-term fundamentals. Dislocations in public credit continue to create opportunities in both corporate and niche private lending

Current allocation

Previous allocation

Morgan Stanley

INVESTMENT MANAGEMENT

APPENDIX

Risk Factors

Summary of Risk Factors

This is a summary of various risks associated with investing in portfolios of alternative investments (a "Fund"). This summary is not, and is not intended to be, a complete enumeration or explanation of the risks involved. The recipient should consult with its own advisors before deciding whether to invest in a Fund. In addition, to the extent that the investment program of a Fund changes and develops over time, additional risk factors not described here may apply. Only a recipient who understands the nature of the investment, does not require more than limited liquidity in the investment, and has sufficient resources to sustain the loss of its entire investment should consider making the kind of investments described in this Presentation.

The following are among the risks applicable generally to investment in a Fund:

Limitations on Transfer; No Market for Interests. The transferability of an interest in a Fund will be subject to certain restrictions contained in the governing documents of such Fund and will be affected by restrictions imposed under applicable securities laws. There is currently no market for the interests, and it is not contemplated that one will develop. The interests should only be acquired by investors able to commit their funds for an indefinite period of time.

Risk of Loss. There can be no assurance that the returns on a Fund's investments will be commensurate with the risk of investment therein, that the operations of a Fund will be profitable or that a Fund will be able to avoid losses. The possibility of a partial or total loss of capital of a Fund exists, and prospective investors should not subscribe unless they have the resources to sustain the loss of their entire investment. A Fund will have no source of funds from which to pay distributions to the limited partners or members of such Fund (in either case, the "Limited Partners") other than income and gains received on investments and the return of capital. Any losses in a Fund are borne solely by Limited Partners in such Fund and not by Morgan Stanley or its affiliates.

Reliance on the General Partner, the Investment Adviser and Service Providers. The success of a Fund will be highly dependent on the financial and managerial expertise of its investment adviser (the "Investment Adviser"), the general partner or manager of a Fund (in either case, the "General Partner") and other service providers and their expertise in the relevant markets. The quality of results of the Investment Adviser, the General Partner and such service providers will depend on the quality of their personnel. There are risks that death, illness, disability, change in career, or new employment of such personnel could adversely affect results of a Fund. The Limited Partners will not make decisions regarding the acquisition, management, disposition, or other realization of any investment or regarding a Fund's business and portfolio.

Recent Legislative Events. On July 21, 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). Section 619 of the Dodd-Frank Act is known as the "Volcker Rule." The Volcker Rule took effect on July 21, 2012 and generally prohibits a "banking entity," including Morgan Stanley and any of its affiliates, from acquiring or retaining any ownership interest in or sponsoring a hedge fund or a private equity fund unless certain requirements are met. While a Morgan Stanley controlled entity will be allowed to serve as the Investment Adviser of a Fund. the activities of the Investment Adviser with respect to such Fund will be subject to additional restrictions and conditions, which could have a materially adverse effect on such Fund.

Regulation as a Bank Holding Company. Morgan Stanley has elected to be regulated as a Bank Holding Company (a "BHC") under the U.S. Bank Holding Company Act of 1956, as amended (the "BHCA"), and the Federal Reserve has granted Morgan Stanley's application for "financial holding company" ("FHC") status under the BHCA. FHC status is available to BHCs which meet certain criteria. FHCs may engage in a broader range of activities than BHCs which are not FHCs. In addition, the Investment Adviser is, for purposes of the BHCA, a subsidiary of a company that is subject to supervision and regulation by the Federal Reserve. In discharging its responsibilities as the Investment Adviser, the Investment Adviser will observe limitations arising from the BHCA applicable to the Investment Adviser or a Fund.

The activities of BHCs and their affiliates are subject to certain restrictions imposed by the BHCA and related regulations. Certain BHCA regulations may also require aggregation of the positions owned, held, or controlled in client and proprietary accounts by Morgan Stanley and its affiliates (including without limitation the Investment Adviser) with positions held by a Fund (and, in certain instances, one or more investments). Moreover, Morgan Stanley may cease in the future to qualify as an FHC. In either case, a Fund may become subject to additional restrictions or may cause the General Partner to dissolve such Fund. The BHCA and Federal Reserve regulations and interpretations thereunder may be amended over the term of a Fund, which could also result in further restrictions on the activities or investments of such Fund. There can be no assurance that the bank regulatory requirements applicable to the Investment Adviser and Morgan Stanley will not likewise apply to a Fund and therefore have a material adverse effect on such Fund and its operation, or that such requirements will not change or that any such change will not have a material adverse effect on such Fund.

Availability of Investment Opportunities. The success of a Fund is based in large part on the ability of the Investment Adviser to identify eligible investment opportunities. The business of identifying and structuring investments of the types contemplated by a Fund is competitive and involves a high degree of uncertainty. Furthermore, the availability of investment opportunities generally will be subject to market conditions, as well as, in some cases, the prevailing regulatory or political climate. Accordingly, there can be no assurance that a Fund will be able to identify and complete attractive investments in the future. Moreover, other funds managed by the Investment Adviser or Morgan Stanley affiliates are or may be seeking investment opportunities similar to those a Fund is or may be seeking, and Morgan Stanley and such other funds, as applicable, have no obligation to offer any opportunities it or they may identify to such Fund.

Valuation Analysis Undertaken by Adviser. In identifying certain potential investments for a Fund, the Investment Adviser may seek to purchase interests at a discount to what it believes to be the fair value of the interests. In order to determine the fair value of an interest, the Investment Adviser expects to analyze comparable transactions and publicly traded comparisons and utilize other analytical methods. However, given the nature of certain investments, there is no guarantee that any such analysis undertaken by the Investment Adviser will reflect a value that is a discount to the fair value that would be determined by a third party. It is possible that a third party would conclude that the fair value of the interest is the amount actually paid by a Fund, rather than the Investment Adviser's belief as to the fair value of the interest. Investors should be aware that there may exist a conflict of interest to the extent that a Morgan Stanley entity is performing valuations for a Fund.

Leverage. Subject to the restrictions described in its governing documents and/or memorandum, a Fund may have the ability to enter into derivative transactions, such as total return swaps, options and futures, which could subject such Fund to leverage. In addition, certain Underlying Funds (as defined herein) or portfolio companies may directly or indirectly borrow funds from brokerage firms and banks and may "leverage" their investment return with options, swaps, forwards, and other derivative instruments. While leverage presents opportunities for increasing total returns, it has the effect of potentially increasing losses as well.

Line of Credit. A Fund may obtain a line of credit for bridge purposes to facilitate its investment activities. Should a Fund obtain such a line of credit, such Fund may be required to pledge all of its assets as collateral and may also be required to pay commitment fees and non-use fees, even if such line of credit is never used. The risks associated with such a line of credit include interest expense risk, and, in the unlikely event that the value of the collateral pledged to secure such a line of credit were to decline significantly, such Fund could be forced to liquidate its assets to satisfy its repayment obligations under such line of credit.

Tax Considerations. Investment in a Fund will involve significant U.S. federal income and other tax considerations. A summary of the tax considerations applicable to a Fund will be provided in such Fund's governing documents and/or memorandum. Investors should consult their own independent legal or tax advisor concerning their individual situations.

The following are among the risks applicable generally to Underlying Fund investments:

General Risks Related to Investments in Underlying Funds. A Fund may invest a significant portion of its assets in unregistered financial instruments issued by underlying hedge funds, private equity funds, real estate funds, and/or fund of funds, and other pooled investment vehicles (collectively "Underlying Funds"). The unregistered financial instruments issued by Underlying Funds are generally not publicly traded. A Fund will in general be unable to readily dispose of such non-publicly traded financial instruments and, in some cases, may be contractually prohibited from disposing of such financial instruments for a specified period of time. In addition, the market prices, if any, for such financial instruments tend to be volatile and may be below the values provided by Underlying Fund managers, and such Fund may not be able to sell such positions when it desires to do so or to realize what it perceives to be their fair value in the event of a sale or upon a full distribution of proceeds relating to such Underlying Funds. The sale of illiquid financial instruments also often requires more time and results in higher brokerage charges or dealer discounts and other selling expenses than does the sale of financial instruments eligible for trading on national securities exchanges or in the OTC markets.

Reliance on Third-Party Management. A Fund may invest in Underlying Funds managed by investment managers which are unrelated to Morgan Stanley and its affiliates and, indirectly, in investments selected by such unrelated Underlying Fund managers. A Fund will not have an active role in the day-to-day management of the Underlying Funds in which it invests, and such Fund and the Investment Adviser have no control of the Underlying Funds' investment management, brokerage, operations, or custodial agreements and must rely on the experience and competency of each Underlying Fund manager. Moreover, a Fund will generally not have the opportunity to evaluate the specific investments made by any Underlying Fund before they are made. Accordingly, the returns of a Fund will depend on the performance of these unrelated Underlying Fund managers and could be adversely affected by the unfavorable performance of such Underlying Fund managers. Limited Partners will not, by virtue of their interests, have a direct interest or voting rights in the Underlying Funds and will not have standing or recourse against any Underlying Fund or its affiliates. The overall success of a Fund depends, among other things, on (i) the ability of the Investment Adviser to select Underlying Funds and to allocate the assets among them and (ii) the Underlying Funds' ability to be successful in their strategies. The past performance of such strategies is not necessarily indicative of their future profitability. No assurance can be given that the strategy or strategies utilized by a given Underlying Fund will be successful under all or any future market conditions. There can be no guarantee of future performance, and there is no assurance that a Fund or Underlying Funds will be able to achieve their investment objectives or be profitable.

Due Diligence Considerations. With respect to a Fund's investments in Underlying Funds, the Investment Adviser will conduct such due diligence as it believes is adequate to select Underlying Funds which to invest such Fund's assets. Due diligence is not foolproof, however, and may not uncover problems associated with a particular Underlying Fund. The Investment Adviser may rely upon representations made by an Underlying Fund's manager, accountants, attorneys, prime brokers, or other investment professionals. Any such representations which prove misleading, incomplete, or false may result in the selection of Underlying Funds which might have otherwise been eliminated from consideration had fully accurate and complete information been made available to the Investment Adviser. Even exhaustive due diligence, however, may not protect against subsequent fraud by an Underlying Fund manager or sponsor.

Performance-Based Compensation Arrangements of Underlying Fund Managers. An investment manager to an Underlying Fund will receive any performance or incentive fees or allocations to which it is entitled irrespective of the performance of any of the other Underlying Funds and of a Fund in the aggregate. Each Underlying Fund manager generally charges a Fund, as an investor in an Underlying Fund, an asset-based fee, and some or all of the Underlying Fund managers will receive performance or incentive fees or allocations. A Fund expects that each Underlying Fund manager (or one of its affiliates) will receive compensation based on the performance of the Underlying Fund it manages. Such compensation arrangements may create an incentive for the Underlying Fund manager to make investments which are riskier or more speculative than would be the case if such arrangements were not in effect. In addition, because such performance-based compensation will likely be calculated on a basis which includes unrealized appreciation on assets in the relevant Underlying Fund's portfolio, such compensation may be greater than if it were based solely on realized gains.

Dual Layers of Fees. By investing in Underlying Funds indirectly through a Fund, Limited Partners may bear asset-based fees and performance-based fees and allocations at both the Fund level and the Underlying Fund level. Similarly, Limited Partners will bear a proportionate share of the other operating expenses of such Fund and, indirectly, similar expenses of such Underlying Funds.

Lack of Transparency. Underlying Funds are not registered as investment companies with the U.S. Securities and Exchange Commission (the "SEC") under the Investment Company Act of 1940 (the "ICA"), and investors in Underlying Funds will not have the benefit of the protections afforded by the ICA to investors in registered investment companies. Although the Investment Adviser will periodically receive information from each Underlying Funds in which a Fund is invested regarding such Underlying Fund's investment performance and investment strategy, the Investment Adviser may have little or no means of independently verifying full this information. Underlying Funds are not contractually or otherwise obligated to inform their investors of details surrounding proprietary investment strategies. In addition, the Investment Adviser has no control over the investment management, brokerage practices, custodial arrangements, or operations of Underlying Funds and must rely on the experience and competence of each Underlying Fund's investment manager in these areas.

Limited Voting Rights of Investors. An Underlying Fund typically restricts the ability of its investors to vote on matters relating to Underlying Fund. As a result, investors in the Underlying Fund will have no say in matters which could adversely affect their investment, via the portfolio, in the Underlying Fund. Additionally, for regulatory purposes related to the Investment Adviser's management of certain funds registered with the SEC under the ICA, the Investment Adviser may enter into contractual relationships under which a Fund irrevocably waives their voting rights (if any) to vote interests in an Underlying Fund.

Limited Liquidity of Underlying Funds. Certain Underlying Funds may have substantially limited the redemption and liquidity rights otherwise expected by their investors. These limitations can include enforcement of "lock-up" provisions, imposition of "gates," suspension of redemptions, or commencement of liquidation. As such, these Underlying Funds are expected to have extremely limited near-term liquidity, and, especially in circumstances where an Underlying Fund's underlying investments lack readily available market prices, they may be very difficult to value. There is no guarantee that investments in such Underlying Funds will be able to be redeemed at the desired time or the stated or nominally applicable price or value or that these Underlying Funds will not experience further disruption. Any transfer of an interest in these Underlying Funds will generally require the consent of the Underlying Fund's general partner, manager, or sponsor, and the Underlying Fund's general partner, manager, or sponsor, and the Underlying Fund's general partner, manager, or sponsor is not obligated to grant such consent. Consequently, there is no guarantee that any such consent will be granted either at the time when an initial investment in the Underlying Fund is desired or, in the event that the hedge fund continues to limit redemptions, at any later time when disposition of the Underlying Fund interest is desired. In addition, Underlying Funds may distribute securities in kind to investors. Securities distributed in kind may be illiquid or difficult to value. In the event that an Underlying Fund were to make such a distribution in kind to a Fund, the Investment Adviser would seek to dispose of the securities so distributed in a manner which is in the best interests of such Fund.

Investments in Co-Investments. A fund may invest in interests of a portfolio company alongside an Underlying Fund (a "Co-Investment"). Co-Investments may have limited liquidity or no liquidity rights, in which case investors would be required to remain invested in such investments until their liquidation or other corporate transaction. Furthermore, Co-Investments may require future contributions. These investments are also subject to a substantial risk of loss, based, among others, on business risks, operations risks, risks of the industry sectors to which such investments belong, and other risks. In addition, there may be no readily available valuation for such investments and the value assigned to them by the Investment Adviser (and the fees based on such value) would be prone to substantial uncertainty.

Risks of Over-Commitment Strategy. Based on the assumption that Underlying Funds with capital call mechanics will not call all of their commitments from their investors, the Investment Adviser, in an effort to be fully invested, expects to pursue an "over-commitment" strategy pursuant to which it will commit, in the aggregate, to Underlying Funds an amount greater than the total contribution amounts of the Limited Partners. If Underlying Funds call all of their capital commitments and the Investment Adviser does pursue an "over-commitment" strategy, a Fund and/or its Limited Partners could be adversely affected because of such Fund's inability to honor its obligations. For example, in such a circumstance, a Fund may default on capital calls from certain Underlying Funds (and suffer the consequences, which could include, among other things, the forfeiture of its interest in one or more Underlying Funds) or take actions which may be adverse to such Fund and its Limited Partners in an attempt to avoid such a default. The actions could include, among others, the following: (i) selling assets at inopportune times and at disadvantageous prices, especially in light of the illiquid nature of a Fund's investments, and/or (ii) borrowing money, which would result in expense to a Fund and possibly adverse tax consequences to its Limited Partners and subject such Fund to the risks associated with leverage described above. A Fund (and ultimately its Limited Partners), and not Morgan Stanley, will have the responsibility to fund capital commitments to Investments and therefore bear the risk of this strategy.

The following risks are applicable to emerging markets investments:

Emerging Markets. A Fund or Underlying Funds may invest in assets in emerging markets. Investing in emerging markets involves risks and special considerations not typically associated with investing in other more established economies or securities markets. Such risks may include: (i) increased risk of confiscatory taxation or nationalization or expropriation of assets; (ii) greater social, economic, and political uncertainty, including war; (iii) higher dependence on exports and the corresponding importance of international trade; (iv) greater volatility, and smaller capitalization of securities markets; (v) greater volatility in currency exchange rates; (vi) greater risk of inflation; (vii) greater controls on foreign investment and limitations on repatriation of invested capital and on the ability to exchange local currencies for U.S. dollars; (viii) increased likelihood of governmental involvement in, and control over, the economies; (ix) governmental decisions to cease support of economic reform programs or to impose centrally planned economies; (x) differences in auditing and financial reporting standards which may result in the unavailability of material information about issuers; (xi) less extensive regulation of the securities markets; (xii) longer settlement periods for securities transactions and less reliable clearance and custody arrangements; and (xiii) less developed corporate laws regarding protection of investors and fiduciary duties of officers and directors.

Non-U.S. Investments. Certain non-U.S. investments involve risks and special considerations not typically associated with U.S. investments. Such risks may include but are not limited to (i) changing political environments, regulatory restrictions and changes in government institutions and policies; (ii) changes in policy with regard to taxation, fiscal and monetary policies, repatriation of profits and other economic regulations; (iii) currency exchange rate fluctuation; (iv) differences in auditing and financial reporting standards; (v) differences in tax regimes and changes in tax treaties; (vi) local intermediary risks and (vii) restrictions on the repatriation of capital and profits.

Currencies. A Fund or the Underlying Funds may invest a portion of its assets in non-U.S. currencies, or in instruments denominated in non-U.S. currencies, the prices of which are determined with reference to currencies other than the U.S. dollar. A Fund or the Underlying Funds may or may not seek to hedge all or any portion of its foreign currency exposure. To the extent unhedged, the value of a Fund or such Underlying Fund's assets will fluctuate with U.S. dollar exchange rates, as well as the price changes of its investments in the various local markets and currencies. In addition, some governments from time to time impose restrictions intended to prevent capital flight, which may for example involve punitive taxation (including high withholding taxes) on certain securities transfers or the imposition of exchange controls making it difficult or impossible to exchange or repatriate the local currency. These and other restrictions may make it impracticable for a Fund or the Underlying Funds to distribute the full amount of the Limited Partners' capital accounts in U.S. dollars, and, therefore, a portion of the distribution may be made in non-U.S. securities or currency.

The following risks are applicable to investments in debt:

Loan Restructurings. Restructurings of loans, as well as other portfolio assets, made by a Fund may decrease the value thereof. There is no guarantee that restructuring will maximize the value of or any recovery on any such portfolio asset. Any restructuring can fundamentally alter the nature of the related portfolio asset and restructurings are not subject to the same underwriting standards that are employed in connection with the origination or acquisition thereof. Any restructuring could alter, reduce or delay the payment of interest or principal from any portfolio asset and result in extension of the term thereof, which could delay the timing of and reduce distributions made to the Limited Partners. An Underlying Fund's participation in loan restructurings will entail similar risks.

Loan Prepayments. Loan prepayments and defaults may reduce a Fund's expected return. The terms of most of the loans and certain other portfolio assets permit prepayment. Prepayments, accelerated amortization due to structural features of the portfolio assets, the inability of obligors to refinance portfolio assets and defaults on the portfolio assets may cause a Fund not to receive its expected return on such portfolio asset and, in certain circumstances, may result in a loss on such investments. A Fund may not be able to reinvest principal received on the portfolio assets at yields equivalent to the yield on such portfolio assets; therefore, the ultimate return such Fund receives on its investment in the portfolio assets may be less than the return it expected on the portfolio assets at the time of initial investment. Similar risks will apply to an Underlying Fund that prepays a loan.

The following risks are applicable to other types of investments a Fund may make:

Real Estate Investments. Certain investments will be subject to the risks inherent in the ownership and operation of real estate and real estate-related businesses and assets. Deterioration of real estate fundamentals generally may negatively impact the performance of a Fund. Additional risks include, but are not limited to, those associated with the burdens of ownership of real property, general and local economic conditions, changes in environmental and zoning laws, uninsured or uninsurable losses, regulatory limitations on rents, decreases in property values, changes in tenant demand, changes in supply of and demand for competing properties in a particular area, fluctuations in the rates and occupancy for hotel properties, changes in housing policy, the financial resources of tenants, changes in availability of debt financing which may render the sale or refinancing of properties difficult or impracticable, changes in building and similar laws, energy and supply shortages, terrorist attacks, war, natural disasters and other "acts of God", changes in real property tax rates and operating expenses, changes in interest rates, and the availability of mortgage funds, which may render the sale or refinancing of properties difficult or impracticable, increased mortgage defaults, increases in borrowing rates, environmental liabilities, contingent liabilities on disposition of assets, and other factors that are beyond the control of the Investment Adviser. Many of the potential real estate investments will be difficult to value, and if the Investment Adviser's opinion as to the value of such investment is incorrect or not shared by other market participants. a Fund's returns will be adversely affected.

Risks of Acquiring Real Estate Loans and Participations. A Fund (and Underlying Funds) may acquire real estate loans or participation interests therein which may be nonperforming at the time of their acquisition or may later become nonperforming for a wide variety of reasons. Such nonperforming real estate loans may require a substantial amount of workout negotiations and/or restructuring, which may entail, among other things, a substantial reduction in the interest rate and a substantial write-down of the principal of such loan. Even in such circumstances, it may be that, upon maturity of such real estate loan, replacement "takeout" financing will not be available. Purchases of participations in real estate loans raise many of the same risks as direct investments in real estate loans and also carry risks of illiquidity and lack of control. In addition, loan participations also involve credit exposure to the financial institutions participating in the loan. It is possible that a Fund (or an Underlying Fund) may foreclose on collateral securing one or more real estate loans purchased by such Fund (or Underlying Fund). It is anticipated that some of a Fund's investments (or an Underlying Fund's investments) in real estate loans and participations may not be rated by any recognized rating agency. Generally, the value of unrated classes is more subject to fluctuation due to economic conditions than rated classes and there is increased risk of nonpayment or of a significant delay in payments on unrated classes. Should assets be downgraded, it may adversely affect their value and may adversely affect the value of a Fund (or an Underlying Fund).

Small-Capitalization Companies. A Fund or the Underlying Funds may invest in small- to medium-sized companies of a less seasoned nature. Investments in small- to medium-sized companies often involve significantly greater risks than the investments in larger, better-known companies. Because small- to medium-sized companies may lack the management experience, financial resources, product diversification, and competitive strengths of larger companies, there is greater risk that a small- to medium-sized company may be unable to meet its obligations under its debt securities, which may be accompanied by deterioration in the value of any collateral and a reduction in the likelihood of a Fund or an Underlying Fund realizing any guarantees that may have been obtained in connection with the investment. The frequency and volume of trading in these securities is often substantially less than that of larger companies, which may result in wider price fluctuations in small-capitalization securities than in securities of larger issuers. When selling large positions in small-capitalization companies, a Fund or an Underlying Fund may have to sell holdings at discounts from quoted prices or may have to make a series of small sales over a period of time.

Investment in Fixed Income Securities. A Fund or Underlying Funds may invest in fixed-income securities and obligations, including, without limitation: bonds; convertible bonds; bank loans; notes and debentures issued by corporations; debt securities issued or guaranteed by local or regional governments or the U.S. government or one of its agencies or instrumentalities; commercial paper; and "higher yielding" (and, therefore, higher risk) debt securities of the former categories. The value of fixed income securities in which a Fund or Underlying Funds may invest will change in response to fluctuations in interest rates. Except to the extent that values are independently affected by currency exchange rate fluctuations, when interest rates decline, the value of fixed income securities generally can be expected to rise. Conversely, when interest rates rise, the value of fixed income securities generally can be expected to decline. A Fund or Underlying Funds may invest in zero coupon bonds and deferred interest bonds, which are debt obligations issued at a significant discount from face value. The original discount approximates the total amount of interest the bonds will accrue and compound over the period until maturity or the first interest accrual date at a rate of interest reflecting the market rate of the security at the time of issuance. While zero coupon bonds do not require the periodic payment of interest, deferred interest bonds generally provide for a period of delay before the regular payment of interest begins. Such investments experience greater volatility in market value due to changes in interest rates than debt obligations which provide for regular payments of interest.

Derivatives Risk Generally. Derivatives are financial contracts whose value depends on, or is derived from, the value of an underlying asset, reference rate or index. Subject to the restrictions set forth in its governing documents, a Fund may invest in derivative instruments for any purpose including, among other things, as a substitute for taking a position in the underlying asset or as part of a strategy designed to reduce or increase exposure to other risks, such as interest rate, credit or currency risk. A Fund's use of derivative instruments involves risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments. Derivatives are subject to a number of risks, including interest rate risk, market risk and credit risk. They also involve the risk of mis-pricing or improper valuation and the risk that changes in the value of the derivative may not correlate perfectly with the underlying asset, reference rate or index. If a Fund invests in a derivative instrument it could lose more than the principal amount invested. Also, suitable derivative transactions may not be available in all circumstances and there can be no assurance that a Fund will engage in these transactions to reduce exposure to other risks when that would be beneficial. An Underlying Fund's investment in derivative instruments will entail similar risks.

Equity Securities and Equity-Related Instruments. A Fund may invest long and short in equities and equity-related instruments (including, without limitation, listed private equity funds and listed infrastructure funds). Stocks, options and other equity-related instruments may be subject to various types of risks, including market risk, liquidity risk, counterparty credit risk, legal risk and operations risk. In addition, equity-related instruments can involve significant economic leverage and may, in some cases, involve significant risk of loss. "Equity securities" may include common stocks, preferred stocks, interests in REITs, convertible debt obligations, convertible preferred stocks, equity interests in trusts, partnerships, joint ventures or limited liability companies and similar enterprises, warrants and stock purchase rights. In general, stock values fluctuate in response to the activities of individual companies and in response to general market and economic conditions. Accordingly, the value of the stocks and other securities and instruments that a Fund holds may decline over short and extended periods. The stock markets tend to be cyclical, with periods when stock prices generally rise and periods when stock prices generally fedine. The volatility of equity securities means that the value of an investment in a Fund may increase or decrease. An Underlying Fund's investment in equities and equity-related instruments will entail similar risks.

Mortgage-Backed Securities. A Fund (or an Underlying Fund) may acquire senior and subordinated tranches of mortgage-backed securities ("MBS") issuances. In general, subordinated tranches of MBS are entitled to receive repayment of principal only after all principal payments have been made on more senior tranches and also have subordinated rights as to receipt of interest distributions. Subordinated tranches are subject to a greater risk of nonpayment than senior tranches of MBS or MBS-backed by third party credit enhancement. In addition, the secondary market for such subordinated securities is not as active and well-developed as the market for certain other mortgage-backed securities. Accordingly, such subordinated MBS may have limited marketability and there can be no assurance that a more efficient secondary market will develop. Although senior tranches of MBS are less risky than subordinated tranches of the same issue, they are still subject to the risk of loss.

Convertible Securities. A Fund may invest in convertible securities, which are debt securities or preferred equity securities that are exchangeable for other debt or equity securities of the issuer at a predetermined price. Convertible securities entitle the holder to receive interest payments paid on corporate debt securities or the dividend preference on preferred equity securities until such time as the convertible security matures or is redeemed or until the holder elects to exercise the conversion privilege. As a result of the conversion feature, convertible securities typically offer lower interest rates than if the securities were not convertible. It is possible that the potential for appreciation on convertible securities may be less than that of a common stock equivalent. Convertible securities may or may not be rated within the four highest categories by S&P and Moody's and, if not so rated, would not be investment grade. To the extent that convertible securities are rated lower than investment grade or not rated, there would be greater risk as to timely repayment of the principal of, and timely payment of interest or dividends on, those securities. Also, in the absence of adequate anti-dilution provisions in a convertible security, dilution in the value of a Fund's holding may occur in the event the underlying stock is subdivided, additional securities are issued, a stock dividend is declared or the issuer enters into another type of corporate transaction which increases its outstanding securities. An Underlying Fund's investment in convertible securities will entail similar risks.

Risks Associated with Investments in REITs. A Fund may invest in REITs or similar securities. Such investments involve risks relating to the particular REIT issuer of the securities, including the financial condition and business prospects of the issuer. REITs generally are required to invest a substantial portion of their assets in operating real estate or real estate-related assets, and therefore are subject to the inherent risks associated with real estate-related investments. REIT securities are generally unsecured and may also be subordinated to other obligations of the issuer, and a Fund may also invest in REIT securities that are rated below investment grade. The performance of a REIT may be affected by its failure to qualify as a REIT under applicable law, in which case it may become subject to material taxation or other penalties, which may reduce earnings available for distribution. An Underlying Fund's investment in REITs will entail similar risks.

Senior Portfolio Company Debt. A Fund may invest in securities of issuers that may incur debt that ranks equally with, or senior to, such Fund's investments in such issuer. The portfolio companies usually will have, or may be permitted to incur, other debt that ranks equally with, or senior to, the debt securities in which a Fund invests. By their terms, such debt instruments may provide that the holders are entitled to receive payment of interest or principal on or before the dates on which a Fund is entitled to receive payments in respect of the debt securities in which such Fund invests. Also, in the event of insolvency, liquidation, dissolution, reorganization or bankruptcy of a portfolio company, holders of debt instruments ranking senior to a Fund's investment in that portfolio company would typically be entitled to receive payment in full before s Fund receives any distribution in respect of its investment. After repaying such senior creditors, the portfolio company may not have any remaining assets to use for repaying its obligation to a Fund. In the case of debt ranking equally with debt securities in which a Fund invests, such Fund would have to share on an equal basis any distributions with other creditors holding such debt in the event of an insolvency, liquidation, dissolution, reorganization or bankruptcy of the relevant portfolio company. An Underlying Fund's investment in senior portfolio company debt will entail similar risks.

Buy-Out Transactions. A Fund or Underlying Funds may invest in leveraged buyouts which by their nature require companies to undertake a high ratio of leverage to available income. Leveraged investments are inherently more sensitive to declines in revenues and to increases in expenses.

Venture Capital Investments. The Underlying Funds may make venture capital investments. Such investments involve a high degree of business and financial risk that can result in substantial losses. The most significant risks are the risks associated with investments in: (i) companies in an early stage of development or with little or no operating history; (ii) companies operating at a loss or with substantial fluctuations in operating results from period to period; and (iii) companies with the need for substantial additional capital to support or to achieve a competitive position.

The foregoing list of risk factors, conflicts of interest and other considerations does not purport to be a complete enumeration or explanation of the risks involved in investing in a Fund. A more complete discussion of risk factors, conflicts of interest and other considerations will be available in the finalized governing documents and/or memorandum of a Fund.