

Alternative opportunities

2024 Outlook and methodology | USD | Q1 Update

Invesco Solutions

This document is intended for Professional Clients in Continental Europe (as defined under Important Information); for Professional Clients in Dubai, Ireland, the Isle of Man Jersey and Guernsey, and the UK; for Professional Clients, Financial Advisers, Qualified Clients/Sophisticated as defined in the important information at the end); for Sophisticated or Professional Investors in Australia; for Institutional Investors in the United States; in Canada, this document is restricted to investors who are (i) Accredited Investors as such term is defined in National Instrument 45-106, and (ii) Permitted Clients as such term is defined in National Instrument 31-103.; for Qualified Institutional Investors in Japan; for certain specific institutional investors in Malaysia upon request, in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong, for Institutional Investors and/or Accredited Investors in Singapore, for certain specific sovereign wealth funds and/or Qualified Domestic Institutional Investors approved by local regulators only in the People's Republic of China, for certain specific Qualified Institutions and/or Sophisticated Investors only in Taiwan, for Qualified Professional Investors in Korea, for certain specific institutional investors in Brunei, for Qualified Institutional Investors and/or certain specific institutional investors in Thailand, for certain specific institutional investors in Indonesia and for qualified buyers in the Philippines for informational purposes only. It is not intended for and should not be distributed to or relied upon by the public or retail investors.



Table of contents

1

Private credit

Direct lending & real asset debt

2

Private equity

Large buyout

3

Real assets

Real estate and infrastructure

4

Commodities

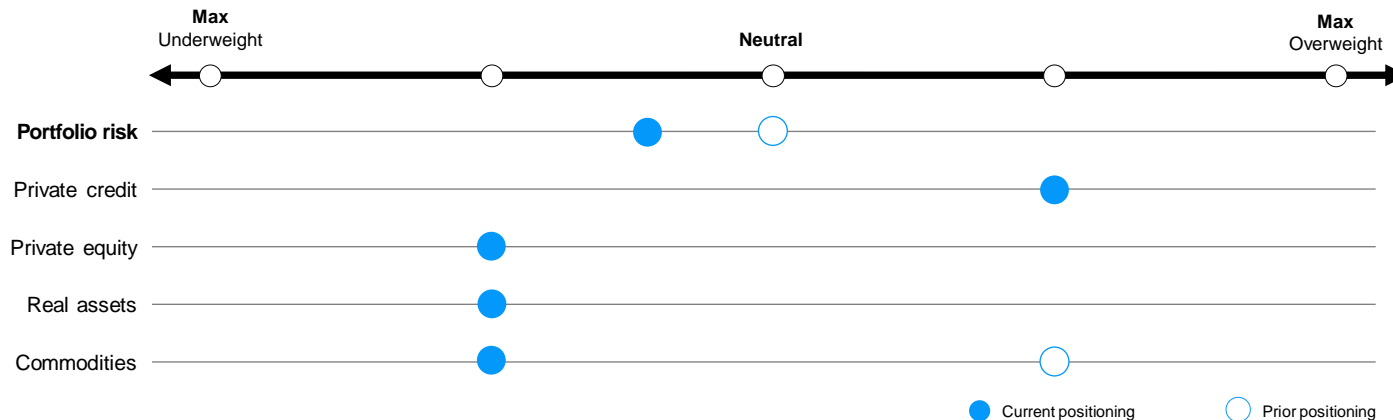
Metals, energy, and agriculture

2024 Alternative opportunities – Q1 update: Alternatives outlook

Executive summary



Jeff Bennett, CFA
Head of Manager Selection
Invesco Solutions



Private credit

As we look to 2024, our view for direct lending is that the backdrop supporting a more favorable transaction environment is firmly in place relative to 2023, including better visibility into the macro environment, softening inflationary pressures, potential rate reductions and heightened pressure from LPs for private equity firms to generate realizations and invest in new platform companies. Within distressed debt and special situations, we are seeing a significant amount of liquidity-constrained small caps that are “good companies” with “bad balance sheets”, providing an expanded opportunity set for the asset class.

Private equity

With record levels of dry powder now four years or older, depressed debt coverage ratios, and a looming refinancing wall, opportunities should present themselves for managers with turnaround experience in an environment where General Partners (GPs) are highly incentivized to ramp up purchase activity. While still at valuations that exceed pre-2021 levels, the correction in late-stage venture valuations should provide a continued opportunity for private equity firms with a flexible mandate.

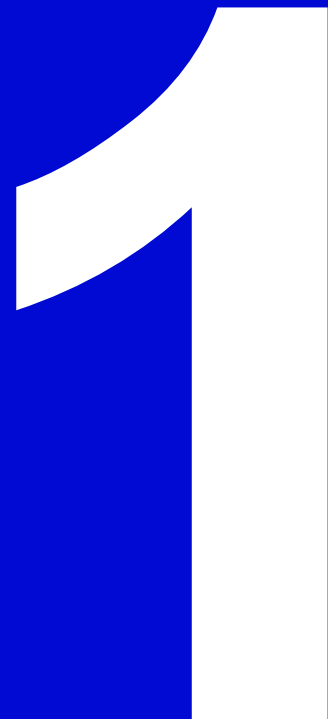
Real assets

Despite a subdued transaction environment, many real estate markets continue to see robust income fundamentals. We note that leasing has slowed broadly across property types in the US, where we expect the recovery in fundamentals to lag the capital markets recovery. Within infrastructure, while dry powder remains elevated, and valuations, like those in real estate, have not backed up with base rates, near term fundamentals are strong and secular tailwinds are supportive. Commodity prices remain volatile and rangebound across most sub-complexes.

Source: Invesco Solutions, views as of Feb. 29, 2024.

Private credit

Direct lending
& real asset debt



2024 Alternative opportunities – Q1 update: Private credit



Jeff Bennett, CFA
Head of Manager Selection
Invesco Solutions



Ron Kantowitz
Head of Direct Lending
Invesco Private Debt



Charlie Rose
Managing Director
Invesco Real Estate Credit

Presently overweight direct lending due to attractive valuations and terms on new vintages

Asset class	Overall	Valuations	Fundamentals	Secular trend
Direct lending	Overweight	Attractive	Neutral	Attractive
Real asset debt	Overweight	Attractive	Neutral	Attractive
Distressed / special situations	Overweight	Neutral	Neutral	Attractive

Direct lending

As we look to 2024, our view is that the backdrop supporting a more favorable transaction environment is firmly in place relative to 2023, including better visibility into the macro environment, softening inflationary pressures, potential rate reductions and heightened pressure from LPs for private equity firms to generate realizations and invest in new platform companies. Combined with continued discipline in terms of credit quality and a relatively stable yield environment, we believe 2024 will offer a compelling opportunity to deploy capital.

Should perceived market risks abate during 2024, along with conservative market expectations of rate cuts, we anticipate that credit spreads and OIDs (original issue discounts) will modestly decline and revert to more normalized levels. Obviously, credit risk is specific to each transaction, but more broadly we would expect to see spreads tighten by 25-75bps and OID's tighten from 97.5 to the 98.0 area.

Taking all this into account, we believe the impact to direct lending yields should be muted – with a modest decline likely in the range of 50-100 bps. Most importantly, we still expect overall yields to reside in the 11-12% area for 2024, which is still very attractive from a risk/return perspective and meaningfully higher than the yields direct lending exhibited leading up to the Fed's tightening cycle.

Distressed debt and special situations

Today's higher rate environment has impacted the ability of small cap companies to cover their fixed charges; while they have also increasingly sought out capital solutions to procure liquidity and secure maturity extensions. It's worth noting that by historical standards, today's distressed businesses appear to be less operationally challenged. Instead, these companies tend to be liquidity-constrained providing the opportunity to invest in "good companies" with "bad balance sheets" at prices below their intrinsic value. As a result, we believe this expanded opportunity set will not

only offer attractive return potential but may have less risk.

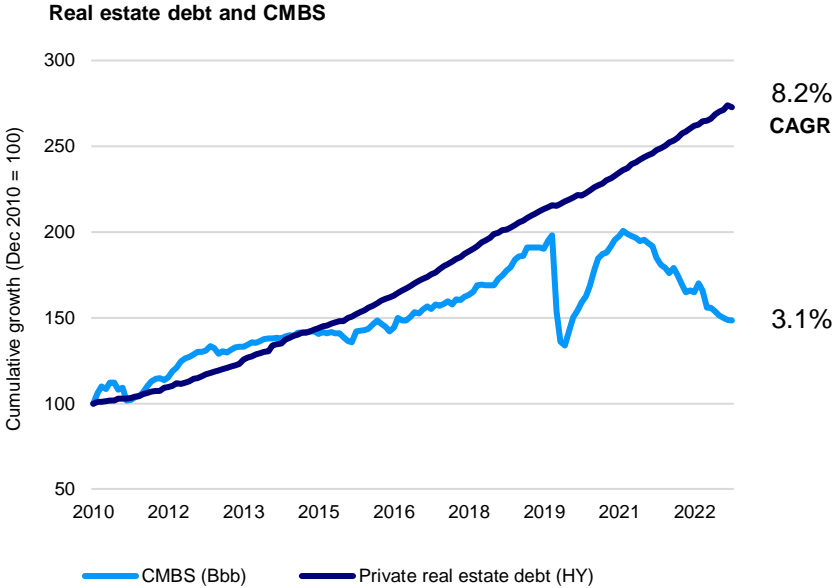
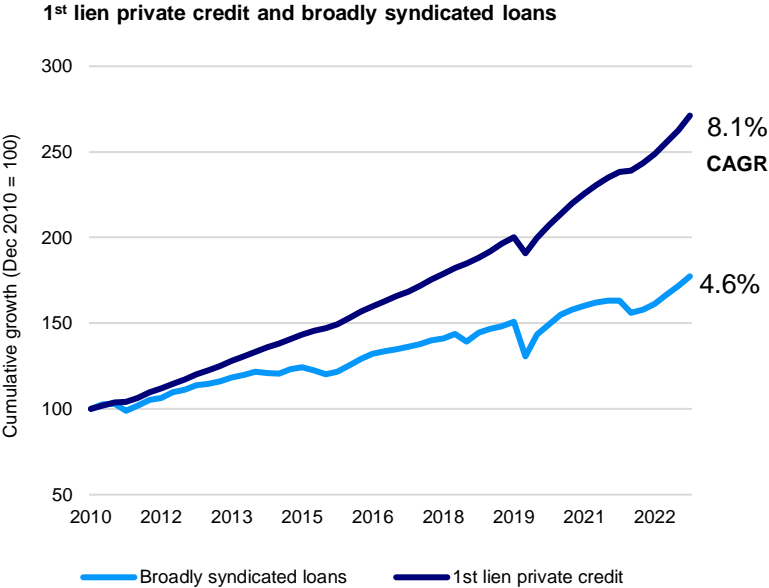
Commercial real estate debt

Elevated benchmark rates will continue to put pressure on cap rates, resulting in prolonged volatility in property values for most asset classes. However, value declines are expected to temper in 2024 and it is our belief that transaction cap rates and values have likely stabilized for the favored asset classes even as valuation cap rates for those asset classes may have a few quarters to catch up.

Overall, we believe this year's projected decline in benchmark rates is expected to shrink the negative leverage gap, accelerate transaction activity from muted levels, and increase market certainty around real estate valuations.

Source: Invesco Solutions, Invesco Private Credit, Invesco Real Estate Credit, views as of Feb. 29, 2024.

Cumulative growth of private credit vs. public credit



Source: Investment growth of 100; 1st lien private credit represented by the Cliffwater Direct Lending Index Senior and broadly syndicated loans represented by the Credit Suisse Leveraged Loan Index quarterly from Dec. 2010 to Sept. 2023; CMBS (BBB) represented by Bloomberg Non-Agency Investment Grade CMBS: Bbb Total Return Unhedged index and private real estate debt (HY) represented by the Giliberto-Lewy High Yield Commercial Real Estate Debt Index (G-L 2), monthly from Dec. 2010 to Sept. 2023. Private credit is net of normative fees, while loans are gross of fees. **Past performance does not guarantee future results.**

Views on private assets: Private credit

Investment type	Spread (SOFR+)	Allocation range			Comments
		Underweight	Neutral	Overweight	
Direct Lending Senior (1st Lien)	600-800 bps				<ul style="list-style-type: none"> Anchor for diversified debt private debt portfolios Favorable environment for creditors, with strong convents and call protections Strong pipeline of opportunities with limited competition from they syndicated loan market Public market tightening and syndicated loan reopening has slightly reduced our outlook
Direct Lending Junior (2 Lien or Mezz)	800-1000 bps				<ul style="list-style-type: none"> Borrowing that occurs behind senior / 1st lien private corporate debt Potential for opportunistic financing with attractive risk/reward Typically, junior to broadly syndicated 1st lien loan
Real Estate Debt (Whole loan / Mezz)	350-500 / 600-800 bps				<ul style="list-style-type: none"> Mortgage secured by a lien on a commercial property High single-digit, low double-digit returns available with conservative lending standards and modest LTVs Combination of limited CMBS issuance and a pullback from US regional banks is driving an improved opportunity for private capital
US Infrastructure Debt (HY)	550-750 bps				<ul style="list-style-type: none"> Current environment allows for 1st lien secured Opco loans Long-term contractual cash flows, CPI linkages, and lower defaults/higher recoveries Secular trends driving growth in digital and renewables sectors combined with limited competition from regional banks drives favorable supply demand dynamics
Alternative Credit	600-1000 bps				<ul style="list-style-type: none"> Non-traditional markets such as loans, leases and other receivables Asset-backed nature of collateral and amortization schedules enhances protection Provides diversification and relies on current income
Opportunistic Credit	1000+ bps				<ul style="list-style-type: none"> Focus on dislocations in credit markets High levels of economic and market volatility may create attractive opportunities
Venture debt (First Lien)	1000+ bps				<ul style="list-style-type: none"> Loans to well-capitalized venture-backed borrowers LTVs typically below 20% Limited access to IPO markets and increased cost of capital for venture equity drive more favorable pricing & higher creditor protections
Distressed debt / special situations	1000+ bps				<ul style="list-style-type: none"> Focus on dislocations in credit markets High levels of economic and market volatility may create attractive opportunities We see many small companies with strong balance sheets looking for capital solutions

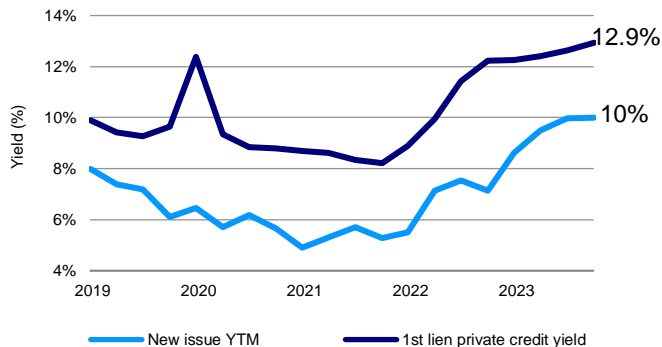
Source: Invesco Solutions views as of Feb. 29, 2024. For illustrative purposes only.

Valuations and fundamentals:

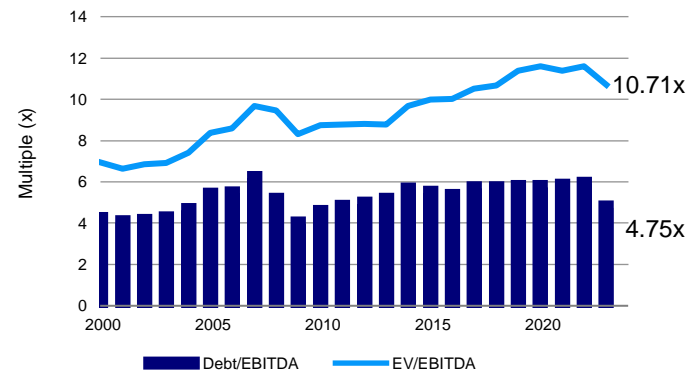
1st lien private credit— new issue YTM and leverage ratios

Spreads on offer to 1st lien lenders are attractive on an absolute, relative, and risk-adjusted basis

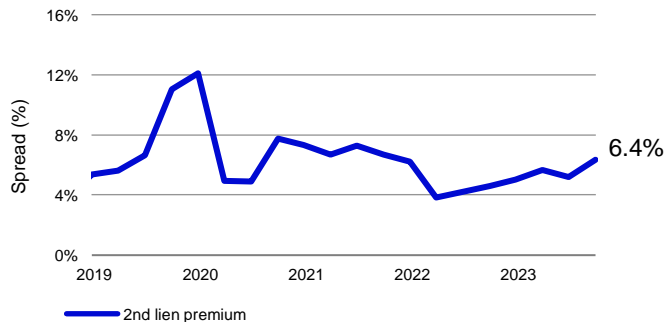
Yields on new issues



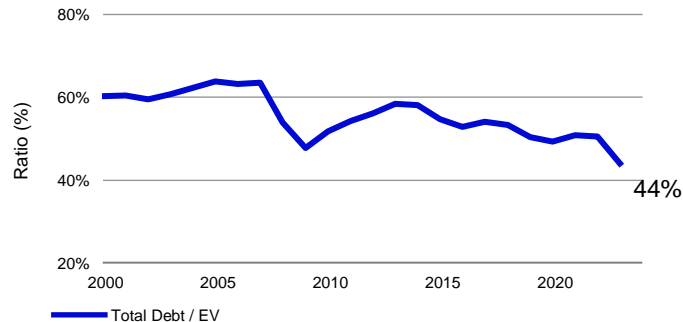
Global private credit multiples



Spreads on 2nd lien debt to public proxies



Global private credit LTV

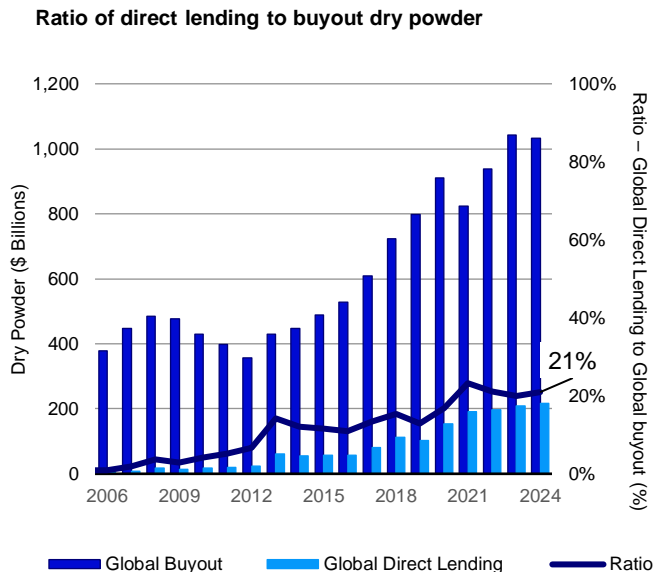


Source: Pitchbook, LCD Leveraged Loan, SEC EDGAR, JPMorgan, Bloomberg L.P., as of Dec. 31, 2023. New issues refer to bonds issued within the quarter. 1st lien spread over LIBOR estimates are based on SEC filings by a representative sample of BDCs, and the spread is calculated by subtracting a broadly syndicated loan yield based on Spread-to-Maturity on JPM Lev Loan Index. 2nd lien spread over LIBOR estimates based on SEC filings by a representative sample of BDCs and is calculated by subtracting an HY corporate bond yield based on Option-Adjusted Spread on BBG US Corp HY Index.

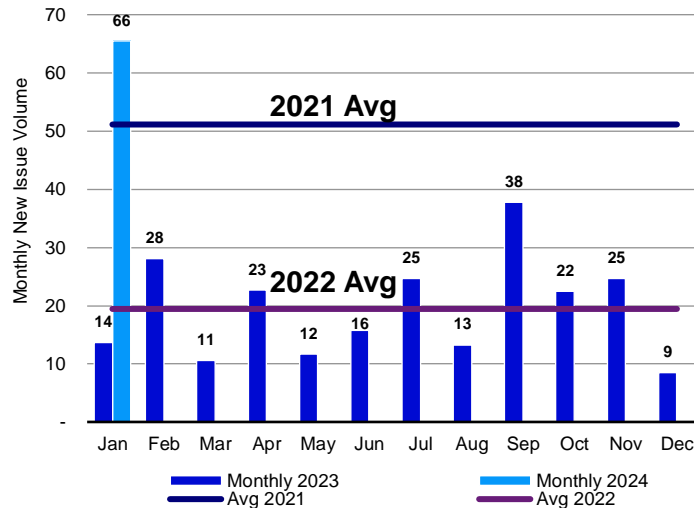
Supply demand dynamics:

Direct lending and buyout dry powder and loan issuance

Supply demand dynamics support a robust environment for lenders with available dry powder. 2024 has started with a notable uptick in broadly syndicated loan volume as markets reopen from depressed 2022 levels.



US new-issue broadly syndicated loan volume

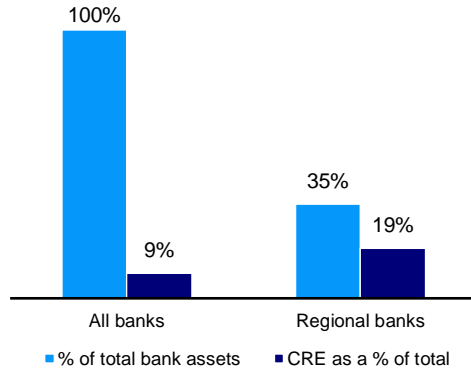


Source: Invesco Solutions, Preqin, Pitchbook LCD, data as of Jan 30, 2024.

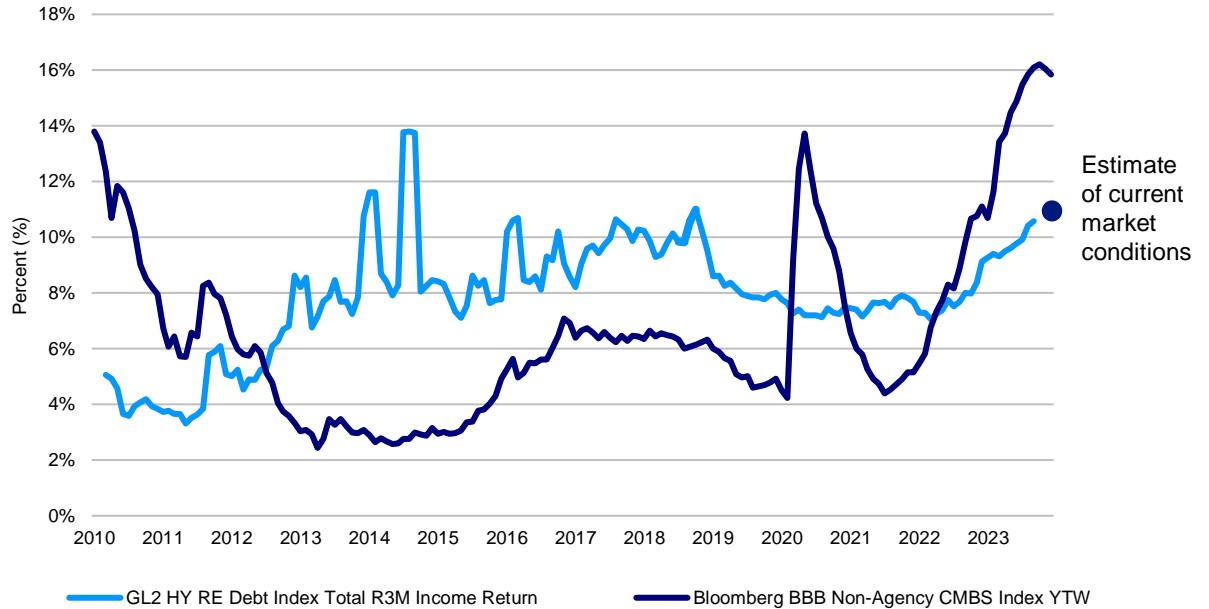
Valuations and fundamentals: Real estate credit

High absolute yields and “illiquidity premium” supported by reduced supply of loans from regional banks

Regional banks as a percentage of CRE loans



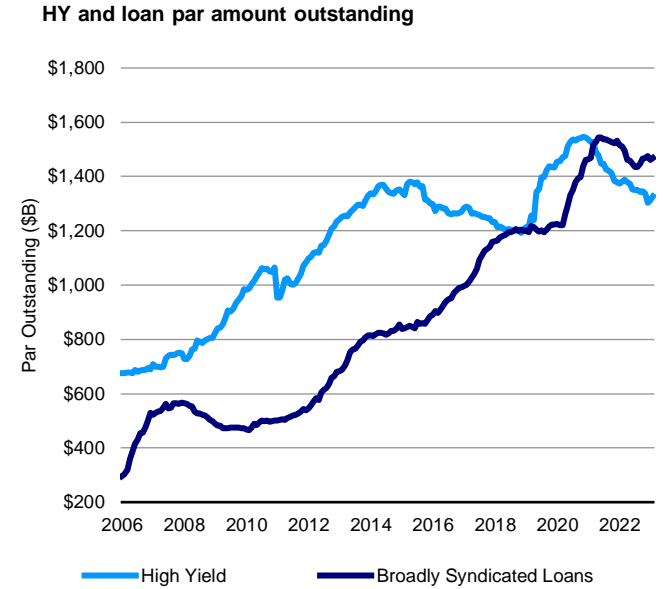
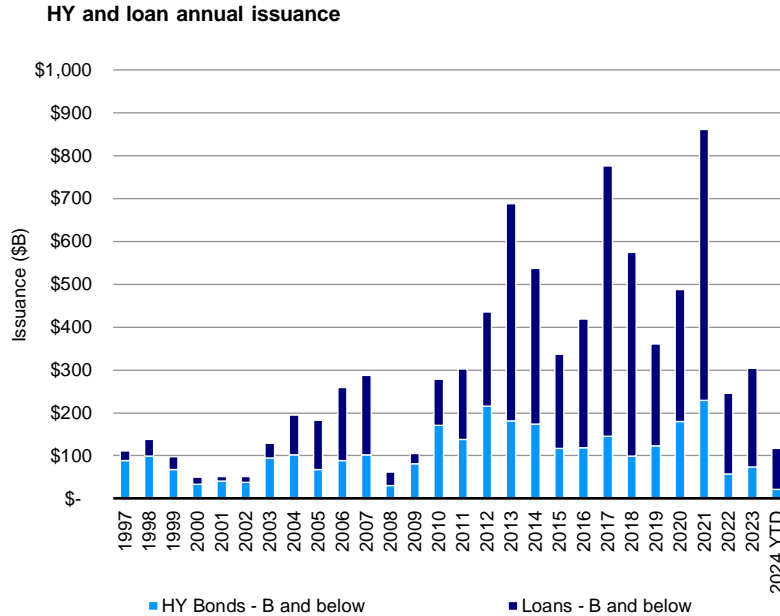
Real estate credit yields compared to proxy CMBS YTW



Source: Invesco Solutions; Gilberto-Levy, FDIC, Bloomberg L.P., as of Dec. 31, 2023.

Valuations and fundamentals: Distressed

Significant issuance in the loan market rated single B and below, showcasing the opportunity set relative to history



Source: Invesco Solutions; ICE BofA, JP Morgan, as of Jan. 31, 2024.

Private equity

Large buyout

2

2024 Alternative opportunities – Q1 update: Large buyout



Jeff Bennett, CFA
Head of Manager Selection
Invesco Solutions

Underweight PE as valuations are moderating, with pockets of opportunity in private-to-private transactions

Asset class	Overall	Valuations	Fundamentals	Secular trend
Private equity: LBO	Underweight	Unattractive	Neutral	Neutral
Growth equity	Neutral	Neutral	Neutral	Attractive

Private equity has historically provided outsized returns relative to both public equity investments as well as other private asset classes. In monitoring the current environment a few themes emerge:

Prospective opportunity for turnarounds

With record levels of dry powder now four years or older, depressed debt coverage ratios, and a looming refinancing wall, opportunities should present themselves for managers with turnaround experience in an environment where General Partners (GPs) are highly incentivized to ramp up purchase activity.

Improving financial environment

The broadly syndicated loan market has continued to recover at the same time as terms available from private lenders have eased slightly, albeit for deals being financed at near record low leverage levels, which reflect historically conservative lending standards. While base rates remain elevated relative to post-GFC levels, credit spreads have tightened considerably.

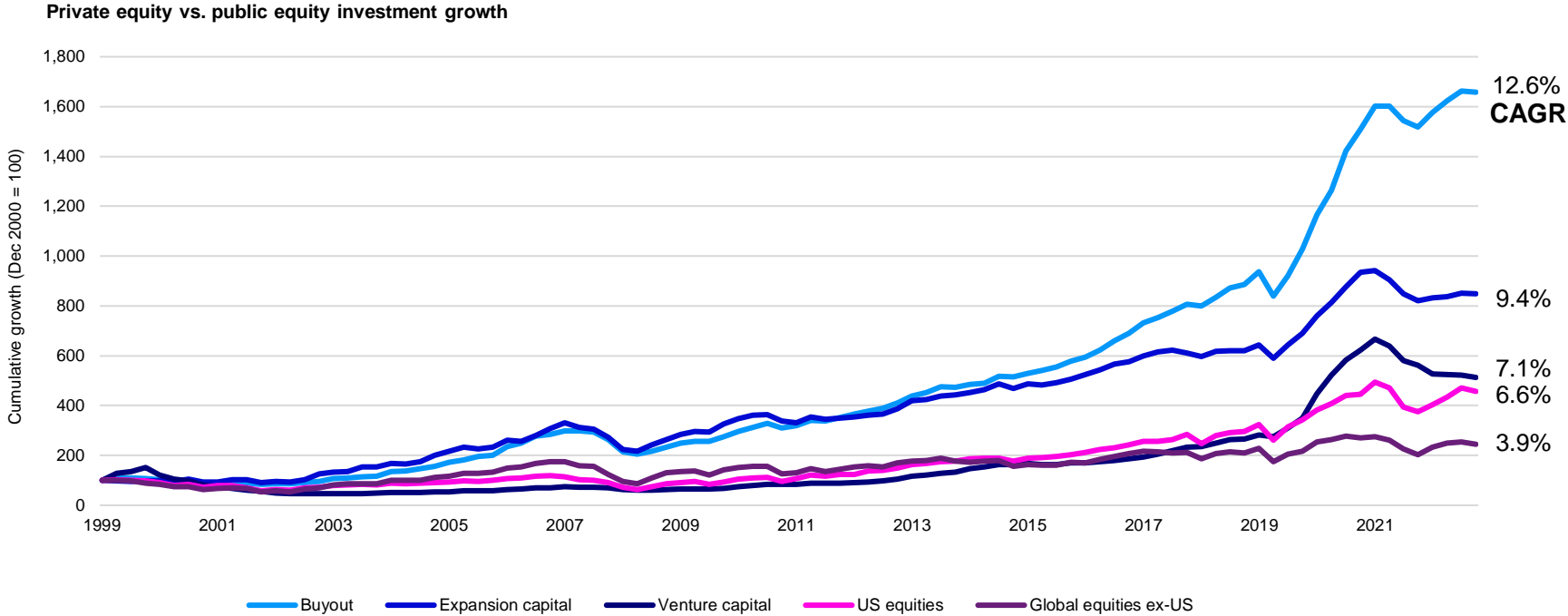
Continued focus on growth

We have seen a continued focus on growth equity strategies. This highlights the continued theme reflecting a more favorable opportunity set for companies that can rely on organic growth to drive return relative to those that require the use of leverage which comes at a high cost in the current environment. While still at valuations that exceed pre-2021 levels, the correction in late-stage venture valuations should provide a continued opportunity for private equity firms with a flexible mandate.

Limited exit opportunities

Exit opportunities have largely dried up, leaving private equity firms with over \$3 trillion in unsold assets. This trend has resulted in a lack of cash flow back to LPs that are becoming evermore selective with new subscriptions.

Cumulative growth of private equity versus public equity



Source: Investment growth of 100; Private asset index return data (large buyout, expansion capital, and VC / growth equity) from Burgiss and are net of fees; US equity returns represented by Russell 3000 TR index; Global ex-US equity returns represented by MSCI ACWI ex USA net TR index are gross of fees, quarterly from Dec. 1999 to Sept. 2023. **Past performance does not guarantee future results.**

Views on private assets: Private equity

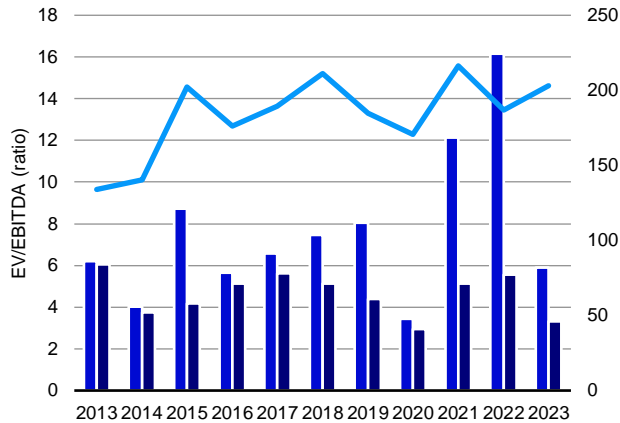
Investment type	Allocation range			Comments
	Underweight	Neutral	Overweight	
Large buyout				<ul style="list-style-type: none"> Exposure to high quality companies backed by strong management teams Renewed opportunity for take-private transactions and private-to-private exits at favorable valuations balanced by headwinds from an increasing cost of debt
Growth/expansion equity				<ul style="list-style-type: none"> Profitable franchises exposed to secular growth themes Less competition for deals from the IPO or SPAC markets Heightened focus on platforms
Venture capital				<ul style="list-style-type: none"> Exposure to a broad variety of disruptive technologies and secular growth themes at an early stage Challenging exit environment with the potential for a sustained period of "down rounds" Modest correction in valuations, primarily for late stage venture deals

Source: Invesco Solutions views as of Feb. 29, 2024. For illustrative purposes only.

US large buyout take private volume and EV/EBITDA valuations

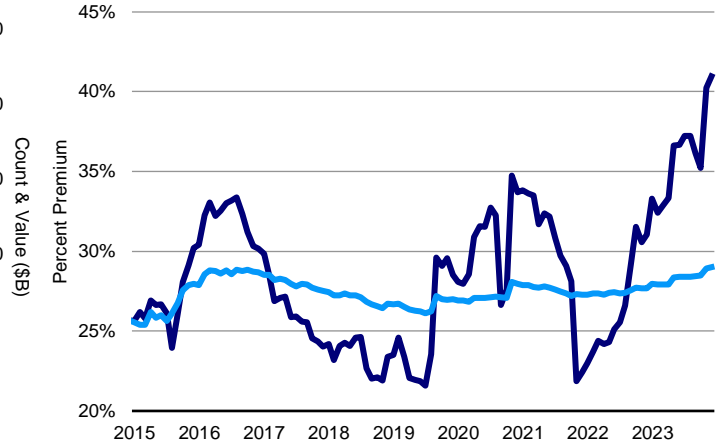
Multiples and premiums are at the high end of their historical range

Take private deal volume compared to EV/EBITDA



- Announced Total Value (\$B)
- Count
- Median Target EV To Trailing 12M EBITDA

M&A deal premium vs. long-term average

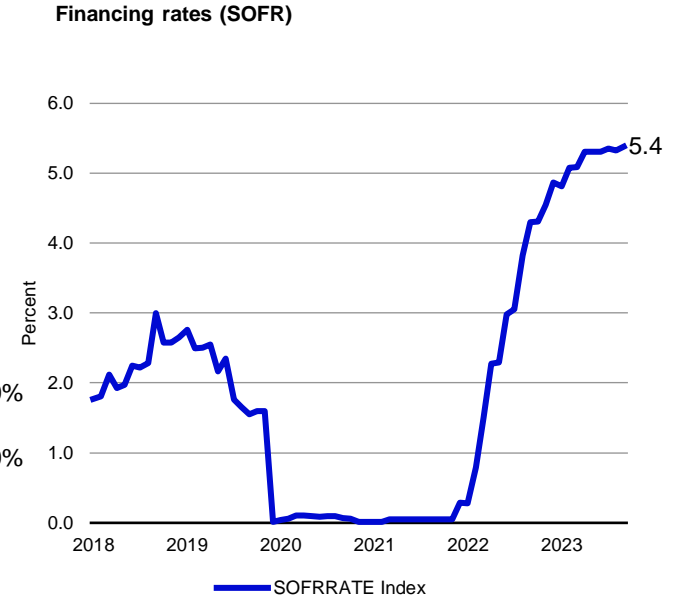
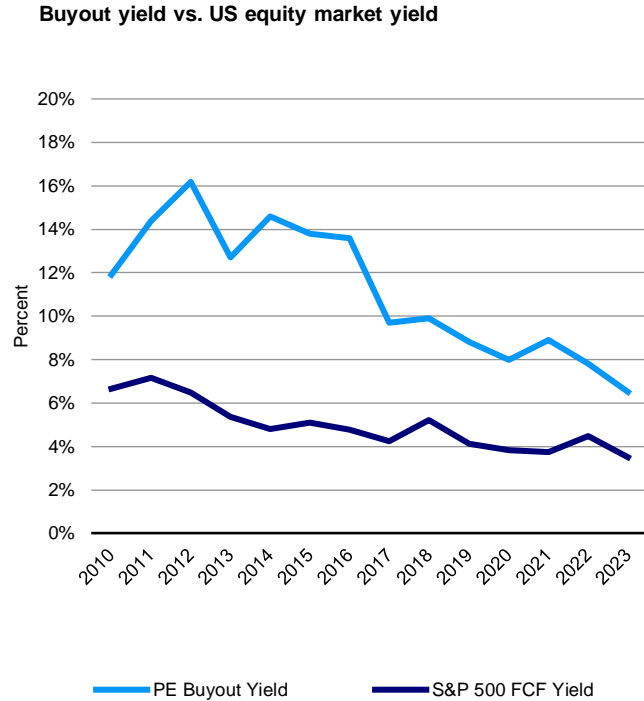


- T12M Average
- LTA

Source: Invesco Solutions, Pitchbook, Bloomberg L.P., as of Dec. 31, 2023.

US large buyout vs. equity market yield

While purchase prices have moderated slightly, this is more than offset by rising financing costs

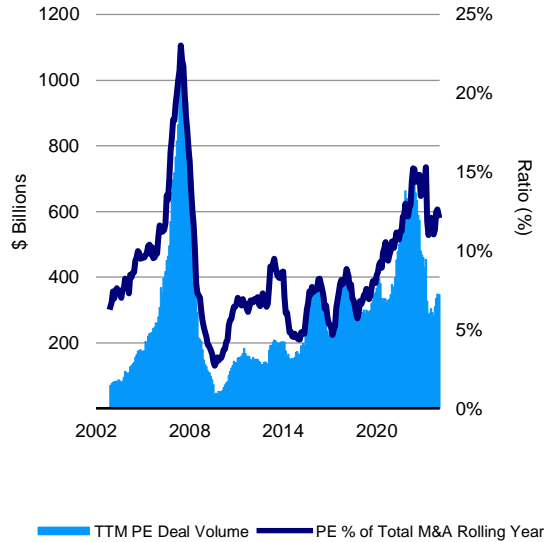


Source: Invesco Solutions, Pitchbook, Bloomberg L.P. as of Dec 31, 2023.

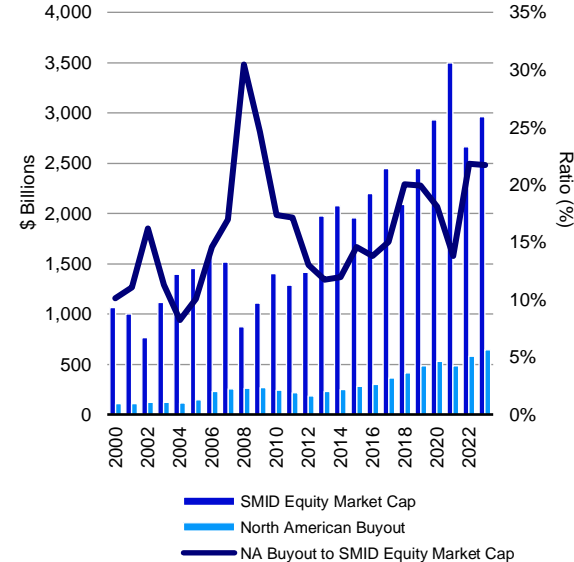
Fundamentals: Buyout and IPO deal volume

Limited exit opportunities favors those with dry powder and should drive an increase in private-to-private deal activity

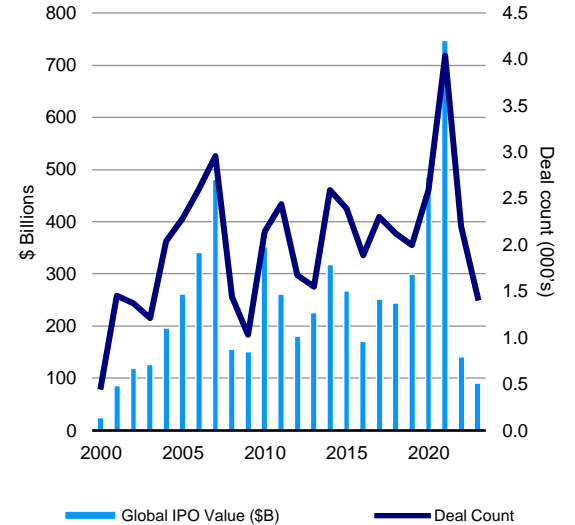
PE deal volume



PE dry powder to target's market cap



Trailing year IPO activity



Source: Invesco Solutions, Pitchbook, Preqin, Bloomberg L.P., latest data available, as of Dec. 31, 2023.

Real assets

Real estate and infrastructure

3

2024 Alternative opportunities – Q1 update: Real assets



Jeff Bennett, CFA
Head of Manager Selection
Invesco Solutions



Mike Bessell, CFA
Investment Strategist
Invesco Global Real Estate

Underweight real assets as higher interest rates are pressuring valuations

Asset class	Overall	Valuations	Fundamentals	Secular trend
Core RE	Underweight	Unattractive	Neutral	Neutral
Value add	Neutral	Neutral	Neutral	Attractive
Infrastructure	Neutral	Unattractive	Attractive	Attractive

Real Estate

It is our conviction that real estate investments made in 2024-25 will offer significant outperformance. With global interest rates having peaked and now starting to decline, there is increasing confidence that real estate pricing will stabilize as we head into 2024, enabling a recovery in transaction volumes.

With consensus expectations firming up around a 'soft landing' for global economies, many global real estate markets continue to see robust income fundamentals, though we note that leasing has slowed broadly across property types in the US, where we expect the recovery in fundamentals to lag the capital markets recovery. The key exceptions are those markets which are seeing excess supply, either due to a ramp up in construction activity, such as high-rise apartment markets in certain US metros, or a contraction in demand, such as we currently see in

Source: Invesco Solutions, IRE, views as of Feb. 29, 2024.

many office markets.

The focus for real estate is on the longer-term rate outlook, particularly the impact on exit cap rates 5-10 years out. While short-term rate expectations have been particularly volatile, longer-term interest rate expectations also declined as financial markets price in a series of rate cuts in 2024. So long as the expected soft landings for the US and Eurozone are met, we expect real estate yields to stabilize. While asset values are repricing, banks are focused on existing loan books and so offer limited new liquidity, continuing to impact the volume of real estate transactions in all key markets.

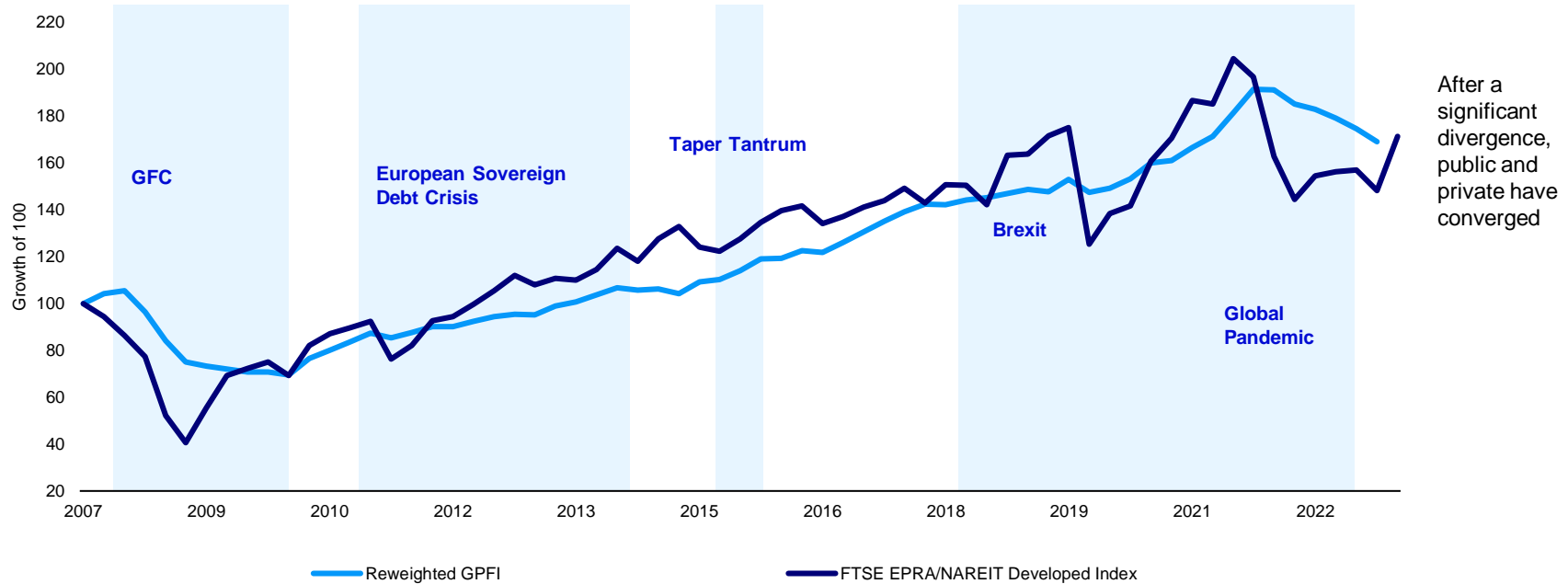
Infrastructure

Within infrastructure, dry powder levels remain elevated, and valuations, like those in real estate, have not backed up with

base rates, near term fundamentals are strong and secular tailwinds are supportive. In addition, fundraising during 2023 was the weakest in ten years, which should bode well prospectively from a supply demand perspective. Tailwinds include but are not limited to (1) the estimated domestic and global need for infrastructure investment over the next decade supported by the Infrastructure Investment and Jobs Act as well as the Inflation Reduction Act; (2) the strong fundamentals within the transportation sector in part driven by the post-pandemic rebound in travel and commerce; (3) energy infrastructure in the wake conflict in the Ukraine; and (3) continued secular tailwinds in both the digital and energy transition/renewables sectors. These tailwinds are moderated slightly by the increasing cost of incensing largely driven by the turmoil in the US regional banking sector.

Cumulative growth of listed real estate vs. unlisted real estate

Listed and unlisted global real estate performance 2007-2023, Dec. 2007=100



Note: MSCI Global Quarterly Property Fund Index (GPF) was reweighted to 25% Asia Pacific, 25% Europe and 50% North America. All returns shown in USD. Source: Invesco Real Estate based on data from MSCI Global Quarterly Property Fund Index, as of Sept. 30, 2023, and Macrobond as of Dec. 31, 2023. Listed real estate is gross of fees while unlisted is net of fees.

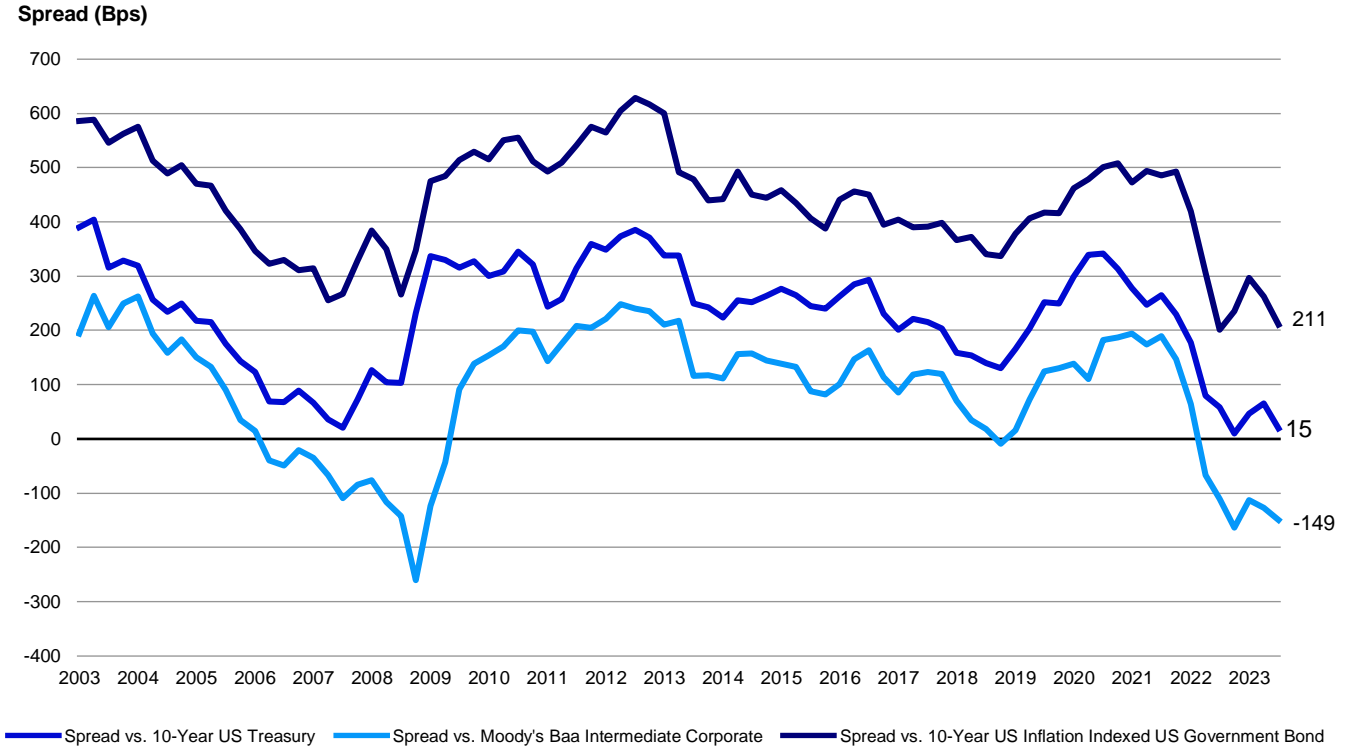
Views on private assets: Real assets

Investment type	Allocation range			Comments
	Underweight	Neutral	Overweight	
Real estate core				<ul style="list-style-type: none"> Public and private valuations have converged, but remain rich in absolute terms Exposure to high quality real estate assets with stable current income Potential headwinds to existing cap rates resulting from rapid rise in interest rates Mixed outlook varies by sub-sector
Real estate value add / opportunistic				<ul style="list-style-type: none"> Focus on dislocations in credit markets High levels of economic and market volatility may create attractive opportunities
Infrastructure core				<ul style="list-style-type: none"> Exposure to current inflation-linked income backed by long-term contracts and/or concessions Broad-based fundamental tailwinds across sub-sectors balanced by high valuations
Infrastructure value add / opportunistic				<ul style="list-style-type: none"> Includes exposure to brownfield and greenfield projects Tailwind from secular growth themes (renewables, digital) and increased government support (IIJA)

Source: Invesco Solutions, views as of Feb. 29th, 2023. For illustrative purposes only.

Real estate cap-rate spreads

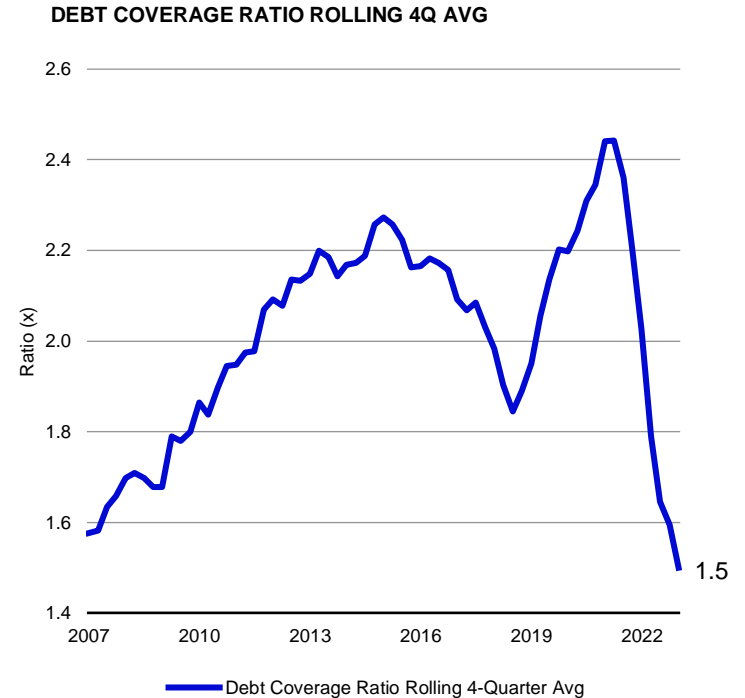
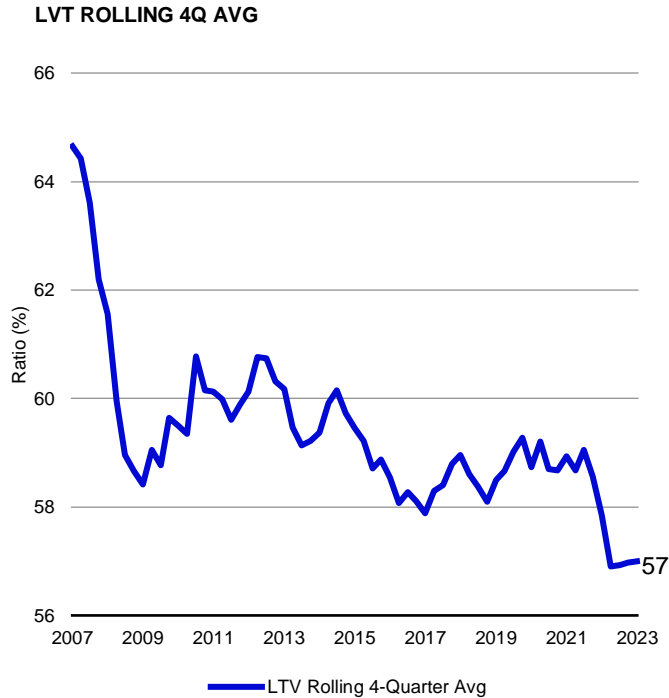
Direct real estate valuations remain elevated relative to other income-generating alternatives



Source: Invesco Solutions, NCREIF, Moody's Analytics, as of Sept. 30, 2023.

Real estate Leverage (LTV) and debt coverage ratio

Modest levels of leverage in the system post-GFC should moderate systemic risk, currently monitoring interest coverage ratios

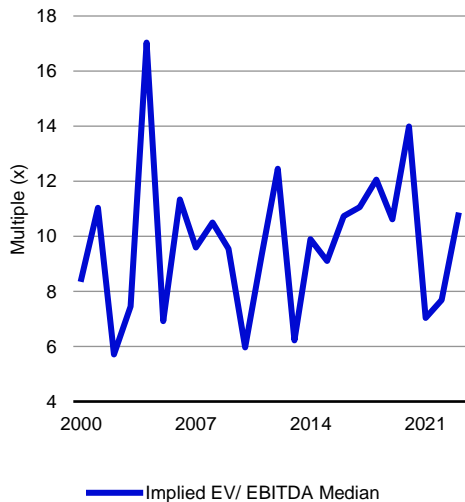


Source: Invesco Solutions, NCREIF, Moody's Analytics, as of Sept. 30, 2023.

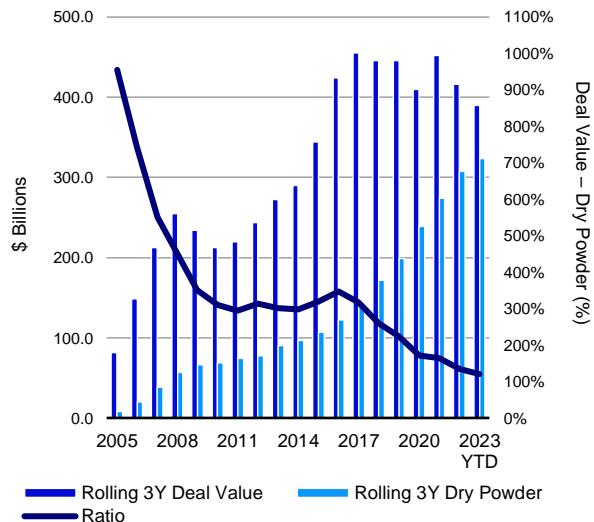
Valuations and fundamentals: Infrastructure

Relatively high valuations combined with robust dry powder are offset by an expanding opportunity set with long-term secular tailwinds

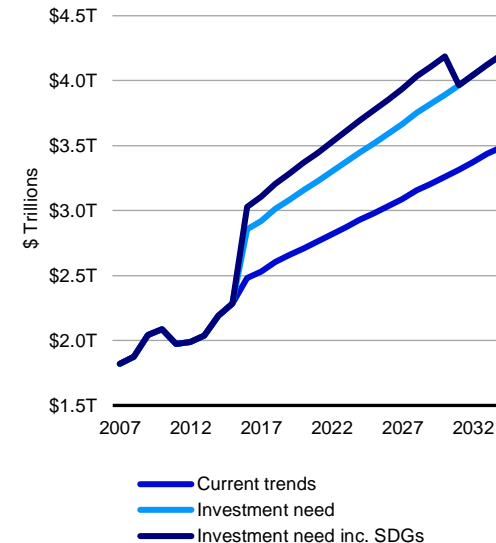
Infrastructure EV/EBITDA



Deal value to dry powder ratio



Investment need in infrastructure



Source: Invesco Solutions, Pitchbook, Preqin, Global Infrastructure Hub, as of Oct. 31, 2023.

Commodities

Metals, energy, and
agriculture

4

2024 Alternative opportunities – Q1 update: Commodities



Jeff Bennett, CFA
Head of Manager Selection
Invesco Solutions



David Gluch, CFA
Client Portfolio Manager
Invesco Global Asset Allocation

Current net underweight commodities due to trend and carry but valuation is increasingly attractive

	Overall	Secular trend	Valuations	Fundamentals
Asset class	Underweight	Unattractive	Attractive	Unattractive
Agriculture	Underweight	Unattractive	Attractive	Unattractive
Energy	Overweight	Attractive	Attractive	Neutral
Industrial metals	Underweight	Unattractive	Attractive	Unattractive
Precious metals	Underweight	Unattractive	Unattractive	Unattractive

While our secular trend assessment has currently shifted to unattractive, we caution that commodity prices remain rangebound across the major sub-complexes. Precious metals experienced a strong rally in the fourth quarter of 2023, but in early 2024, prices have stagnated as markets have been forced to reassess the timing and magnitude of interest rate cuts. Industrial metals remain under pressure from plunging nickel prices due to a surge in new supply from Indonesia and the Philippines just as the Russians need cash. Energy trend has been supported by refined products such as diesel and heating oil, despite the greater than 80% collapse in natural gas since its September 2022 peak, which has single handedly resulted in a decline of the Bloomberg Commodity Index over the timeframe. While the El Nino weather pattern has positively impacted tropical soft commodities, the decline in larger weighted grain exposures has shifted agricultural trend to unattractive.

For valuation, a comparison of spot prices to an exponentially weighted five-year average prices is utilized. Gold's price resiliency not only hurts precious metals but also the broader index as gold is the top holding in the Bloomberg Commodity Index. Energy valuation remains attractive due to volatile and declining natural gas, while 3-year price lows in grains are supporting agriculture.

Fundamentals, as measured by annual carry, are net unattractive due to the Bloomberg Index's larger weight to gold, whose carry is unattractive given a persistently inverted yield curve. Carry remains highest in refined products and weakest in natural gas leading energy to neutral. Weakness in grains is countering strength in tropical soft commodities, while industrial metals continue to wait for tighter markets.

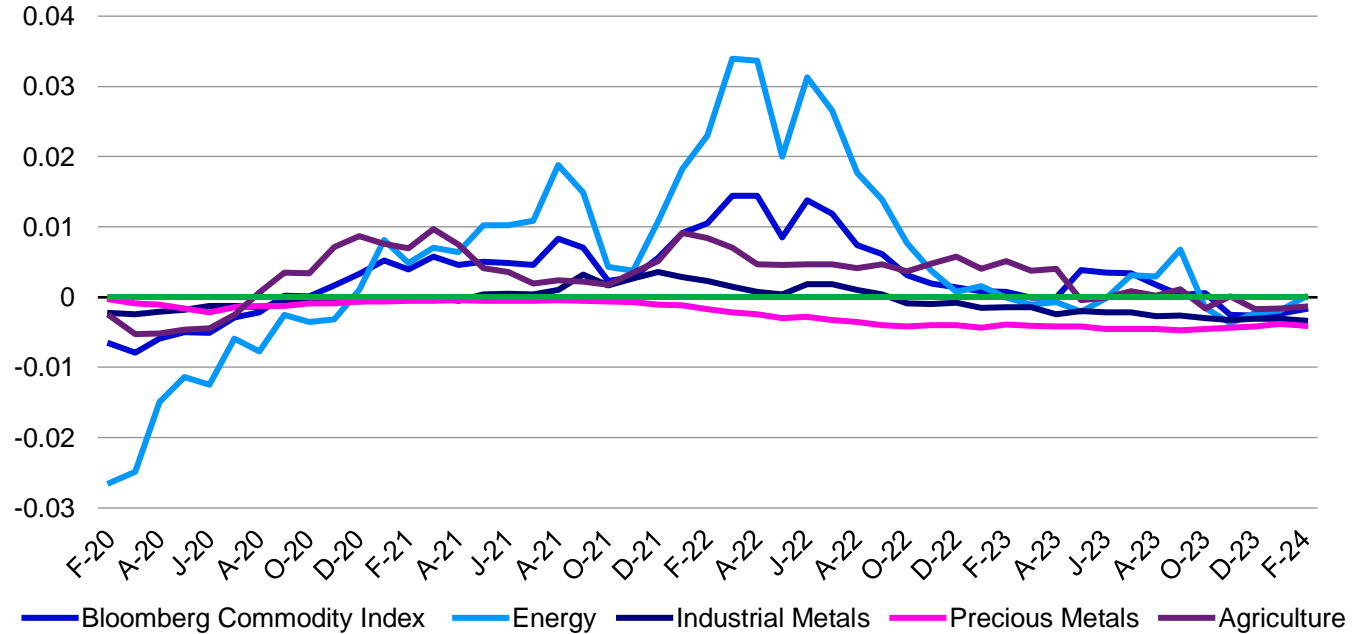
Source: Invesco Solutions, views as of Feb. 29, 2024. Views reflect the Bloomberg Commodity Index and do not translate directly to any Invesco commodity strategy.

Carry has weakened since 2022's cycle peak

Carry remains mildly unattractive mostly due to the Bloomberg Commodity Index's exposure to gold and natural gas.

Energy carry is improving near-term due to refined products while we wait to see if gold has bottomed.

Proprietary Carry Signal

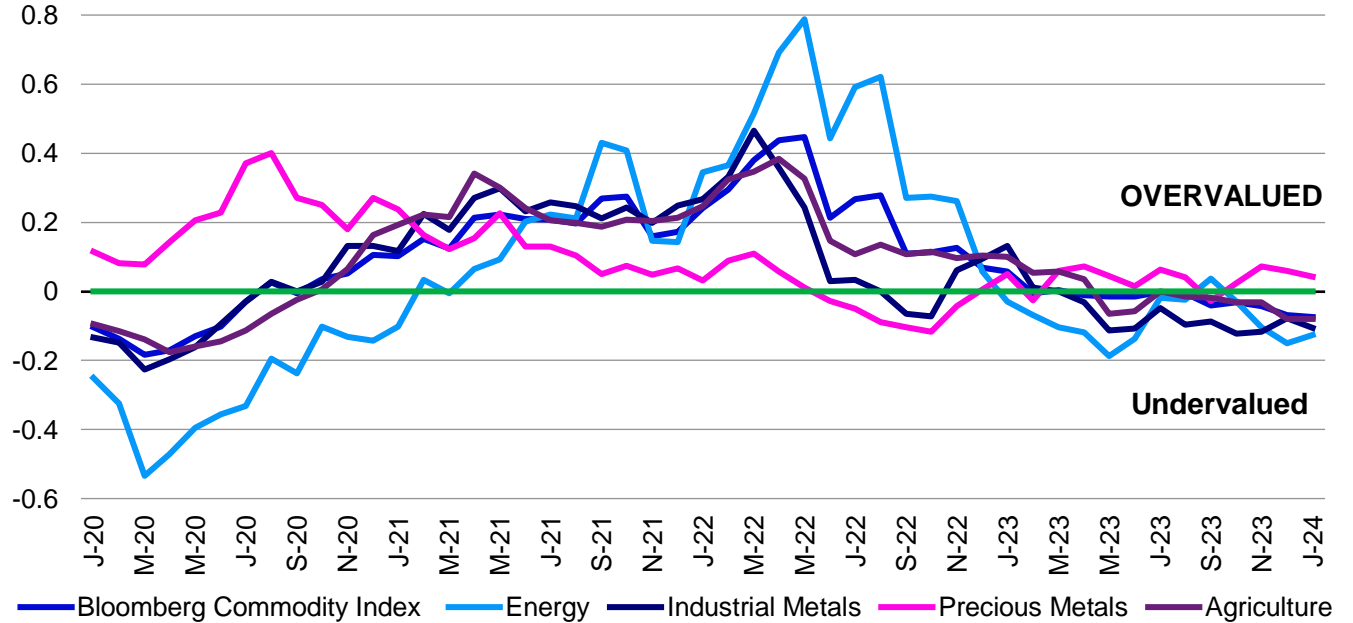


Source: Invesco Solutions.

Improving versus 2022's overvaluation

Gold's resilience despite higher real interest rates and dollar strength are keeping precious metals overvalued. An 80% multi-year decline in natural gas is keeping energy undervalued, while 3-years lows in corn and wheat are aiding agriculture.

Proprietary Valuation Signal



Source: Invesco Solutions.

Outlook for Commodity Markets

Uncertainty and
volatility will
likely persist

2024 Major Themes

1

Underinvestment remains a positive long-term catalyst for commodities, but an inverted yield curve and a slowdown in global manufacturing provide near-term downside risks as China remains in a deleveraging process.

2

Potential central bank policy reaction to a more severe slowdown in the global economy and resulting spillover effects into the dollar and real interest rates. Lower real interest rates and a lower dollar are positive catalysts for precious metals.

3

Geopolitical risks have expanded beyond the conflict in Ukraine to include the Middle East and China/Taiwan with the most direct price effects likely to impact oil and gold.

4

The El Nino weather pattern poses a risk to grain crops after propelling soft commodities prices including cocoa to a 45-year high and sugar to a 12-year high in 2023.

5

Protectionism measures have been increasing since weather-related supply issues have impacted commodity markets over the past few years. As an example, India has recently implemented a sugar export ban, while Thailand has limited sugar exports.

6

Green energy remains a primary source of long-term metals demand, while underinvestment and mature geology restrain supply, but recent demand for solar panels and wind turbines has declined due to rising costs.

Invesco Solutions

Invesco Solutions is an experienced multi-asset team that seeks to deliver desired client outcomes using Invesco's global capabilities, scale, and infrastructure. We partner with investors to fully understand investors' goals and harness strategies across Invesco's global spectrum of active, passive, factor, and alternative investments that address investors' unique needs. From robust research and analysis to bespoke investment solutions, our team brings insight and innovation to investors' portfolio construction process. Our approach starts with a complete understanding of investors' needs:

We help support better investment outcomes by delivering insightful and thorough analytics. By putting analytics into practice, we develop investment approaches specific to investors' needs. We work as an extension of investors' teams to engage across functions and implement solutions.

The foundation of the team's process is the development of capital market assumptions — long-term forecasts for the behavior of different asset classes. Their expectations for returns, volatility, and correlation serve as guidelines for long-term, strategic asset allocation decisions. Assisting clients in North America, Europe, and Asia, Invesco's Solutions team consists of over 75 professionals with 20+ years of experience across the leadership team. The team benefits from Invesco's on-the-ground presence in 25 countries worldwide, with over 150 professionals to support investment selection and ongoing monitoring.

CONTACT

Danielle Singer
Head of North America and EMEA Client Solutions
212 652 4264
danielle.singer@invesco.com

Authors



Jeff Bennett, CFA
Head of Manager Selection
Invesco Solutions



Meirambek Idrissov
Analyst, Investment Research
Invesco Solutions



Drew Thornton, CFA
Head of Solutions Thought Leadership
Global Thought Leadership



Joseph Hubner
Associate, Investment Research
Invesco Solutions



Yu Li, PhD
Quantitative Research Analyst
Invesco Solutions

Disclosures

Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations), and investors may not get back the full amount invested.

Alternative strategies may include investments in private equity, private credit, private real estate and infrastructure, which may involve additional risks such as lack of liquidity and concentrated ownership. These types of investments may result in greater fluctuation in the value of a portfolio. Private Market investments are exposed to risk, which is the risk that a counterpart is unable to deal with counter party its obligations. Changes in interest rates, rental yields and general economic conditions may result in fluctuations in the value of any underlying strategies. These types of strategies may carry a significant risk of capital loss and other market risks.

Important information

This document is intended for Professional Clients in Continental Europe (as defined below); for Professional Clients in Dubai, Ireland, the Isle of Man Jersey and Guernsey, and the UK; for Professional Clients, Financial Advisers, Qualified Clients/Sophisticated as defined in the important information at the end); for Sophisticated or Professional Investors in Australia; Institutional Investors in the United States; in Canada, this document is restricted to investors who are (i) Accredited Investors as such term is defined in National Instrument 45-106, and (ii) Permitted Clients as such term is defined in National Instrument 31-103.; for Qualified Institutional Investors in Japan; for certain specific institutional investors in Malaysia upon request, in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong, for Institutional Investors and/or Accredited Investors in Singapore, for certain specific sovereign wealth funds and/or Qualified Domestic Institutional Investors approved by local regulators only in the People's Republic of China, for certain specific Qualified Institutions and/or Sophisticated Investors only in Taiwan, for Qualified Professional Investors in Korea, for certain specific institutional investors in Brunei, for Qualified Institutional Investors and/or certain specific institutional investors in Thailand, for certain specific

institutional investors in Indonesia and for qualified buyers in the Philippines for informational purposes only. It is not intended for and should not be distributed to or relied upon by the public or retail investors.

For the distribution of this document, Continental Europe is defined as Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden and Switzerland. This does not constitute a recommendation of any investment strategy or product for a particular investor. Investors should consult a financial professional before making any investment decisions.

By accepting this document, investors consent to communicate with us in English, unless investors inform us otherwise. This overview contains general information only and does not take into account individual objectives, taxation position or financial needs. Nor does this constitute a recommendation of the suitability of any investment strategy for a particular investor. It is not an offer to buy or sell or a solicitation of an offer to buy or sell any security or instrument or to participate in any trading strategy to any person in any jurisdiction in which such an offer or solicitation is not authorized or to any person to whom it would be unlawful to market such an offer or solicitation. It does not form part of any prospectus. All material presented is compiled from sources believed to be reliable and current but

accuracy cannot be guaranteed. As with all investments, there are associated inherent risks. Please obtain and review all financial material carefully before investing. Asset management services are provided by Invesco in accordance with appropriate local legislation and regulations. The opinions expressed are those of Invesco Solutions team and may differ from the opinions of other Invesco investment professionals. Opinions are based upon current market conditions and are subject to change without notice. Performance, whether actual, estimated, or backtested, is no guarantee of future results. Diversification and asset allocation do not guarantee a profit or eliminate the risk of loss.

Unless otherwise stated, all information is sourced from Invesco Solutions, in USD and as of Dec. 31, 2023.

This document is issued in:

Australia by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia, which holds an Australian Financial Services Licence number 239916.

Canada by Invesco Canada Ltd., 120 Bloor Street East, Suite 700, Toronto, Ontario M4W 1B7.

Belgium, Denmark, Finland, France, Greece, Italy, Liechtenstein, Luxembourg, Norway, Portugal, Spain and Sweden by Invesco Management S.A., President Building, 37A Avenue JF Kennedy, L-1855 Luxembourg, regulated by the Commission de Surveillance du Secteur Financier, Luxembourg.

Dubai by Invesco Asset Management Limited, Index Tower Level 6 - Unit 616, P.O. Box 506599, Al Mustaqbal Street, DIFC, Dubai, United Arab Emirates. Regulated by the Dubai Financial Services Authority.

Austria and Germany by Invesco Asset Management Deutschland GmbH, An der Welle 5, 60322 Frankfurt am Main, Germany.

Hong Kong by Invesco Hong Kong Limited 景順投資 管理有限公司, 45/F, Jardine House, 1 Connaught Place, Central, Hong Kong.

Japan by Invesco Asset Management (Japan) Limited, Roppongi Hills Mori Tower 14F, 6–10–1 Roppongi, Minato-ku, Tokyo 106–6114; Registration Number: The Director-General of Kanto Local Finance Bureau (Kinsho) 306; Member of the Investment Trusts Association, Japan and the Japan Investment Advisers Association.

New Zealand by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia, which holds an Australian Financial Services Licence number 239916.

Singapore by Invesco Asset Management Singapore Ltd, 9

Raffles Place, #18–01 Republic Plaza, Singapore 048619.

Switzerland by Invesco Asset Management (Schweiz) AG, Talacker 34, CH-8001 Zurich, Switzerland.

Taiwan by Invesco Taiwan Limited, 22F, No.1, Songzhi Road, Taipei 11047, Taiwan (0800–045–066).

Invesco Taiwan Limited is operated and managed independently.

Israel, the Isle of Man, Jersey, Guernsey and the United Kingdom by Invesco Asset Management Limited which is authorised and regulated by the Financial Conduct Authority. Invesco Asset Management Ltd, Perpetual Park,

Perpetual Park Drive, Henley-on-Thames, RG9 1HH, UK.

The United States of America by Invesco Advisers, Inc., 1331 Spring Street NW, Suite 2500, Atlanta, GA 30309.