Enhancing income portfolios with private markets

Complementing direct lending with real estate debt

Invesco Solutions

Complementing real estate credit and private credit

1. Private credit, both real estate debt and corporate direct lending, have been benefitting from tailwinds stemming from a reduction in supply from traditional lenders and attractive levels of yield.

2. Structurally, these private credit assets provide opportunities for investors to diversify their income exposure from traditional asset classes, with historically low levels of losses.

3. Corporate and asset-backed private credit are complementary to a portfolio seeking to optimize risk, return, and yield*.

Sources: *Invesco Solutions, Vision, as of Dec. 31, 2023. Please see slide 11 for a hypothetical portfolio analysis of both corporate and asset-backed credit and how they optimize a portfolio for risk and return. Please see slide 10 for yield analysis relative to other common fixed income assets. Past performance does not guarantee future results.

Why is private credit attractive?

Illiquidity premia previously exclusive to institutional investors

Private credit had previously been an asset class reserved for institutions and, because of innovations in product structures, is now more widely available to a broader set of investors looking to enhance their portfolios with diverse sources of income. This paper will discuss the case for private credit, both corporate direct lending and asset-backed commercial real estate debt.

With elevated levels of interest rates and inflation and incredibly attractive all-in yields of 10+%**, today's environment has been deemed the golden age of private credit.

For real estate credit specifically, the opportunity set for non-traditional lenders within commercial real estate debt is growing after banks, the primary source of lending with 50% of market share [4], have pulled back dramatically due to regulatory changes. All the while, a record amount of supply due to a $2T maturity wall is approaching over the next three years [5].

Structural benefits of private credit*

Diverse opportunity set

Thousands of large, qualified borrowers seeking capital solutions[1]

Illiquidity premium

300-400 basis points (bps) of return over public comparable assets.[2]

Optimizes a portfolio

High returns, low correlations, and loss rates enhance portfolio statistics.[3]

Why commercial real estate credit now?

Pullback of major lenders

Extended retrenchment by banks (-64%) who were the primary lenders within real estate debt.[4]

Elevated base rates

Floating rate nature of private debt improves overall yield profile as rates rise.

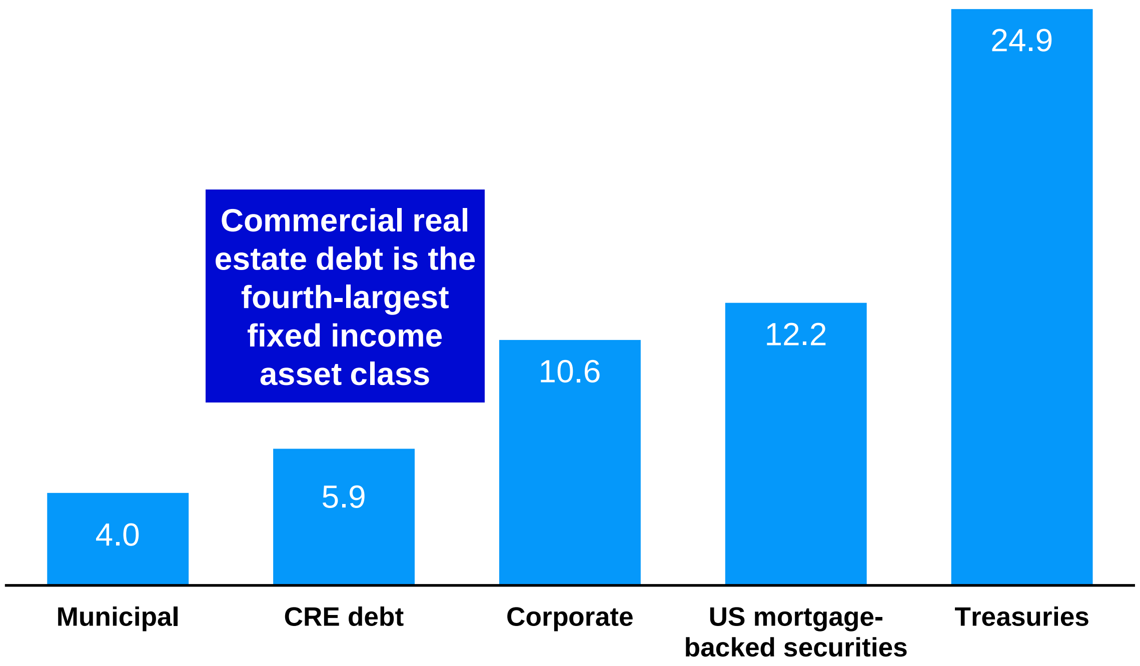
Record high maturities

$2T of real estate debt is maturing within the next three years.[5]

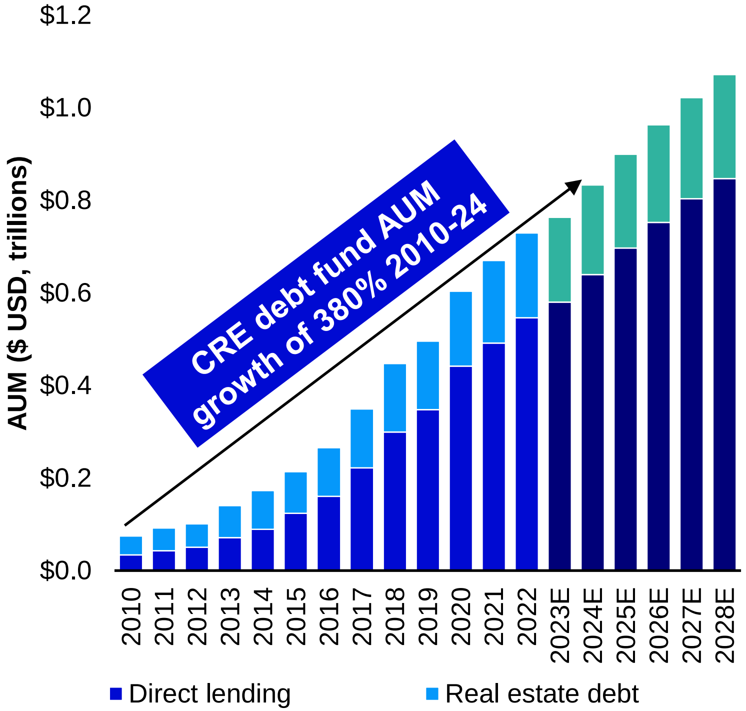
Sources: Invesco. 1 RCA, July 2024. *Applies to both direct lending and real estate credit. ** Please see slide 10 for yield data. 2 See slide 7 for benchmarks and performance. 3 See slide 11 for a hypothetical portfolio optimization. 4 Mortgage Bankers Association (MBA) as of 4Q 2023. 5 Trepp as of Feb. 2024. **Past performance does not guarantee future results**.

How big is the private credit landscape?
Significant, growing opportunity set

Market landscape ($ USD, trillions)



Comparing the size of direct lending and real estate funds



With roughly $6 trillion in commercial real estate (CRE) debt outstanding, there is a tremendous market for loans that fund diverse, high quality real estate projects globally. While not as large as the corporate bond market, CRE debt is the fourth largest fixed income asset class and is quickly growing.

When viewed at the private fund issuer level, CRE debt fund AUM has grown 380% over the past 15 years to an estimated $200B in 2024, compared to $600B in direct lending, showcasing both the recent popularity of the asset class and potential growth relative to the opportunity set of debt outstanding.

Source: SIFMA “2024 Capital Markets Outlook” with data as of Oct. 2023 for treasuries, corporate, municipal, US mortgage-backed securities (MBS) outstanding. St. Louis Fed and TREPP as of Dec. 2023 for CRE loans outstanding. Pitchbook for AUM and projections, as of June 2024.

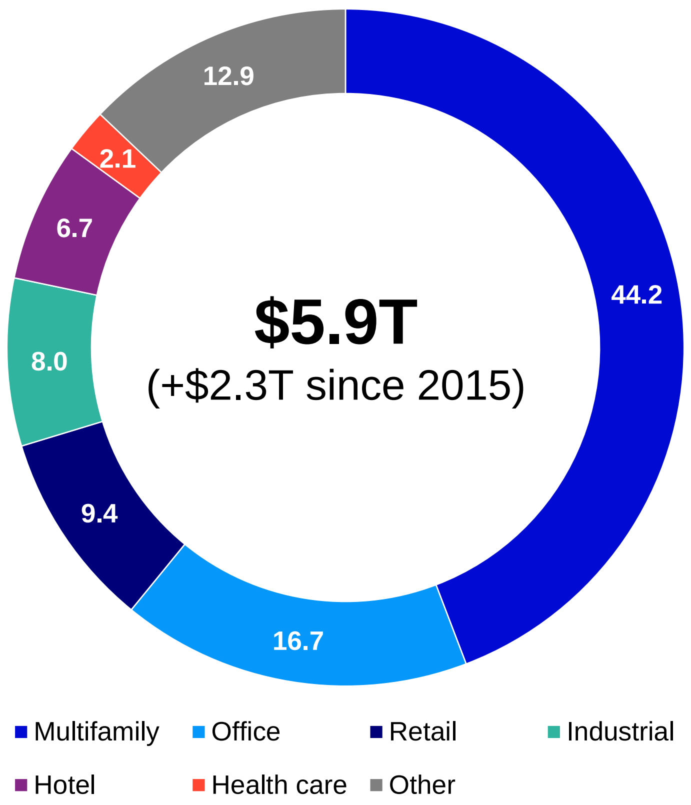
What makes up the private debt opportunity set?
Diverse borrowers representing high quality companies and properties

Private credit exists to fund investments beyond the capabilities of traditional lenders.

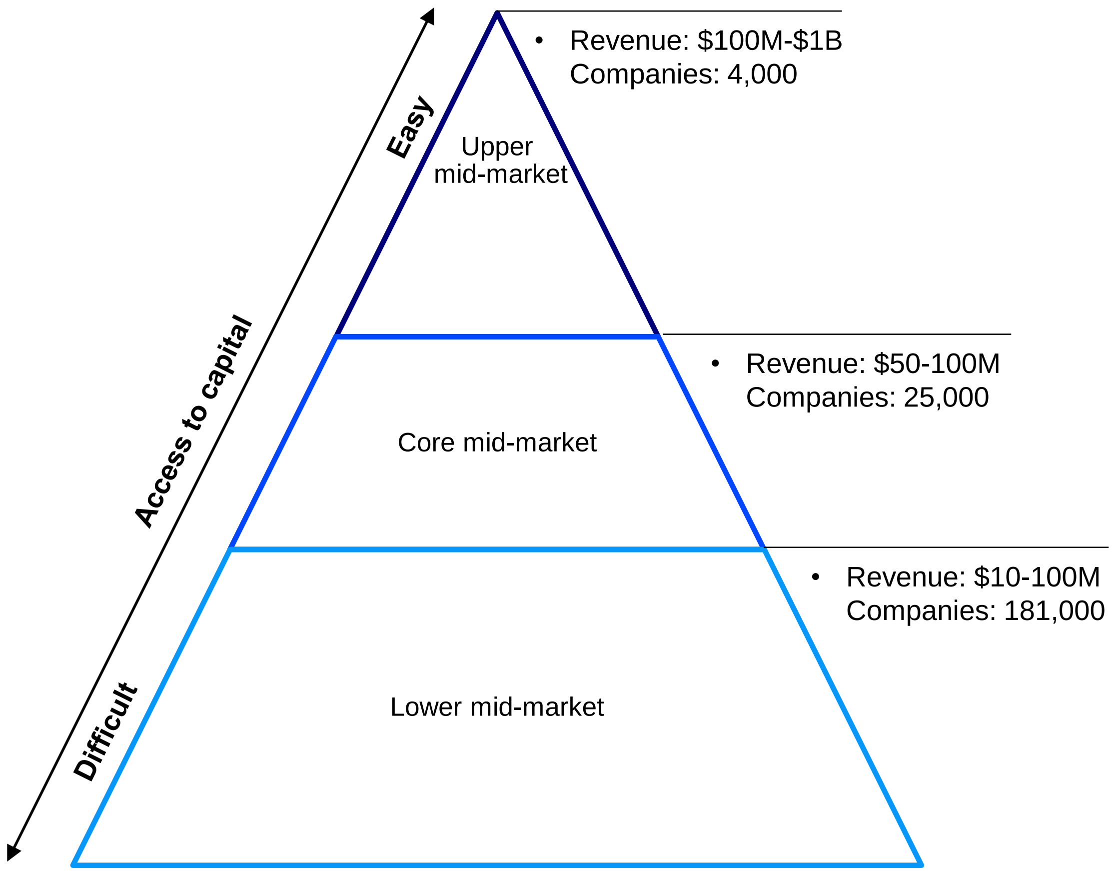
Corporate direct lending looks to provide capital to the middle market, which represents roughly 200,000 private firms with revenues of $10M-$1B, accounting for one-third of private sector GDP in the US.

Real estate debt aims to fill the capital gap for a large, liquid, and diverse CRE property market left by a 29% smaller pool of active lenders since the peak in Q2 of 2022. CRE debt outstanding has increased by $2.3T over the past nine years to $5.9T, with over $2T of that is maturing by 2027, providing a large opportunity for alternative lenders to gain market share with enhanced pricing power.

Real estate debt opportunity set (% of market)



Direct lending opportunity set



Sources: Invesco, SIMFA 2024, Mortgage Bankers Association as of 4Q23, National Center for the Middle Market, as of Dec. 31, 2023.

What are some forms of private credit?

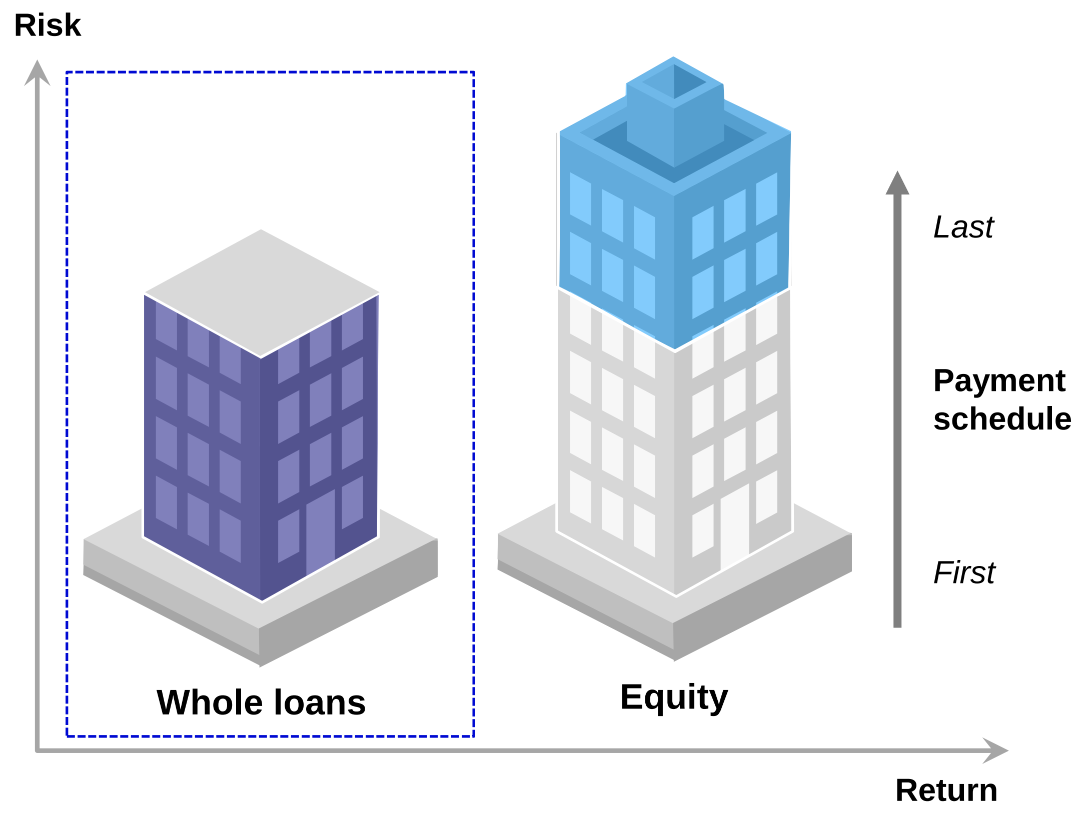
Describing corporate direct lending and asset-backed commercial real estate debt

Both forms of private credit have similar repayment profiles during a credit event or default. Equity is paid back last only after junior and senior debt investors recoup their principal investments.

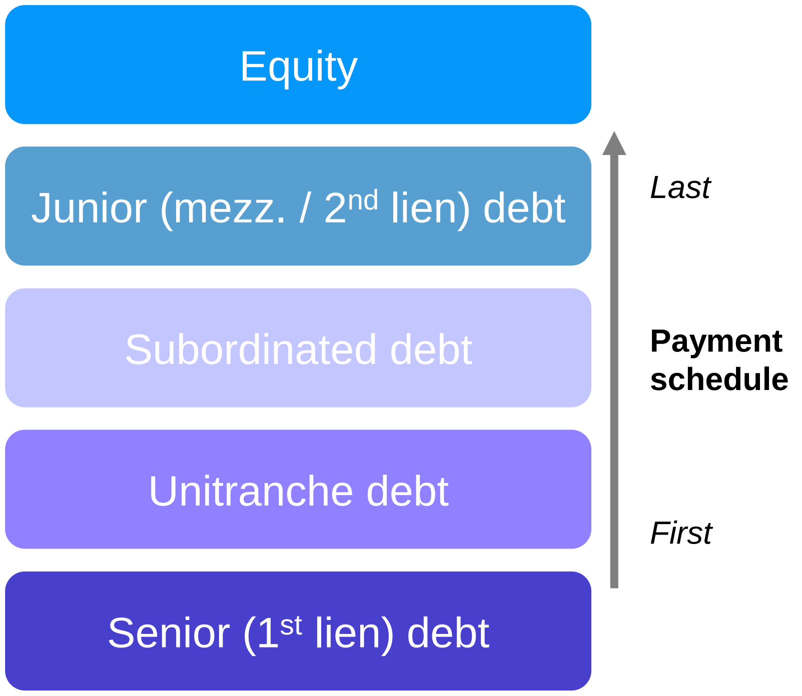
For real estate debt investors, loans begin with a targeted level of debt relative to the borrower's equity, usually 60-75% loan to value (LTV).

After accounting for the cushion of sponsor equity in a deal, real estate debt is unlikely to be impaired in most market environments. Indeed, commercial property values dropped 31.5% in the depths of the financial crisis of 2009, with few loans impaired in the process.

Real estate debt example



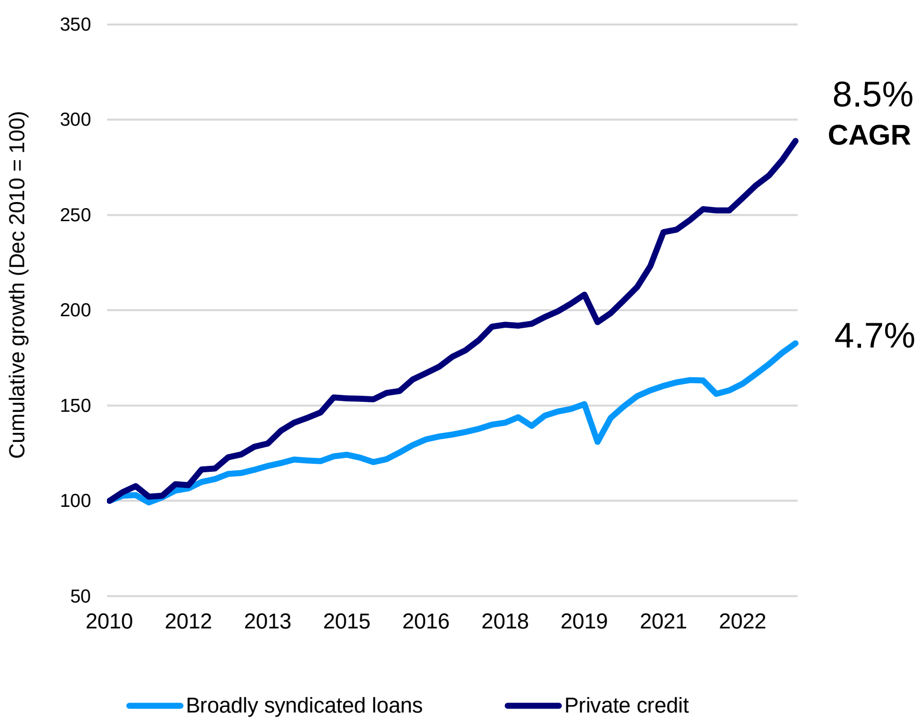
Direct lending example



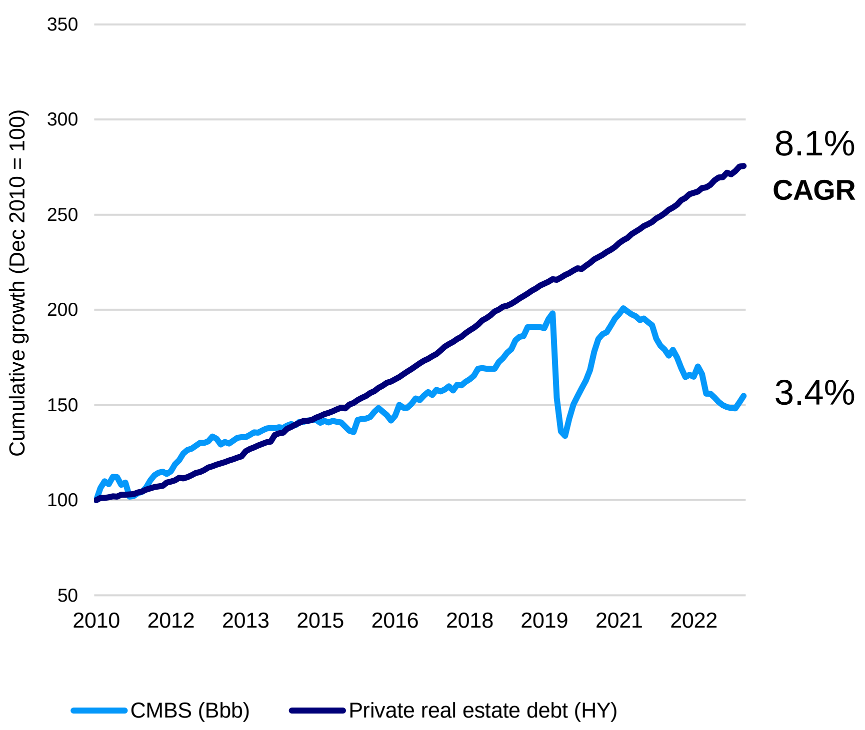
Source: Invesco, for illustrative purposes only.

How does private credit compare to public credit?
Cumulative returns show large illiquidity premia have persisted over time

Private credit and broadly syndicated loans



Real estate debt and CMBS



Evidence of illiquidity premia within private credit markets are clear when compared to public assets with similar risk profiles. Both real estate debt and direct lending have outperformed their public counterparts, Bbb CMBS and broadly syndicated loans, by roughly 300-400 basis points annualized from 2010 to 2023.

This outperformance is the result of unique opportunities not afforded to public markets, diligent underwriting in exchange for a reduction in the ability to access an investor's capital over a multi-year period.

Sources: Investment growth of 100; Private credit, also referred to as direct lending, is represented by the Pitchbook Private Debt Index and broadly syndicated loans are represented by the Credit Suisse Leveraged Loan Index quarterly from Dec. 2010 to Dec. 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-Levy High Yield Commercial Real Estate Debt Index (G-L 2), monthly from Dec. 2010 to Dec. 2023. Private credit is net of normative fees, while loans are gross of fees. **Past performance does not guarantee future results**.

Why private credit?
Consistent and impressive return profile for fixed income alternatives

Total returns for major US fixed income asset classes

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10 Years
Highest return	12.6% Private credit	6.1% RE Credit	17.1% High Yield	10.5% RE Credit	10.2% RE Credit	14.5% Corp. Bonds	9.9% Corp. Bonds	16.5% Private credit	7.1% RE Credit	13.4% High Yield	8.3% Private credit
	11.1% RE Credit	4.7% Private credit	10.3% RE Credit	10.4% Private credit	4.6% Private credit	14.3% High Yield	8.0% Treasuries	7.8% RE Credit	4.7% Private credit	13.3% Senior Loans	8.2% RE Credit
	7.5% Corp. Bonds	0.9% CMBS	10.2% Senior Loans	7.5% High Yield	1.0% CMBS	8.7% Inv. Grade	7.6% CMBS	5.3% High Yield	-0.8% Senior Loans	11.5% Private credit	4.6% High Yield
	7.5% Inv. Grade	0.8% Treasuries	9.0% Private credit	6.4% Corp. Bonds	0.9% Treasuries	8.6% Senior Loans	7.5% Inv. Grade	5.2% Senior Loans	-10.9% CMBS	8.5% Corp. Bonds	4.4% Senior Loans
	6.0% Treasuries	0.5% Inv. Grade	6.1% Corp. Bonds	4.1% Senior Loans	0.4% Senior Loans	8.3% CMBS	7.1% High Yield	-0.8% CMBS	-11.2% High Yield	5.5% Inv. Grade	3.0% Corp. Bonds
	4.2% CMBS	-0.7% Senior Loans	3.5% CMBS	3.5% Inv. Grade	0.0% Inv. Grade	7.9% Private credit	5.9% RE Credit	-1.0% Inv. Grade	-12.5% Treasuries	5.4% RE Credit	2.1% CMBS
	2.5% High Yield	-0.7% Corp. Bonds	2.6% Inv. Grade	3.5% CMBS	-2.1% High Yield	7.4% RE Credit	3.1% Senior Loans	-1.5% Corp. Bonds	-13.0% Inv. Grade	5.3% CMBS	1.8% Inv. Grade
Lowest return	1.6% Senior Loans	-4.5% High Yield	1.0% Treasuries	2.3% Treasuries	-2.5% Corp. Bonds	6.9% Treasuries	2.0% Private credit	-2.3% Treasuries	-15.8% Corp. Bonds	4.1% Treasuries	1.3% Treasuries

Over the past 10 years, private credit and real estate credit have roughly performed in line with one another, delivering roughly 300-400 bps of outperformance compared to major fixed income assets in this shorter time horizon.

Impressively, it is the consistency of these returns that stands out despite a volatile market environment characterized most recently by a global pandemic, rapidly rising interest rates and an inflation shock that has not been seen in decades. Private credit and real estate credit have been amongst the top three performers in 8 out of the past 10 calendar years.

Sources: Invesco Real Estate using data from the RE Credit - Gilberto-Levy 2 Commercial Mortgage Index, Direct Lending – Cliffwater Direct Lending Index, Investment Grade Bonds – Bloomberg US Aggregate Bond Index, High Yield – Bloomberg US Corporate High Yield Index , Senior Loans – S&P/LSTA Leverage Total Return, Treasuries – Bloomberg US Treasury Total Return Unhedged Index, Corporate Bonds – Bloomberg US Corporate Total Return Value Unhedged USD Index, CMBS – Bloomberg CMBS IG Total Return Index Value. Trailing 10 years of data, last 10 years of quarterly returns annualized 2012Q4-2022Q4. **Past performance is not indicative of future results.** Diversification does not guarantee a profit or eliminate the risk of loss.

What are the characteristics of public and private credit?

Terms, structure, and statistics vary between various forms of fixed income

Private credit assets are primarily floating rate, meaning they have little or no sensitivity to interest rates and are priced at a level of credit spread above a base rate such as SOFR. Both provide spreads in the 550-650 bps range and have had limited losses historically. Both forms of private credit have significantly wider spreads than their public counterparts and higher return targets that currently approach 10+%.

While real estate debt tends to be junior on the capital stack, the asset-backed nature and equity cushion can help limit potential losses in a credit event.

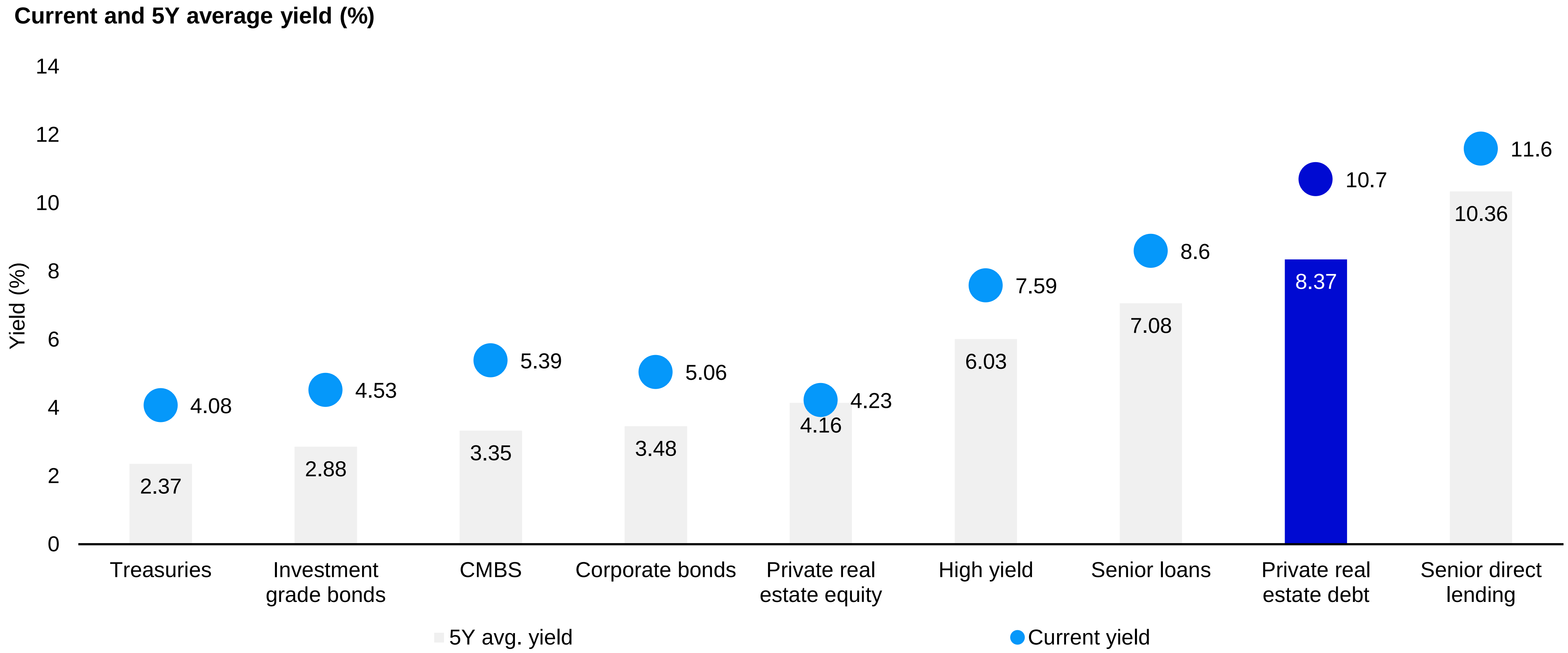
Characteristics of major US fixed income asset classes

	High yield	Corporate credit (banks)	Broadly syndicated loans	First lien direct lending	RE credit (banks)	RE credit (GL-2 index)
Duration (years)	6	7	0.25	0.25	4	0.25
Tenor (years)	7-10	7-10	5-7	5-7	5-10	3-5
Terms	Fixed rate	Fixed rate	Floating rate	Floating rate	Fixed rate	Floating rate
Spreads (bps)	320	88	360	550-650	208	550-650
Security	Unsecured	Secured	Secured	Secured	Asset backed	Asset backed
Loss rates (estimated)	1.68%	0.77%	0.92%	1.00%	0.47%	1.15%
Expected return	6-8%	5-6%	6-9%	9-12%	6-7%	10-12%
Structure	Junior	Senior	Senior	Senior	Senior	Junior

Sources: Bloomberg L.P., as of May 31, 2024. Invesco Real Estate long-term estimates using the full dataset from the RE Credit - Gilberto-Levy 2 Commercial Mortgage Index, Direct Lending– Cliffwater Direct Lending Index, High Yield – Bloomberg High Yield Index, Senior Loans – S&P/LSTA Leverage Total Return, Corporate Credit (Banks) - Federal Reserve (Fred: CORBLACBS), RE Credit (Banks) – Federal Reserve (Fred: CORCREXFACBS). There is no guarantee that the targets will be realized. An investment cannot be made in an index. **Past performance is not indicative of future results.**

Historical and current yields

Income potential in private credit presently 10+%



Due to the floating rate nature of these private credit assets, today's higher rates have resulted in significant all-in yields of 10+% for both first lien direct lending and CRE debt. The income potential available in private markets eclipses that of traditional debt assets and significantly enhances the fixed income portion of a portfolio.

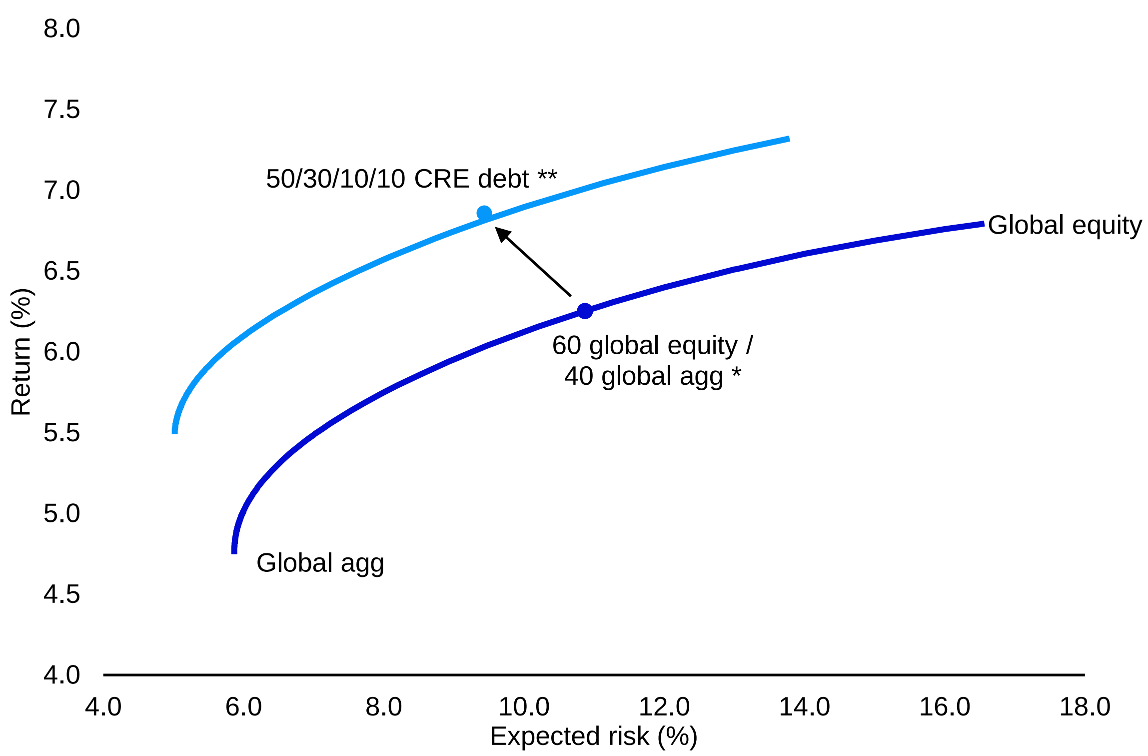
What may be more impressive is the average yield over the past five years, which has shown a consistent pattern of higher yields for private markets despite a benign yield environment for the first half of the period from 2019 to the first half of 2022.

Sources: Invesco Real Estate as of Dec. 31, 2023, using yield to worst data (unless otherwise specified) from the RE Credit - Gilberto-Levy 2 Commercial Mortgage Index (yield to maturity), Direct Lending– Cliffwater Senior Direct Lending Index (yield to maturity, as of Mar. 31, 2024), Investment Grade Bonds – Bloomberg US Aggregate Bond Index, High Yield – Bloomberg US Corporate High Yield Index, Senior Loans – S&P/LSTA Leverage Total Return, Treasuries – Bloomberg US Treasury Total Return Unhedged Index, Corporate Bonds – Bloomberg US Corporate Total Return Value Unhedged USD Index, CMBS – Bloomberg CMBS IG Total Return Index Value. **Past performance is not indicative of future results.** Diversification does not guarantee a profit or eliminate the risk of loss.

Diversified, outcome-oriented private market portfolios

Low correlations to traditional assets and direct lending improves portfolio outcomes

Adding direct lending and real estate debt to traditional efficient frontier



Correlation matrix of public and private assets

		Expected returns	Expected risk	1	2	3	4
1	**Global aggregate bonds**	4.70	5.88	1.00			
2	**Global equities**	6.79	16.52	0.31	1.00		
3	**Private real estate debt**	9.09	5.52	0.17	0.16	1.00	
4	**First lien direct lending**	8.16	6.78	0.13	0.48	0.66	1.00

From a portfolio perspective, the addition of private credit improves a traditional efficient frontier dramatically due to low correlations and attractive risk and return statistics. Compared to a 60/40 portfolio of global equities and fixed income, a 20% allocation to private credit sourced evenly from direct lending and CRE debt results in a portfolio with improved returns of 0.6% and a reduction in expected risk by 1.4%.

Since CRE debt has a low positive correlation to direct lending of 0.66, the frontier is further improved when diversifying the income portion of your alternatives portfolio.

Sources: Invesco Solutions, Vision, as of Dec. 31, 2023. Expected returns are geometric and are calculated using Invesco Solutions 10-year CMAs, please see proxy information on slide 16. Expected risk is calculated using the Barra risk model. There is no guarantee that stated objectives and targets will be met. The portfolios (* represents a 60 global equity / 40 global agg mix and ** represents a 50 global equity / 30 global agg / 10 first lien direct lending / 10 private real estate debt as referenced by “CRE debt” mix) shown are for illustrative purposes only and do not constitute investment advice or investment recommendations.

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Disclosures

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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 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.

Capital market assumptions (CMAs)

Invesco Investment Solutions develops CMAs that provide long-term estimates for the behavior of major asset classes globally. The team is dedicated to designing outcome-oriented, multi-asset portfolios that meet the specific goals of investors. The assumptions, which are based on a 10-year or 5-year investment time horizon, are intended to guide these strategic asset class allocations. For each selected asset class, we develop assumptions for estimated return, estimated standard deviation of return (volatility), and estimated correlation with other asset classes. For additional details regarding the methodology used to develop these estimates, please see our white paper Capital Market Assumptions: A building block methodology.

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Proxy information

Asset class	Index
World Equity	MSCI ACWI
US Inv Grd Corps	Bloomberg US Investment Grade
US High-Yield Corps	Bloomberg US High Yield
US MBS	Bloomberg US MBS
US Bank Loans	CSFB Leverage Loan
Global Aggregate	Bloomberg Global Aggregate
1st lien direct lending	Pitchbook private credit
2nd lien direct lending	Burgiss Mezzanine Private Debt
Real estate debt	Giliberto-Levy High Yield Commercial Real Estate Debt Index (G-L 2)

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(continued in pt 2)

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