PRIVATE CREDIT IN DEFINED CONTRIBUTION PLANS

Enhancing Retirement Outcomes Through Diversification and Yield

July 2025

DCALTA Defined Contribution Alternatives Association

www.dcalta.org

Letter from DCALTA

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In fulfilling our mission to educate fiduciaries and industry stakeholders on the benefits of including different types of alternative investments in defined contribution retirement plans (DC), DCALTA is pleased to provide a whitepaper focused on private credit. Through collaboration of our Alts Implementation & Operations Committee, we continue to release research on many topics ranging from the operational dynamics of including non-traditional investments in a daily pricing environment to how private real estate can serve as a private markets foundation in retirement portfolios.

Private Credit (PC) has grown rapidly as an asset class, attracting institutional investors seeking higher yields and diversification relative to traditional fixed-income investments. Today, private credit continues to evolve, becoming a growing and essential part of many investment institutional and retail portfolios. This paper explores private credit broadly, its sub strategies, and where allocations may effectively replace or complement public fixed income portfolio investments. From a DC context, the paper addresses how fiduciaries can responsibly integrate private credit strategies into DC participant investment options (PIOs) while considering both opportunities and challenges.

DCALTA's mission is to **enhance and secure participant outcomes** through education, research, and advocacy on the benefits of including different types of alternative investments within a defined contribution framework. Our members represent many facets of the U.S. retirement investment ecosystem, and we strive to be the industry's resource and collective voice on investments, policy and operational topics. Our collection of whitepapers are designed to educate plan sponsors and other constituents on the inclusion of alternatives in DC plans and with greater technical certainty.

DCALTA
10 YEARS | DEFINED CONTRIBUTION ALTERNATIVES ASSOCATION

I. EXECUTIVE SUMMARY

Objective

To educate and inform plan sponsors, investment managers, and consultants about the benefits and challenges of incorporating private credit into Defined Contribution (DC) plans, particularly within Participant Investment Options[1] (PIOs).

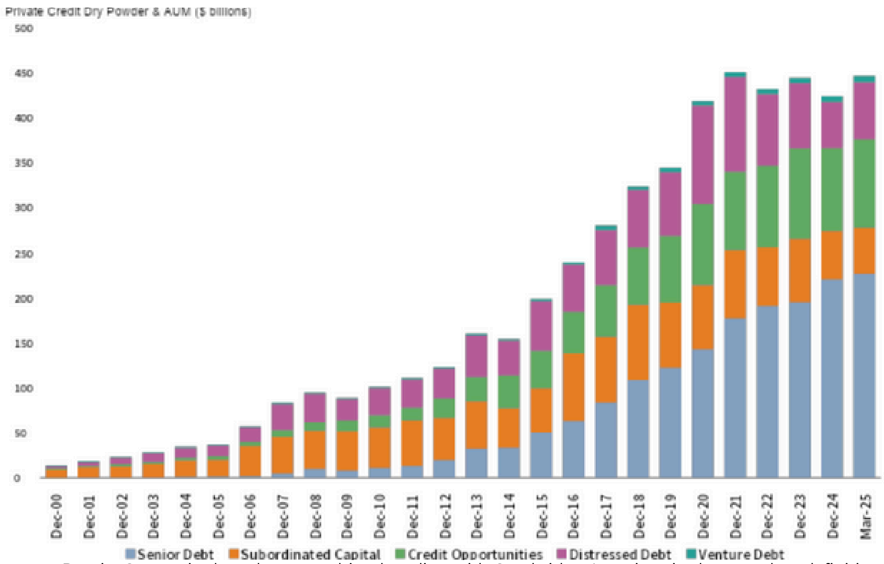
Key Themes:

1. ***Understanding Private Credit:*** Private credit offers diversification, yield premium, and lower volatility compared to traditional fixed-income investments.
2. ***Private Credit in DC Plans:*** Private credit can enhance long-term outcomes for U.S. retirement savers, despite typical investment characteristics such as illiquidity and valuation frequency.
3. ***Implementation Strategies for DC Plans:*** Practical implementation strategies can mitigate risks and align private credit with the goals of participant retirement portfolios.
4. ***Monitoring Private Credit Performance:*** Ensuring the due diligence process for performance measurement is clearly communicated to all stakeholders involved.

II. INTRODUCTION

During the last 15 years, the private credit asset class has grown significantly, accounting for approximately $1.7 trillion today across a wide range of risk and return profiles. Prior to 2008, the asset class was composed primarily of mezzanine and distressed funds. Following the Global Financial Crisis (GFC), new banking regulations impacted the lending capacity of banks which led to significant changes in financial markets. Asset managers recognized the need for capital and the opportunities it created and filled the void with traditional lending products and developed new and creative opportunistic strategies. The graph below illustrates the growth of the asset class and the expansion into new strategies.

Private Credit Dry Powder & AUM ($ billions)



Sources: Preqin. Categories have been combined to align with Cambridge Associates' sub-asset class definitions.

Continuing a long cycle trend since 1994, U.S. Defined Contribution (DC) retirement plan savers have predominantly allocated their investments to target-date funds due to the Pension Protection Act of 2006 (PPA). TDFs have become the primary retirement accumulation vehicle for defined contribution plan participants today with $3.97T[2] in total AUM of the $12.4T[3] in U.S. DC Plan AUM (end of 2024).

Contents

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The positions stated in this document are those of DCALTA and may not be the positions of the individuals or organizations listed above.

About DCALTA

DCALTA seeks to enhance the retirement security of DC plan participants by the inclusion of alternative assets:

- As a modest allocation within a long term focused, multi asset fund option on a DC plan menu.
- Through a well-diversified portfolio of alternative assets.
- Professionally managed within a prudent structure.

Key Topics Covered:

- What is Private Credit?
- What are the major categories of Private Credit and their characteristics?
- Which types of Private Credit are most relevant for DC implementation?
- What are the major implementation vehicles for private credit and what are key design features?

Crucial to building successful retirement outcomes, TDFs can offer participants attractive returns for the age-appropriate investment risk taken using diversified, multi-asset portfolios.

Following the diversification of other sophisticated institutional investors including Endowment & Foundations and Defined Benefit (DB) plans into less liquid and alternative asset classes, TDF's in the mid-2000's began allocating beyond daily priced liquid stocks and bonds to private real estate. More recently, TDF strategies are allocating to other private market strategies, such as Private Credit (PC).

The purpose of this paper is to educate investment fiduciaries and other stakeholders on the types and characteristics of private credit. Further, it will explore how fiduciaries can responsibly integrate these strategies into Participant Investment Options (PIOs) while highlighting opportunities and challenges.

III. UNDERSTANDING PRIVATE CREDIT

What is Private Credit?

Private credit refers to privately negotiated debt financing for various types of companies or assets and takes place outside of the public capital markets. Borrowers generally include companies, real estate and infrastructure owners, consumers, and various types of assets. Lenders are typically alternative asset managers offering dedicated private credit funds, and hold the private loans and private bonds to maturity. This paper focuses on the types of credit described in the chart below. DC plans are more likely to incorporate types of credit that can provide a greater capacity to accommodate the reallocation of existing DC assets under management (AUM) and future contribution flows due to its favorable liquidity characteristics.

Types of Credit	Major Categories	Summary
Corporate	Direct Lending	Private loans that are typically floating-rate and are senior in the capital structure and loans tend to be focused on middle-market[4] sized companies.
	Investment Grade Private	Private bonds that are typically fixed-rate and typically senior in the capital structure. Largely consists of private bonds to investment grade corporations or entities.
Real Assets	Real Estate Credit	Private financing for existing real estate, new construction or repositioning.
	Infrastructure Credit	Private financing for existing infrastructure, new construction or asset improvements.
Specialty & Alternative Credit	Specialty Finance	Primarily private lending against equipment or pools of financial assets. Underlying collateral can include hard assets (e.g., shipping containers and aircraft), intangibles (e.g., intellectual property, royalties), consumer lending (e.g., Buy Now, Pay Later), private market fund financing (e.g. subscription lines, NAV lending) and more.

- **Corporate Credit:** The corporate credit market is substantial, encompassing a wide array of debt instruments issued by corporations such as senior secured loans and mezzanine financing. Corporate credit offers diversification benefits relative to public markets and encompasses a range of credit qualities, from investment-grade to high-yield loans. Investment Grade comprises 60% to 70% of the market. These are bonds rated BBB or higher by major rating agencies, indicating lower credit risk and more stable financial performance. High-yield corporate debt constitutes around 30% to 40% of the market. Within the sub-investment grade segment of the corporate private debt market, direct lending is the main strategy. Direct lenders lend mostly to sponsor-backed middle-market companies (i.e. companies with EBITDA below $100m). Direct lending loans are typically senior secured first-lien loans with floating rates and normally incorporate financial maintenance covenants, unlike broadly syndicated loans.

- **Real Asset Credit:** Involves lending secured by physical assets like real estate or infrastructure. Borrowers may include real estate developers or infrastructure projects. This category can provide stable cash flows and lower correlation to equity markets, focusing on high-quality, investment-grade loans backed by tangible assets. Real asset credit is often viewed as a safer investment due to the intrinsic value of the underlying assets.
- **Specialty & Alternative Credit:** Asset-backed finance is particularly diversifying compared to corporate credit, as it is less sensitive to economic cycles and relies on cash flows to generate returns. In summary, asset-backed lending is a specialized area within private credit due to its unique characteristics, higher yields compared to public credit, and its appeal as a stable and diversified investment option

Public Market Equivalent

For each of the private credit categories covered, there is generally a public market equivalent. In the simplest terms, private credit is the privately negotiated version of loans and bonds. Listed below are public equivalents of private credit, sample reference benchmarks and a premium range investors may expect to receive.

Private Credit	Public Credit Equivalent	Sample Reference Benchmarks[5]	Expected Return Premium
Direct Lending	Bank loans / broadly syndicated loans	Morningstar LSTA US Leveraged Loan Index Cliffwater Direct Lending Index	2% or more
Investment Grade Private	Investment grade corporate bonds	Bloomberg US Corporate Bond Index	0.3% to 1.5% or more
Real Estate Credit	Mortgage-Backed Securities & Commercial Mortgage-Backed Securities	Bloomberg US Mortgage Backed Securities (MBS) Index	Rating/Capital Structure dependent
Infrastructure Credit	Bonds or loans financing infrastructure assets	EDHECinfraDebt300® FTSE Fixed Income Core Infra Index	Rating/Capital Structure dependent
Specialty Finance	Asset-backed securities	Morningstar LSTA US Leveraged Loan Index	3% or more

Private Credit Universe & Projections

Private markets comprise 13% of institutional portfolios on average and 86% of global investors allocate to private markets.[6] Comprising the private markets, private credit is quite common in institutional portfolios, with commercial real estate, direct lending, and residential real estate being the most prevalent. Further, the global private credit market is estimated at approximately $3 trillion in assets under management (AUM) as of 2025. Institutional investors hold around $2.6 trillion (86.7%) of this total, while retail investors account for approximately $0.4 trillion (13.3%).

Key Drivers of the Growth in Private Credit

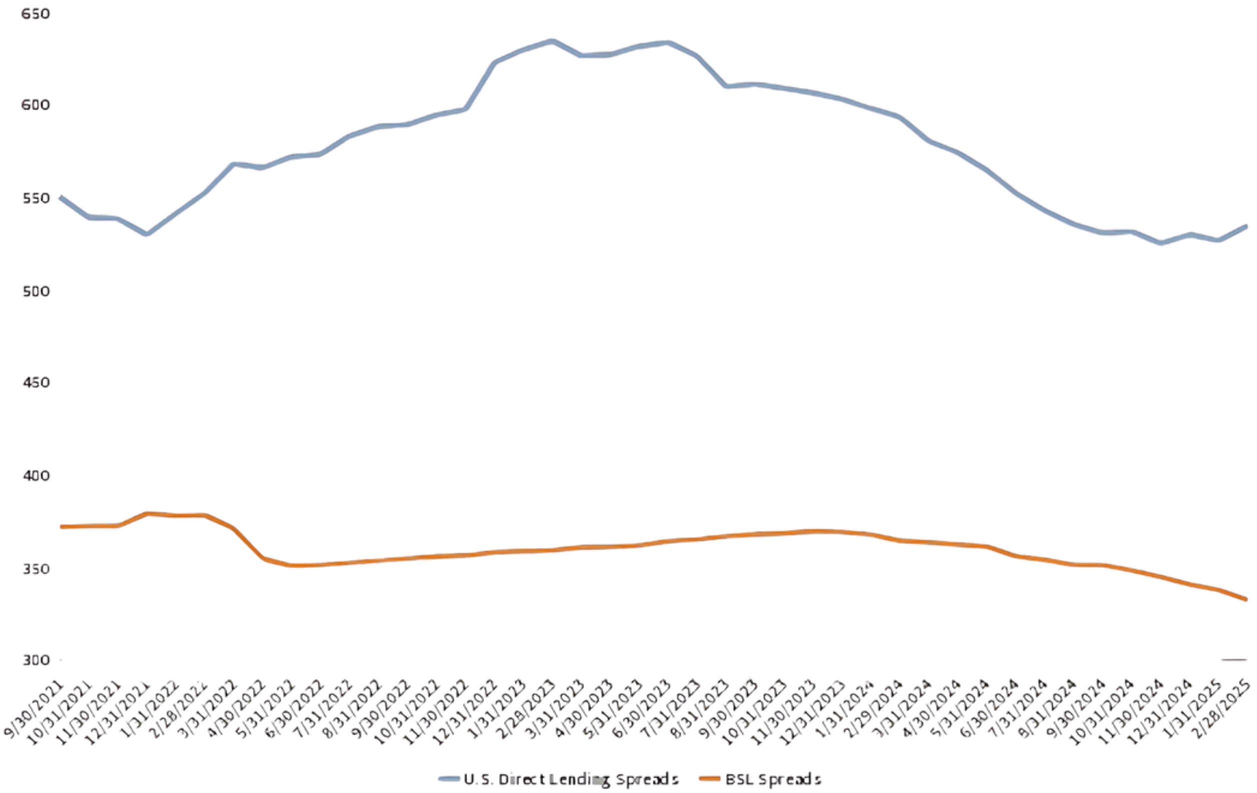
The 2008 financial crisis triggered significant structural and regulatory changes in the banking sector. Basel III imposed stricter capital requirements, making it more challenging for banks to finance riskier ventures, particularly for smaller and mid-sized companies.

The Volcker Rule further restricted banks' proprietary trading activities, limiting their traditional role in financing and capital raising. Additionally, increased regulation on public companies has also contributed to businesses seeking out private market financing. Public companies face significant costs associated with complying with regulations like the Sarbanes-Oxley Act (SOX), Dodd-Frank Act, and various SEC rules. They are under constant pressure to meet quarterly earnings targets, which can lead to a short-term focus on immediate profitability rather than long-term growth and innovation. They face scrutiny from regulators, analysts, and the media, and additionally they may be subject to activist investors, who seek to influence management decisions, demand strategy changes, or even force a sale of the company.

These pressures on both the financial institutions and the businesses seeking financing, have created a void that private market asset managers promptly filled. Private market investors, including private lenders, direct lending platforms, private equity, and private real estate firms, have expanded offerings to provide diverse financing options tailored to the needs of companies seeking to fund growth, build on innovation, and accomplish long-term goals. This active ownership model provided by private market investors, coupled with less stringent reporting requirements, has led to many companies staying private longer while generating more value. Additionally, the increased breadth of private markets has enabled the financing of larger companies, further expanding the choice between public and private ownership. The expansion of both the supply and demand for private market solutions has been transformative. The private markets have matured to provide companies with greater choice between public and private financing options. Despite private markets typically having higher financing costs, as discussed in this paper, there are key reasons companies may choose the private financing route, which expands the opportunities for private capital investors.

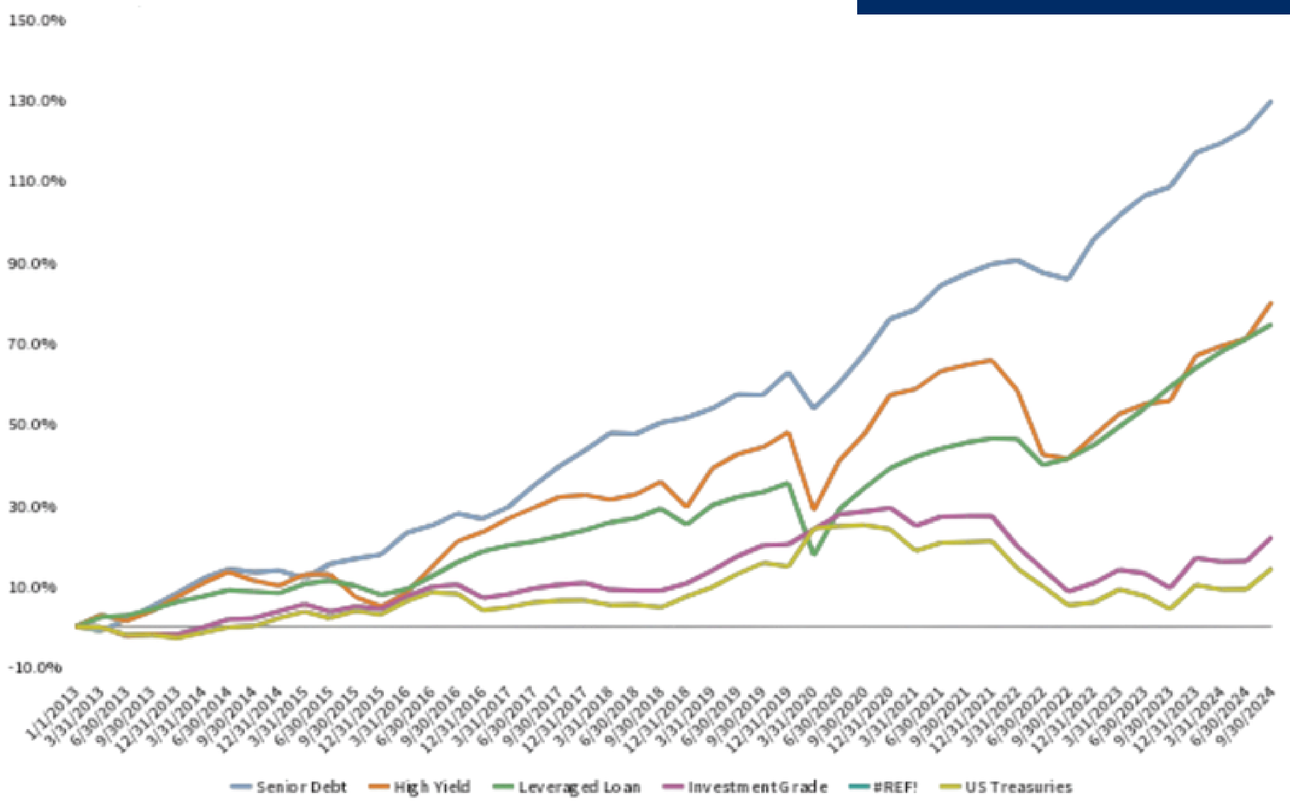
The following graphic illustrates that, on average, private credit achieves a credit spread premium of over 200 basis points relative to the public BSL market.

U.S. Direct Lending Credit Spreads vs BSL credit spreads (BPS)



Source: KBRA DLD and Pitchbook LCD as of February 28, 2025.

Total Return Comparison



Sources: Cambridge Associates Senior Debt Benchmark; BofA ML U.S. High Yield Master II Index; S&P UBS Leveraged Loan Index; BBG Aggregate Bond Index; BBG US Treasury Bond Index; Data through 9/30/24

Private credit has historically outperformed public leveraged finance asset classes such as broadly syndicated loans and high yield bonds. As the graph above illustrates, the direct lending asset class has historically outperformed the public leveraged finance and fixed income markets. Thanks to its reliance on income to generate returns as well as the typical senior position of direct lending loans in the capital stack, direct lending has been able to provide stable returns with relatively low drawdowns. Private credit benefits from an attractive structure contained in contractual language and dictates:

- The interest charged on the loan provides an income stream, increasing liquidity as well as a consistent and predictable return given that the vast majority of the return comes from the coupon's payment.
- A set maturity date controls the duration of the investment and provides additional liquidity.
- The loan benefits from collateral, in the case of senior debt, a first lien on all of the assets of the company. This feature is important should the borrower come under stress, as the collateral will protect the downside and support the recovery of the principal amount of the loan.

Most private credit assets are based on a floating interest rate, which protects the investment from interest rate risk and a rising rate environment. Direct lending loans tend to have an interest rate floor which provides investor protection from very low interest rates. During the most recent period of inflation-induced rate rising cycles, the interest rate on private credit loans increased. This contrasts with the fixed-rate high yield and investment-grade markets, where bond prices moved down significantly due to increasing interest rates. Managers can combine floating and fixed rate instruments to optimize interest rate environment flexibility.

Defined Contribution plans, particularly multi-asset structures like Target Date Funds, are long-term focused. They have the liquidity profile to benefit from allocating to private credit relative to the sizing of the position within the entire portfolio of the PIO and/or across a grouping of TDF vintages. Commonly, DC plans allocate to High Yield today in their TDF's often at 5–10% of their fixed income strategy sleeves, similar to other institutional strategies. Private credit as a substitute or in addition to High Yield, even in smaller percentages, can have a meaningful impact on TDF total performance due to the higher yield and total return. The asset class can also play different roles across the glide path, complementing other assets within the fund (see case examples).

IV. PRIVATE CREDIT IN DEFINED CONTRIBUTION PLANS

Private credit benefits from several attributes that make it a compelling addition to investors' portfolios, including DC plans. The asset class typically offers higher yields compared to public fixed income markets. For instance, private credit invest-ments can yield 2% to 5% more than public bonds, driven by factors such as illiquidity and higher credit risk. Additionally, private credit provides attractive structural attributes through loan covenants, downside protection due to its placement in the borrower's capital structure, and more rapid closing timeframe. Loans are typically floating rate, providing protection from interest rate risk and lowering the correlation to fixed income and equity markets. Private credit senior debt yields carry a premium relative to traded bank loans. This premium is driven by both the relatively smaller size of the borrower universe as well as the illiquid nature of the loans.[8] Both private senior debt and public broadly syndicated loan (BSL) yields are based on three components: a base rate (SOFR), a credit spread, and an original issue discount (OID). BSL funds typically invest in very large syndicated loans made to large companies.

Integrating private credit into 401(k) plans is best achieved through multi-asset participant investment options, those that may combine both public and private markets, multiple asset classes and/or multiple strategies based on age or risk, or other relevant investor characteristics via managed accounts.

These approaches provide several advantages:

- Participants may lack the expertise to navigate the complexities and risks associated with private credit investments. By introducing private credit in a multi-asset portfolio, they benefit from professional management that can optimize allocation and risk management.
- Enhanced Diversification: Private credit can provide access to higher-yielding assets that are less correlated with traditional equity and fixed income investments, improving the overall risk-return profile of the portfolio.
- Ability to manage liquidity: For years, participants have relied on daily liquidity. PIOs with multi asset class/multi-managers can effectively manage liquidity when combining daily-priced and illiquid assets.[7]

V. INTEGRATING PRIVATE CREDIT INTO THE DC FRAMEWORK

The primary considerations for implementing private credit in a DC framework are valuation frequency, liquidity management, and performance measurement. Private credit assets are not typically marked-to-market as frequently as public securities, leading to potential discrepancies in performance reporting when comparing to other assets in DC plans which are valued/priced on a daily basis. Private credit valuations are typically performed quarterly by the manager/lender or their affiliate. After this, direct valuation might be reviewed and potentially adjusted daily to bring valuations in line with current market conditions and any investment specific information that could have a meaning-ful impact on the valuation and therefore the investor's net asset value. When investing in private credit funds or fund-of-funds products managed by a third party, valuations are typically performed quarterly and in arrears using an indirect valuation methodology based on fund-level direct valuation and adjusted as appropriate by the fund investor or fund-of-funds manager.

Private credit has historically had a higher cost of capital than traditional public credit markets and so conventional wisdom would suggest that below investment grade middle-market size businesses utilize private credit markets. Given the growth of these markets, however, there are a number of reasons high-quality businesses consider private credit vs public credit. We believe its ability to command a higher cost of capital has been due to its ability to provide (i) greater sophistication, flexibility, customization, speed and certainty of execution, and (ii) the ability to evaluate complexity that may impede more traditional lenders.

- ***Tailored Debt Structures:*** Private credit lenders offer customized debt structures, combining senior and subordinated debt to simplify the borrowing process and reduce complexity for borrowers.
- ***Speed and Certainty:*** Private credit transactions can offer expedited execution and avoid the uncertainty associated with public market volatility.
- ***Flexibility:*** Private credit deals are tailored to individual borrowers' needs, incorporating features like delayed drawdowns, bespoke covenants, and multi-currency loans.
- ***Confidentiality:*** The private nature of these transactions ensures confidentiality, protecting sensitive proprietary information.

Comparison of Other Private Assets in Terms of Liquidity

When comparing private credit to other private assets, such as private equity or real estate, the liquidity characteristics can vary.

Private Credit: Private loans usually have a maturity of under seven years and tend to repay earlier, bringing the historical average loan life to 3 - 4 years. Relative to other types of private assets, private credit has a known maturity date and yield income, providing an elevated level of known liquidity within private credit funds. Moreover, as the private debt market matures, investors now have access to a growing secondary market, providing an additional avenue to unlock liquidity when required

Private Equity: In typical drawdown structures, private equity has longer lock-up periods and is considered more illiquid than private credit. Investors commit capital over several years before benefitting from returns, as private equity investments often require time to mature. Typically, private equity in-vestments are 5 to 7 years, but may be extended if the environment for common exit opportunities including initial public offerings isn't ideal. Nonetheless, private equity investors also benefit from access to one of the most mature and sizable private secondary markets. This market offers a relatively broad universe of opportunities—not only enabling investors to access liquidity when needed but also allowing them to accelerate portfolio deployment. By acquiring interests on the secondary market, investors can circumvent the typically slow capital deployment associated with primary commitments and gain more timely exposure to seasoned assets and diversified portfolios.

Fund Wrapper	Vehicle Type	Key Characteristics
Collective Investment Trust (CIT)	Interval Fund / Tender Offer Fund	Generally offered to Accredited Investors; offer daily subscriptions and a daily NAV; and can use fund-level leverage.
	Business Development Company (BDC)	Generally offered via private placement to Accredited Investors; offer monthly subscriptions and a monthly NAV; and can use fund-level leverage.
	Private Funds	Generally offered in a limited partnership structure; only available to qualified purchasers; offer monthly or quarterly subscriptions and NAV.
	Exchange Traded Funds (ETFs)	An exchange-traded fund (ETF) is an investment fund that holds multiple underlying assets and can be bought and sold on an exchange, much like an individual stock.

VI. BENCHMARKING & MONITORING PRIVATE CREDIT PERFORMANCE

The emergence of private credit has increased demand for benchmarking performance and monitoring portfolios. The three primary methods for benchmarking performance are as follows:

- ***Public Markets Indices***. A comparison to an index of traded broadly syndicated bank loans such as the Morningstar LSTA Leveraged Loan Index. This approach is useful for understanding the long-term higher return and lower risk benefits of private credit in relation to its nearest public credit alternative, the broadly syndicated bank loan market. Private and public corporate loans may have differences in constituency, pricing, and duration that should be taken into consideration when benchmarking to private credit.
- ***Private Credit Universes***. A comparison to a universe of private credit funds rather than loans, such as those available through Cambridge Associates, Preqin, and MSCI. This approach is useful for understanding both absolute and relative private credit fund performance. These are proprietary universes using aggregated fund level performance data.
- ***Using Private Credit Indices***. The third method uses an index of private credit loans such as the Cliffwater Direct Lending Index and the Lincoln Senior Debt Index. These indices are comprised using public market data of actual private credit loans offering transparency into underlying loan holdings.

In addition to the multiple benchmark approaches, there exists a variety of return calculation methods that are used to gauge private credit performance:

- ***Time-Weighted Return***. This return calculation is universally used for measuring public asset class performance and widely used to measure performance for evergreen private credit vehicles such as BDCs and interval funds.
- ***Internal Rate-of-Return (IRR)***. Private credit funds mostly publish returns using this calculation method because it mirrors calculations used by private equity funds and does not include any performance drag caused by investor cash holdings anticipating capital calls or reinvesting fund distributions. This method is useful when comparing manager/fund performance for individual "vintages", the year the fund first started investing.
- ***Other***. There are various other return measures reported by managers such as multiple-of-invested-capital (MOIC) or total-value-to-paid-in-capital (TVPI).

Performance measurement and monitoring are important investment functions. As DC private credit investment allocations increase we would expect a primary benchmarking method to emerge.

VII. CONCLUSION

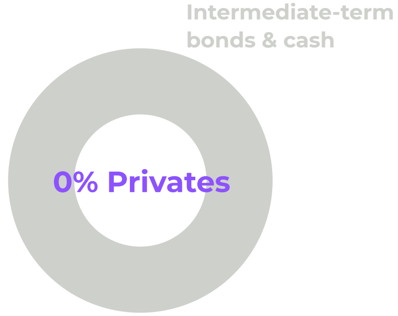
Private credit presents a compelling opportunity to enhance retirement outcomes in Defined Contribution (DC) plans by offering higher yields, diversification benefits, and lower correlation to public markets compared to traditional fixed-income investments. As outlined in this whitepaper, the asset class, provides plan sponsors and fiduciaries with a viable strategy to improve participant investment options (PIOs), particularly within multi-asset vehicles like Target Date Funds (TDFs). Key benefits include a yield premium of 2% to 5% over public bonds, floating-rate structures that mitigate interest rate risk, and stable cash flows from senior secured loans, as seen in direct lending and real asset credit. The case examples illustrate practical applications: a 12% allocation to private credit in a stable value portfolio can enhance crediting rates while leveraging the fund's liquidity profile, and a 20% allocation in a U.S. core bond portfolio may help increase yield by approximately 20% (from 4.45% to 5.15%) compared to core-plus bond funds. These examples underscore private credit's ability to complement existing fixed-income strategies while maintaining prudent risk management. However, challenges such as illiquidity, quarterly valuation frequencies, and higher costs of capital require careful implementation. Strategies like integrating private credit into professionally managed multi-asset portfolios, utilizing vehicles such as Collective Investment Trusts (CITs) or interval funds, and employing robust benchmarking methods (e.g., Cliffwater Direct Lend-ing Index or public market indices) can help address these hurdles. Liquidity management can be further supported by private credit's shorter average loan life (3 - 4 years) compared to private equity and the growing secondary market for private debt. DCALTA encourages plan sponsors, investment managers, and consultants to explore private credit as a means to enhance long-term retirement security. We recommend further exploration of resources, including regulatory guide-lines, performance benchmarks, and additional case studies, to support informed decision-making and optimize participant outcomes.

VIII. CASE STUDIES

Example 1. Stable Value Portfolio adding Private Credit (12% allocation)

- Private credit can be used to enhance the crediting rate of stable value funds
- For a plan to exit a stable value product, typically a 12 month or more notice is required. An allocation to private credit can be a way to take advantage of the liquidity profile of stable value funds.
- Generally, stable value providers can wrap a small to modest allocation to private credit.
- A typical stable value portfolio has a duration of ~3.5 years and nearly all investment-grade bonds and cash

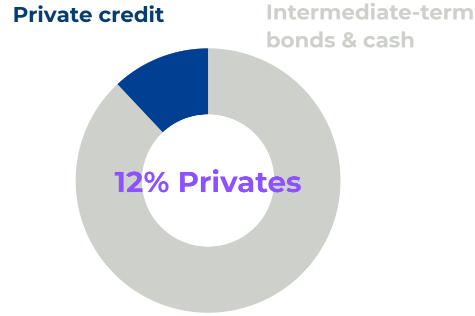
STABLE VALUE



	Net of Fee Yield	*Weight*
Intermediate-Term & Cash	4.50%	*100%*
Private Credit	8.50%	-
Blended Yield	**4.50%**	
Wrap Contract Fee	0.14%	
Net Crediting Rate	***4.36%***	

	Fee	*Weight*
Short-Term Bonds	0.15%	*100%*
Private Credit	1.50%	-
Stable Value Wrap Fee	0.14%	*100%*
Total Fee	***0.29%***	

STABLE VALUE + PRIVATE CREDIT



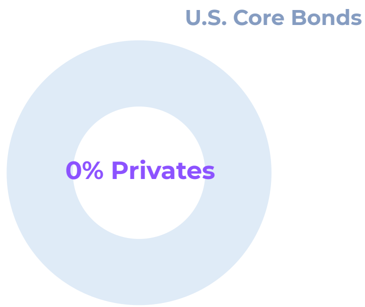
	Net of Fee Yield	*Weight*
Intermediate-Term & Cash	4.50%	*88%*
Private Credit	8.50%	*12%*
Blended Yield	**4.98%**	
Wrap Contract Fee	0.14%	
Net Crediting Rate	***4.84%***	

	Fee	*Weight*
Short-Term Bonds	0.15%	*88%*
Private Credit	1.50%	*12%*
Stable Value Wrap Fee	0.14%	*100%*
Total Fee	***0.45%***	

Example 2. U.S. Core Bond Portfolio adding Private Credit (20% allocation)

- Private credit can be used to enhance the yield potential of a core or core-plus style of bond bund.
- A modest allocation to a basket of private credit, including direct lending and asset-backed, can enhance the yield potential by ~20% versus a core bond fund.

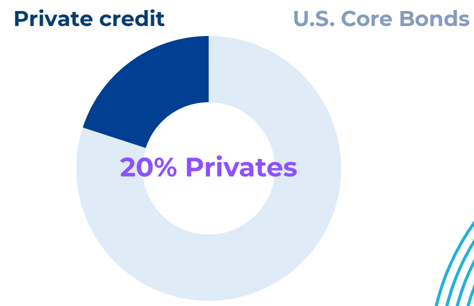
CORE BONDS



	Net of Fee Yield	*Weight*
US Core Bonds	4.40%	*100%*
Private Credit	8.50%	-
Net Yield	***4.40%***	

	Fee	*Weight*
US Core Bonds	0.03%	*100%*
Private Credit	1.50%	-
Total Fee	***0.03%***	

CORE BONDS + PRIVATE CREDIT



	Net of Fee Yield	*Weight*
US Core Bonds	4.40%	*80%*
Private Credit	8.50%	*20%*
Net Yield	***5.22%***	

	Fee	*Weight*
US Core Bonds	0.03%	*80%*
Private Credit	1.50%	*20%*
Total Fee	***0.32%***	

References

1. DCALTA. (2023, October) *Liquidity Framework For Inclusion Of Alternative Assets in DC Plans*: A Guide for U.S. Plan Sponsors and Industry Stakeholders
2. Almazora, Leo. (2025, March). Target-date fund assets surge to $3.97 trillion in 2024 as CITs overtake mutual funds. *InvestmentNews*.
3. Investment Company Institute. 2025. *The US Retirement Market, Fourth Quarter 2024* (March).
4. Middle-market size businesses defined as at least $50 million in earnings before interest, taxes, depreciation, and amortization
5. Sample Benchmarks—additional information:
   - Morningstar LSTA US Leveraged Loan Index
   - Bloomberg US Corporate Bond Index
   - Bloomberg US Mortgage Backed Securities (MBS) Index
   - EDHECinfraDebt300®
   - FTSE Fixed Income Core Infra Index
6. Northern Trust. (2025) Northern Trust Global Asset Owner Peer Study 2025: Asset Owners in Focus
7. DCALTA. (2021, February). *Daily Valuation of Alternative Assets in DC Plans: A Framework for Plan Sponsors and Industry Stakeholders*
8. Traded bank loans are actively traded in the secondary market, similar to high yield and investment grade bonds and typically senior secured debt provided by a group of lenders to high-yield companies. Section IV.