

### Market insights contributors



Amanda Lynam, CPA

Head of Macro Credit Research, Portfolio Management Group



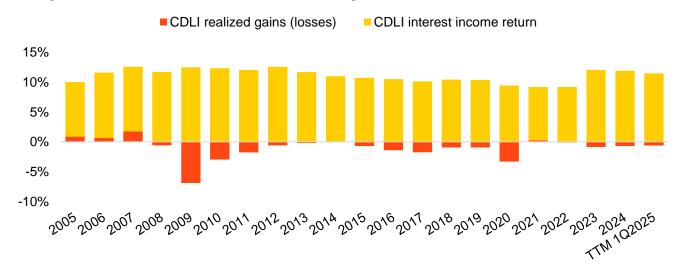
#### **Dominique Bly**

Macro Credit Research Strategist, Portfolio Management Group

## **Key takeaways**

- Despite the significant market volatility of the past few months, a few underlying views have
  remained somewhat consistent: U.S. growth is likely to moderate from the above-trend pace of
  the past few years, and prospects for preemptive Federal Reserve interest rate cuts in the near
  term are quite low. As a result, we expect corporate credit borrowers will likely need to navigate a
  structurally higher cost of capital environment, amid a less supportive growth backdrop.
- In this Global Credit Weekly, we take stock of the most recent fundamental and performance data from the private credit asset class, using a wide range of third-party data sources that we track. Our deep dive covers topics specific to private credit (i.e., covenant defaults, payment-in-kind, non-accruals, BDCs, fundraising) as well as the more 'traditional' metrics that we also track in the liquid credit market (i.e., all-in yields, realized losses, recovery rates, leverage, coverage).
- The growth backdrop is the most critical ingredient, in our view, as to whether this broad range of private credit fundamentals will remain resilient. This underscores the importance of monitoring real-time signals to track whether economic activity 'catches down' to the softer sentiment data.
- Additionally, private credit borrowers cannot be painted with a broad brush. Under the surface, there is a considerable amount of dispersion, similar to the trends we have observed across a range of other asset classes that we track such as <u>liquid credit</u>, <u>commercial real estate</u>, and the <u>U.S. consumer</u>. And across both the liquid and private credit markets, we are closely monitoring the 'tails', which were already under fundamental pressure prior to any slowdown in economic activity.

Exhibit 1: Realized losses for the Cliffwater Direct Lending Index were contained through 1Q Trailing 12-month interest income return and realized gains (losses)



Source: Cliffwater Direct Lending Index, BlackRock. As of March 31, 2025 (most recent available as of June 4, 2025). Realized gains in the CDLI can be driven by equity stubs, warrants, and gains on exited investments. These were more common in 2005–2007, when second lien and mezzanine loans were a greater portion of the CDLI. We exclude unrealized gains and losses in this chart. Long-term unrealized gains (losses) are approximately zero, as they either convert to net realized losses upon a credit default or are reversed when principal is fully repaid. **The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results.** Index performance returns do not reflect any management fees, transaction costs, or expenses. Indices are unmanaged, and one cannot invest directly in an index.

## **Private credit fundamentals: Taking stock**

Despite the significant market volatility of the past few months, a few underlying views have remained somewhat consistent: U.S. growth is likely to moderate from the above-trend pace of the past few years, and prospects for preemptive Federal Reserve interest rate cuts in the near term are quite low. As a result, we expect corporate credit borrowers will likely need to navigate a structurally higher cost of capital environment, amid a less supportive growth backdrop.

In this *Global Credit Weekly*, we take stock of the most recent fundamental and performance data from the private credit sector, using a wide range of third-party data sources that we track. In short, the data, which extend through 1Q2025, show that a few private credit fundamental metrics have weakened somewhat, while most others have remained steady or even improved. That said, while fundamentals, in aggregate, are generally still solid, there is a notable degree of dispersion under the surface. These themes are consistent with what we have observed in other market segments, such as <u>liquid credit</u>, <u>commercial real estate</u>, and the <u>U.S. consumer</u>.

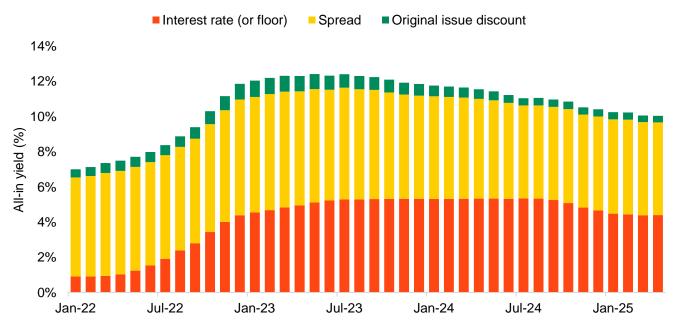
We believe private credit borrowers' ability to navigate the sharp increase in interest rates in 2022 and 2023 was due, in large part, to the above trend pace of growth which prevailed over the past several quarters. This underscores the importance of monitoring real-time signals to track whether economic activity 'catches down' to the soft sentiment data.

#### Income and realized losses

We first turn to the <u>Cliffwater Direct Lending Index</u> (CDLI), which is an asset-weighted index of approximately 19,000 directly originated U.S. middle market loans totaling \$465 billion. In 1Q2025, the trailing twelve-month (TTM) interest income of the CDLI totaled 11.47%, compared to realized losses of 63bp (Exhibit 1). Notably, the trailing twelve-month loss rate remains below the longer-term average of roughly 100bp.

Exhibit 2 illustrates the historical breakdown of the all-in yield components for private credit loan ('unitranche') pricing, this time using data from KBRA DLD. While interest rates have declined modestly, in tandem with Federal Reserve <u>rate cuts</u> delivered in 2H2024, they remain elevated in absolute terms, relative to January 2022 (before the Federal Reserve began its rate-*hiking* cycle). Spreads as of April 2025 have compressed approximately 130bp vs. the February 2023 wides and are 40bp tighter vs. April 2024. That said, they have been relatively stable over the past few months.

**Exhibit 2: All-in yields: modest spread compression and structurally high rates**All-in yield breakdown for U.S. new issue unitranche private credit loans (3-month rolling averages)



Source: KBRA DLD, BlackRock. As of April 30, 2025. 3-month rolling averages for 1L term loans. Original issue discount assumes a 3-year yield to maturity.

#### **Defaults and recoveries**

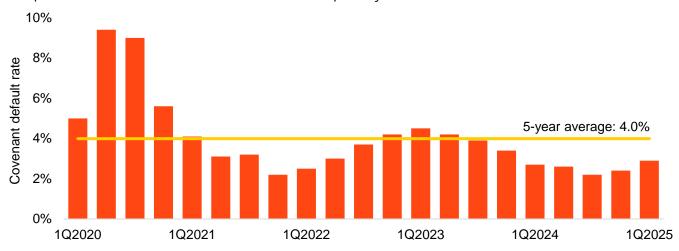
While still tracking below the 5-year average (4.0%; Exhibit 3), the recent uptick in the private credit covenant default rate warrants watching, in our view. Indeed, after six consecutive quarters of declines, the covenant default rate has increased for the past two quarters. The uptick is notable, as it may suggest a waning in lenders' willingness to amend challenged loans in the months ahead. This may be informed by an expectation of a combination of a more challenging growth backdrop, policy uncertainty, and structurally higher interest rates.

That said, for investors, we view ultimate *losses* as more informative than covenant defaults. Exhibit 4 demonstrates the implied recovery rates for private credit loans that defaulted. Most notable, in our view, is that the implied trailing 12-month recovery rates have remained steady over the last year, suggesting that loans which defaulted 1 year ago had a similar recovery as those which have defaulted more recently.

And so, amid some market participants' concerns of 'amend and extend' activity across various markets, data suggests that fair value marks and principal recovery have followed a somewhat consistent trend.

Exhibit 3: The covenant default rate remains below the 5-year historical average...

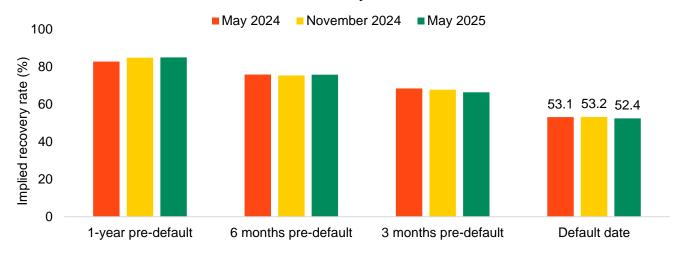
Aggregate size-weighted covenant default rate, and the 5-year historical average, for the U.S. portfolio companies included in the Lincoln International Proprietary Private Market Database



Source: Lincoln International Proprietary Private Market Database, BlackRock. As of 1Q2025. A default is defined by Lincoln as a covenant default (not necessarily a monetary default). The calculation is size-weighted and considers the total net debt balance for each of the portfolio companies that had a defaulting security in the respective quarter. © 2023 Lincoln Partners Advisors LLC. All rights reserved. Used with permission. Third party use is at user's own risk.

#### Exhibit 4: ...and implied recovery rates have held steady

Average trailing 12-month implied recoveries (equal weighted) for defaulted direct lending loans as of May 2024 (count = 23), November 2024 (count = 36), and May 2025 (count = 51)



Source: KBRA DLD, Solve, BlackRock. Captures data through May 22, 2025. Implied recovery rates are calculated as fair value / principal.

#### Non-accruals

Another fundamental indicator that we track closely is the non-accrual rate, which captures loans that are no longer current in paying interest income and would be considered in default. Data from the CDLI shows that non-accruals in private credit have been modest. As of 1Q2025, roughly 1.3% of the CDLI's loan value by cost was on non-accrual, suggesting \$5.9 billion in aggregate value (Exhibit 5).

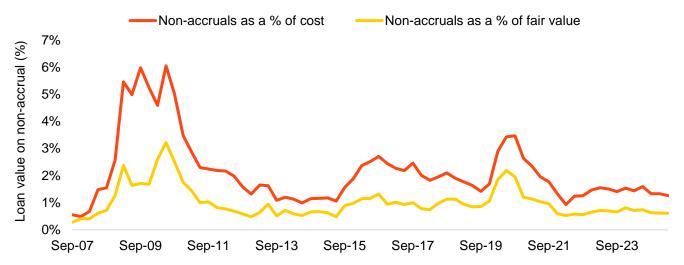
This represents a continuation of a low and range-bound level, with the share of loans on non-accrual hovering between 1% and 1.6% since 2022. This is also modest by historical standards, compared to a long-term average of 2.1%, and a peak of 6% in 2010.

That said, as is often the case in private credit, there is considerable dispersion under the surface. Indeed, as demonstrated by Exhibit 6, loans originated in 2021 represented roughly 30% of the total loan value at cost on non-accrual status in 2024.

2021 was characterized by ample deal activity, a favorable macro backdrop (owing to the 'reopening' of the economy following the pandemic), and a benign interest rate regime. As such, some underwriters may have underestimated the risk of a meaningfully higher interest rate backdrop (which ultimately came to pass). This, in our view, underscores the importance of vintage diversification in investing.

#### Exhibit 5: Non-accrual rates are below historical averages...

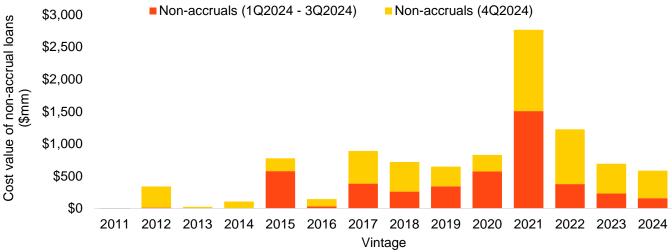
Non-accrual rates (as a percentage of cost and fair value) for the Cliffwater Direct Lending Index



Source: Cliffwater Direct Lending Index, BlackRock. As of 1Q2025.

#### Exhibit 6: ...though a look under the surface reveals dispersion

Cost value of non-accrual loans during 1Q2024 - 3Q2024 and 4Q2024, by origination vintage, in \$ millions



Source: Cliffwater Direct Lending Index, BlackRock. **Performance data represents past performance, which does not guarantee future results.** There is no assurance that similar investments will be made or that similar results will be achieved. FOR QUALIFIED, PROFESSIONAL, INSTITUTIONAL AND WHOLESALE INVESTORS/ PROFESSIONAL CLIENTS ONLY | NOT FOR PUBLIC DISTRIBUTION

#### Leverage and interest coverage

Of course, similar to our approach in analyzing the liquid corporate credit market, we also track the more 'traditional' fundamental metrics, such as leverage and interest coverage. In general, these fundamental indicators are also holding in well – at least through 1Q2025.

To assess these specific trends, we now turn to the Lincoln International Proprietary Private Markets Database, which captures over 6,000 portfolio companies across more than 200 sponsors. For context, the database captures roughly 30% of all U.S. private equity-backed companies.

Exhibit 7 shows that leverage levels have held steady for companies in the Lincoln International database over the last four years. This suggests that, in aggregate, debt has grown proportionately – at least relative to EBITDA (i.e., the denominator of the leverage multiple) – for borrowers in the database.

Fixed charge coverage ratios modestly *improved* across the Lincoln International universe of U.S. and European companies (Exhibit 8). This likely comes as a result of central bank rate cuts in both regions. We view improving fixed charge coverage as a positive signal for private credit borrowers. This metric will be important to watch, especially should the growth backdrop show signs of slowing.

#### Exhibit 7: Leverage levels have held steady over time...

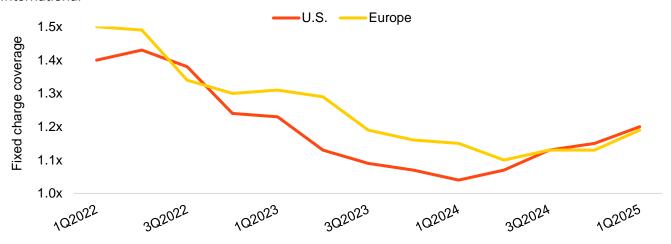
Average total leverage multiples (debt / EBITDA), over time, for the universe of U.S. and European firms captured by Lincoln International



Source: Lincoln International Proprietary Private Market Database, BlackRock. As of 1Q2025.

#### Exhibit 8: ...and interest coverage has improved

Size-weighted fixed charge coverage ratios for the universe of U.S. and European firms captured by Lincoln International



Source: Lincoln International Proprietary Private Market Database, BlackRock. Captures data as of 1Q2025. Calculation: (EBITDA – Taxes – Capex) / (Interest Expense + 1% Debt Balance). For U.S., respective SOFR rates represent a trailing 4 quarter average. For Europe, interest is calculated regardless of whether the company is making cash payments, using Payment-in-Kind (PIK) interest if cash interest is not being paid.

For both charts: © 2023 Lincoln Partners Advisors LLC. All rights reserved. Used with permission. Third-party use is at user's own risk. FOR QUALIFIED, PROFESSIONAL, INSTITUTIONAL AND WHOLESALE INVESTORS/ PROFESSIONAL CLIENTS ONLY | NOT FOR PUBLIC DISTRIBUTION

#### PIK utilization

Payment-in-Kind (PIK) utilization represents another fundamental indicator of private credit borrower health. PIK reflects interest that is 'paid' in the form of additional non-cash principal, as opposed to cash interest income. As we've detailed <u>previously</u>, there are two ways to track PIK: (1) the share of deals that include PIK as an option and (2) PIK as a percentage of interest income. We view the second metric as more informative for credit deterioration, as it reflects a company's liquidity management choices in times of stress.

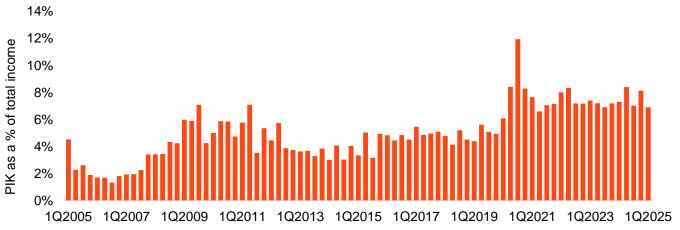
As demonstrated in Exhibit 9, PIK as a share of total interest income fell to 6.9% in 1Q2025, the lowest level seen since 3Q2023, but broadly in line with range-bound levels since late 2021.

An analysis from Lincoln International draws an important distinction between so-called 'good PIK' and 'bad PIK.' For example, 'good PIK' is defined as PIK included as an option for a borrower in the *original* credit documents. In this case, a PIK option may be included to 'win' a deal, generally signaling that the borrower is high-quality. By contrast, 'bad PIK' is PIK that is amended into a credit agreement *after* origination, likely because the borrower is experiencing (unanticipated) stress.

Exhibit 10 demonstrates how 'bad PIK' has grown as a share of total PIK in recent years. Though the share has grown, levels of 'bad PIK' have remained considerably steady since 2023, suggesting that while this trend warrants watching, it does not necessarily indicate excess stress vs. 2023 and 2024.

#### Exhibit 9: PIK as a share of total interest income fell in 1Q2025

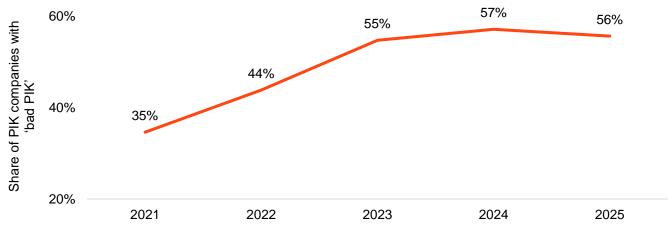
Payment-in-Kind (PIK) as a percentage of total interest income for the Cliffwater Direct Lending Index



Source: Cliffwater Direct Lending Index, BlackRock. As of March 31, 2025 (most recent available for CDLI).

# Exhibit 10: Of the borrowers with a PIK option, the share of PIK added *after* deal close has been steady in recent years

Share of companies with Payment-in-Kind (PIK) interest currently, but did not have PIK at close (i.e., so called 'bad PIK') in the Lincoln International Proprietary Private Market Database



Source: Lincoln Proprietary Private Market Database, BlackRock. As of 1Q2025. 'Bad PIK' is defined as investments without PIKat close that have PIK now. © 2023 Lincoln Partners Advisors LLC. All rights reserved. Used with permission. Third-party use is at user's own risk.

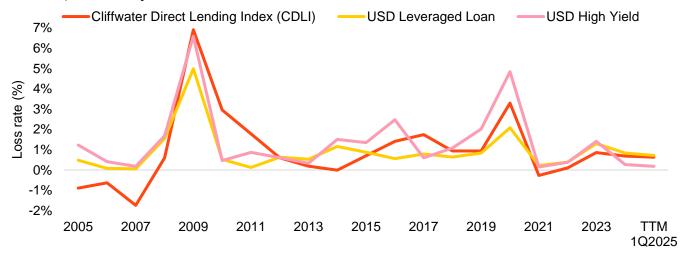
#### Loss rates, yield differentials

Exhibit 11 demonstrates how loss rates have compared between the CDLI and syndicated corporate credit markets, including USD leveraged loans and high yield bonds, over time. Using trailing 12-month data, as of 1Q2025, USD HY bonds have the lowest loss rates, followed by the CDLI and loan markets which have comparable metrics. That said, loss rates across all three segments remain notably contained and below long-term averages (2005 – 2024). We continue to view the collaborative relationship between private credit lenders and borrowers as a feature of the asset class that can help maximize recoveries in the event of borrower stress.

Similarly, Exhibit 12 shows how the private credit yield differential has compared to HY bonds and leveraged loans. We view loans as the most direct comparison to direct lending, as both are floating rate (as opposed to HY, which is fixed rate).

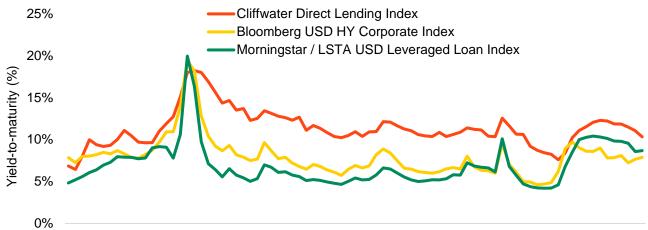
#### Exhibit 11: Loss rates remain contained across credit markets

Realized annual and trailing 12-month 1Q2025 loss rates for the Cliffwater Direct Lending Index (CDLI) and for the universe of USD leveraged loans and HY bonds tracked by JP Morgan (calculated as actual issuer-weighted trailing 12-month default rate, multiplied by one minus the issuer-weighted recovery rate, based on prices 30 days after default)



Source: Cliffwater, JP Morgan, BlackRock. For the CDLI, we show annual and trailing 12-month realized loss rate data for 1Q2025 (most recent available). Realized gains in the CDLI can be driven by equity stubs, warrants, and gains on exited investments. These were more common in 2005-2007, when second lien and mezzanine loans were a greater portion of the CDLI. For USD Leveraged Loans and High Yield, we show implied loss rates based on JPM's actual issuer-weighted, trailing 12-month default and recovery rates.

Exhibit 12: The CDLI offers a modest yield 'pick up' vs. broadly syndicated leveraged loans Average index yield-to-maturity levels



3Q2004 3Q2006 3Q2008 3Q2010 3Q2012 3Q2014 3Q2016 3Q2018 3Q2020 3Q2022 3Q2024 Source: Cliffwater LLC, Bloomberg, Morningstar / LSTA, Pitchbook LCD, BlackRock. As of 1Q2025 (most recent for CDLI).

For both charts: The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

#### Continued dispersion warrants watching...

Even with a wide range of fundamental metrics at hand, the private credit asset class cannot be painted with a broad brush. Under the surface, there is a considerable amount of dispersion, similar to the trends we have observed across a range of other asset classes that we track. This underscores the importance of active credit selection, structural protections, and granular underwriting, in our view.

For example, Exhibit 13 demonstrates how year-over-year (YoY) LTM adjusted EBITDA growth has varied across company size cohorts. Those with EBITDA of \$100mm or more demonstrated the highest growth rate throughout the data set, though this has varied over time. Generally, larger companies in the Lincoln International database have exhibited faster growth than smaller ones, supported by scale, operational efficiencies, diversification in their revenues, and flexibility in their capital structure, among other drivers.

Exhibit 14 shows how EBITDA growth has varied across (and *within*) different sectors, as well. Looking ahead, we believe sectors with exposure to certain key factors, such as international supply chains and discretionary consumer spending, will be important to monitor, given the lingering downside risks to global growth.

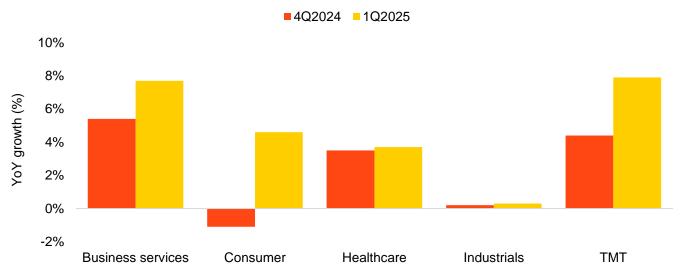
**Exhibit 13: EBITDA growth has varied across buyer sizes, but typically favors larger borrowers** Year-over-year last-twelve-months' adjusted EBITDA growth, by company size (annual EBITDA)



Source: Lincoln International Proprietary Private Market Database, BlackRock. As of 1Q2025. © 2023 Lincoln Partners Advisors LLC. All rights reserved. Used with permission. Third-party use is at user's own risk.

Exhibit 14: There is meaningful dispersion between borrower sectors

Year-over-year last-twelve-months' adjusted EBITDA growth, by industry



Source: Lincoln International Proprietary Private Market Database, BlackRock. As of 1Q2025. © 2023 Lincoln Partners Advisors LLC. All rights reserved. Used with permission. Third-party use is at user's own risk.

#### ...and has implications for performance

Similar to the liquid credit market, we are closely monitoring the 'tails' of the private credit universe, which were already under fundamental pressure prior to any slowdown in economic activity. Here, too, this highlights the potential for heightened performance dispersion, in our view, across strategies, sectors, and even managers.

Exhibit 15 demonstrates the variation in net realized gains (or losses) between the top and bottom quartiles of private credit business development companies (BDCs), in comparison to the CDLI. The quartiles were built using annualized net realized gain (or loss) rates since inception, per Cliffwater, to prevent outlier calendar years from skewing segmentation.

The net realized gain/loss differentials between the top and bottom quartiles are sizable, averaging 317bp per year over the last 10 years. As the private credit market shifts to be more <u>senior</u>, the ability to achieve net realized gains (typically through prepayment fees, equity kickers, etc.) becomes more challenging, as these are typically included in more junior instruments. This underscores the importance of capital preservation or loss mitigation.

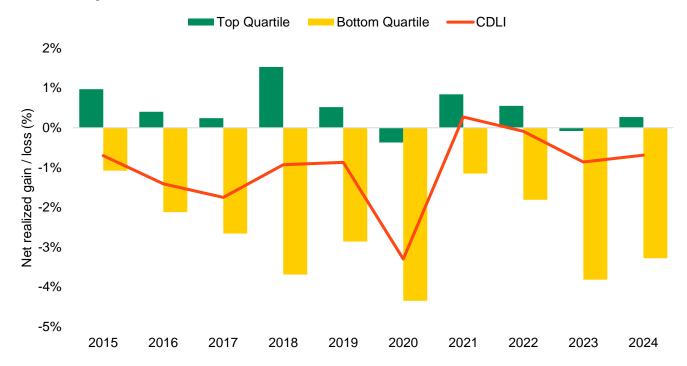
Relatedly, an analysis from Lincoln International examines sponsor-backed companies that were 'taken over' by a lender over the past six months (or were imminently expecting to change to lender ownership) – a cohort of \$17 billion. Within this cohort, 70% were 2021 or 2022 vintage loans, and 75% had less than \$50 million of EBITDA – echoing themes we've discussed earlier around vintage and borrower dispersion.

There were signs of notable stress in this cohort, with the average CAGR since close at -17%, and the median loan-to-value at takeover at 150%. That said, 50% of the companies had sponsor infusions in 2024.

These learnings, in our view, underscore the importance of manager section and diversification in a holistic portfolio allocation. A manager with a robust operating and workout team is likely better equipped to extract value from an already defaulted borrower. Further, given the considerable uncertainty in the macro backdrop, diversification across different factors, including vintage, strategy, and among portfolio company profiles, should support more resilient portfolio performance, in our view.

#### Exhibit 15: Dispersion is evident across BDC quartiles

Trailing 12-month net realized gains (losses) for the top and bottom quartile BDCs, and the entire Cliffwater Direct Lending Index



Source: Cliffwater Direct Lending Index, BlackRock. Data as of YE2024. Performance data represents past performance, which does not guarantee future results. There is no assurance that similar investments will be made or that similar results will be achieved.

FOR QUALIFIED, PROFESSIONAL, INSTITUTIONAL AND WHOLESALE INVESTORS/ PROFESSIONAL CLIENTS ONLY | NOT FOR PUBLIC DISTRIBUTION

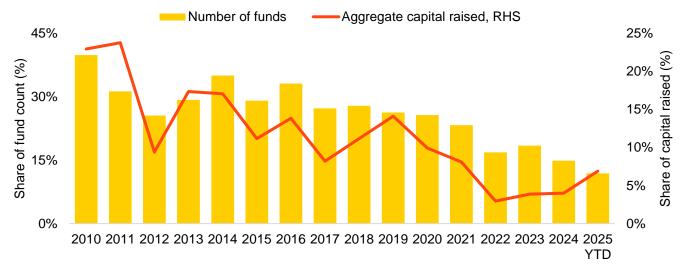
#### Fundraising favors manager experience

And as we've noted <u>previously</u>, fundraising data from Preqin highlights a trend of allocators favoring experienced managers.

Exhibit 16 demonstrates how the number of funds, and the share of capital raised, by first-time private credit fund managers have both fallen over time. That said, there has been a modest uptick this year in the share of aggregate capital raised by first-time fund managers. This uptick is likely driven by a large fund closing from an experienced team, that recently spun off into a new firm.

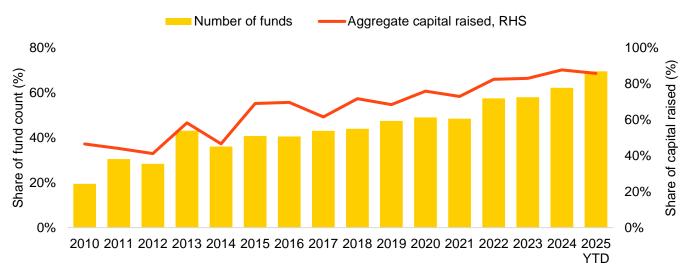
At the same time, experienced managers, or those with four or more private credit funds, have been growing their share of total fundraising (Exhibit 17). This trend of favoring experienced managers is evident across other <u>private capital</u> asset classes as well. Preqin attributes some of this 'consolidation' to allocators increasingly viewing private credit as complementary to a fixed income allocation (which can be flexed up or down depending on the market backdrop) – rather than a pure 'alternatives' allocation. As such, the ability for managers to deploy capital at scale is an important consideration in investment decisions.

**Exhibit 16: First-time fund managers are raising a smaller share of aggregate capital**First-time manager fundraising as a proportion of total private credit funds and aggregate capital raised, RHS



Source: Preqin, BlackRock. Captures data as of June 3, 2025. Captures closed-ended private credit funds.

**Exhibit 17: Experienced managers continue to raise the majority of aggregate capital**Fourth fund or later private credit fundraising as a proportion of total funds and aggregate capital raised, RHS



Source: Pregin, BlackRock. Captures data as of June 3, 2025. Captures closed-ended private credit funds.

## Mix of funds in market reflects evolving allocation preferences

The shift in asset allocation toward experienced managers has likely also impacted the current fundraising landscape, including what funds are coming to market and what their fundraising targets will be.

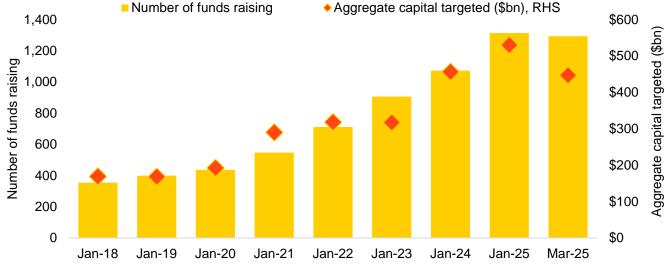
The number of private credit funds currently fundraising fell for the first time on record in March, per Preqin (Exhibit 18), suggesting that fewer managers may be initiating fundraises.

In tandem, fund capital targets skew meaningfully toward the largest fund cohort. Exhibit 19 demonstrates that the number of private credit funds in the market across each size cohort is relatively even. That said, funds targeting more than \$1 billion represent nearly 70% of the total capital targeted, indicating that the funds with the largest target fund sizes are seeking to raise a disproportionate amount of capital (versus their smaller peers).

This shift in the fundraising landscape highlights the benefits of experience and scale. Indeed, structurally higher interest rates have encouraged allocators to be more selective in where they allocate capital. Scaled managers, who are often also experienced managers (i.e., those with four or more private credit funds), tend to benefit from some combination of: an enduring performance track record, more robust origination capabilities, operational expertise and efficiencies, incumbent portfolios, and/or in-house workout expertise. These benefits can also create barriers to entry for newer managers.

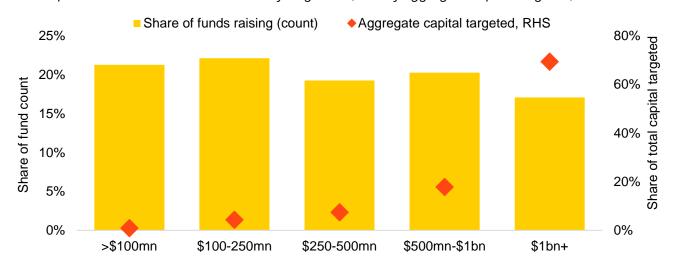
Exhibit 18: The number of private credit funds in market has fallen

Count of private credit funds in market and aggregate capital targeted, in \$ billions, RHS



Source: Pregin, BlackRock. As of 1Q2025.

**Exhibit 19: Funds targeting \$1 billion or more represent 70% of total capital targeted** Share of private credit funds in the market by target size, and by aggregate capital targeted, RHS



Source: Preqin, BlackRock. As of 1Q2025.

FOR QUALIFIED, PROFESSIONAL, INSTITUTIONAL AND WHOLESALE INVESTORS/ PROFESSIONAL, QUALIFIED CLIENTS ONLY I FOR PERMITTED CLIENTS ONLY IN CANADA

Unless otherwise stated, all reference to \$ are in USD.

#### **Risk Warnings:**

**Capital at risk.** The value of investments and the income from them can fall as well as rise and are not guaranteed. You may not get back the amount originally invested.

# Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

Changes in the rates of exchange between currencies may cause the value of investments to diminish or increase. Fluctuation may be particularly marked in the case of a higher volatility fund and the value of an investment may fall suddenly and substantially. Levels and basis of taxation may change from time to time.

Cliffwater Direct Lending Index (CDLI) is an index that assists investors to better understand private credit as an asset class. The CDLI seeks to measure the unlevered, gross of fees performance of U.S. middle market corporate loans, as represented by the underlying assets of Business Development Companies ("BDCs"), including both exchange-traded and unlisted BDCs, subject to certain eligibility criteria. The CDLI is an asset-weighted index that is calculated on a quarterly basis using financial statements and other information contained in the U.S. Securities and Exchange Commission ("SEC") fillings of all eligible BDCs. Eligibility is set as all assets held by BDCs that (1) are regulated by the SEC as a BDC under the Investment Company Act of 1940; (2) have a substantial majority (approximately 75%) of reported total assets represented by direct loans made to corporate borrowers, as categorized by each BDC and subject to Cliffwater's discretion, and (3) file SEC form 10-Q (or 10-K, as applicable) within 75 (or 90) calendar days following the current Valuation Date. If a BDC meets the eligibility criteria, but has not filed its report on Form 10-K or 10-Q with the SEC at the time the index is reconstituted, asset information from its report will be included in the index at the time of the next reconstitution. This information is derived from sources that are considered reliable, but BlackRock does not guarantee the veracity, currency, completeness or accuracy of this information.

#### **Important Information:**

In the U.S., this material is for institutional use only – not for public distribution.

**In Canada**, this material is intended for permitted clients as defined under Canadian securities law, is for educational purposes only, does not constitute investment advice and should not be construed as a solicitation or offering of units of any fund or other security in any jurisdiction.

In **China**, this material may not be distributed to individuals resident in the People's Republic of China ("PRC", for such purposes, not applicable to Hong Kong, Macau and Taiwan) or entities registered in the PRC unless such parties have received all the required PRC government approvals to participate in any investment or receive any investment advisory or investment management services.

In **Singapore**, this document is provided by BlackRock (Singapore) Limited (company registration number:200010143N) for use only with institutional investors as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore. This advertisement or publication has not been reviewed by the Monetary Authority of Singapore.

In **Hong Kong**, this material is issued by BlackRock Asset Management North Asia Limited and has not been reviewed by the Securities and Futures Commission of Hong Kong. This material is for distribution to "Professional Investors" (as defined in the Securities and Futures Ordinance (Cap.571 of the laws of Hong Kong) and any rules made under that ordinance.) and should not be relied upon by any other persons or redistributed to retail clients in Hong Kong.

In **Japan**, this is issued by BlackRock Japan. Co., Ltd. (Financial Instruments Business Operator: The Kanto Regional Financial Bureau. License No375, Association Memberships: Japan Investment Advisers Association, The Investment Trusts Association, Japan, Japan Securities Dealers Association, Type II Financial Instruments Firms Association) for Institutional Investors only. All strategies or products BLK Japan offer through the discretionary investment contracts or through investment trust funds do not guarantee the principal amount invested. The risks and costs of each strategy or product we offer cannot be indicated here because the financial instruments in which they are invested vary each strategy or product. Therefore, before deciding to receive our strategies or products, please refer to the document provided prior to the execution of agreement, prospectus, terms and conditions of investment trust and the explanatory document, etc. that will be delivered to you in accordance with each offering model and confirm the contents thereof.

In **South Korea**, this information is issued by BlackRock Investment (Korea) Limited. This material is for distribution to the Qualified Professional Investors (as defined in the Financial Investment Services and Capital Market Act and its sub-regulations) and for information or educational purposes only and does not constitute investment advice or an offer or solicitation to purchase or sells in any securities or any investment strategies.

In **Brunei**, BlackRock does not hold a Capital Markets Services License and is therefore not licensed for conducting business in any regulated activity under the Securities Market Order, 2013. This document has been issued by BlackRock and is intended for the exclusive use of the recipient. The distribution of the information contained herein may be restricted by law and persons who access it are required to comply with any such restrictions. The information provided herein information is directed solely at persons who would be regarded as "Accredited Investors", "Expert Investors" or "Institutional Investors" in accordance with the Securities Market Order 2013.

In Australia & New Zealand, issued by BlackRock Investment Management (Australia) Limited ABN 13 006 165 975, AFSL 230 523 (BIMAL) for the exclusive use of the recipient, who warrants by receipt of this material that they are a wholesale client as defined under the Australian Corporations Act 2001 (Cth) and the New Zealand Financial Advisers Act 2008 respectively. BIMAL is not licensed by a New Zealand regulator to provide 'Financial Advice Service' 'Investment manager under an FMC offer' or 'Keeping, investing, administering, or managing money, securities, or investment portfolios on behalf of other persons'. BIMAL's registration on the New Zealand register of financial service providers does not mean that BIMAL is subject to active regulation or oversight by a New Zealand regulator. This material provides general advice only and does not take into account your individual objectives, financial situation, needs or circumstances. Before making any investment decision, you should therefore assess whether the material is appropriate for you and obtain financial advice tailored to you having regard to your individual objectives, financial situation, needs and circumstances. Refer to BIMAL's Financial Services Guide on its website for more information. This material is not a financial product recommendation or an offer or solicitation with respect to the purchase or sale of any financial product in any jurisdiction. This material is not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to local law or regulation. BIMAL is a part of the global BlackRock Group which comprises of financial product issuers and investment managers around the world. BIMAL is the issuer of financial products and acts as an investment manager in Australia. BIMAL does not offer financial products to persons in New Zealand who are retail investors (as that term is defined in the Financial Markets Conduct Act 2013 (FMCA)). This material does not constitute or relate to such an offer. To the extent that this material does constitute or relate to such an offer of financial products, the offer is only made to, and capable of acceptance by, persons in New Zealand who are wholesale investors (as that term is defined in the FMCA). BIMAL, its officers, employees and agents believe that the information in this material and the sources on which it is based (which may be sourced from third parties) are correct as at the date of publication. While every care has been taken in the preparation of this material, no warranty of accuracy or reliability is given and no responsibility for the information is accepted by BIMAL, its officers, employees or agents. Except where contrary to law, BIMAL excludes all liability for this information.

In Central America, these securities have not been registered before the Securities Superintendence of the Republic of Panama, nor did the offer, sale or their trading procedures. The registration exemption has made according to numeral 3 of Article 129 of the Consolidated Text containing of the Decree-Law No. 1 of July 8, 1999 (institutional investors). Consequently, the tax treatment set forth in Articles 334 to 336 of the Unified Text containing Decree-Law No. 1 of July 8, 1999, does not apply to them. These securities are not under the supervision of the Securities Superintendence of the Republic of Panama. The information contained herein does not describe any product that is supervised or regulated by the National Banking and Insurance Commission (CNBS) in Honduras. Therefore any investment described herein is done at the investor's own risk. This is an individual and private offer which is made in Costa Rica upon reliance on an exemption from registration before the General Superintendence of Securities ("SUGEVAL"), pursuant to articles 7 and 8 of the Regulations on the Public Offering of Securities ("Reglamento sobre Oferta Pública de Valores"). This information is confidential, and is not to be reproduced or distributed to third parties as this is NOT a public offering of securities in Costa Rica. The product being offered is not intended for the Costa Rican public or market and neither is registered or will be registered before the SUGEVAL, nor can be traded in the secondary market. If any recipient of this documentation receives this document in El Salvador, such recipient acknowledges that the same has been delivered upon his request and instructions, and on a private placement basis. For Guatemala Investors, This communication and any accompanying information (the "Materials") are intended solely for informational purposes and do not constitute (and should not be interpreted to constitute) the offering, selling, or conducting of business with respect to such securities, products or services in the jurisdiction of the addressee (this "Jurisdiction"), or the conducting of any brokerage, banking, or other similarly regulated activities ("Financial Activities") in the Jurisdiction. Neither BLACKROCK, nor the securities, products and services described herein, are registered (or intended to be registered) in the Jurisdiction. Furthermore, neither BLACKROCK, nor the securities, products, services, or activities described herein, are regulated, or supervised by any governmental or similar authority in the Jurisdiction. The Materials are private, confidential and are sent by BLACKROCK only for the exclusive use of the addressee. The Materials must not be publicly distributed and any use of the Materials by anyone other than the addressee is not authorized. The addressee is required to comply with all applicable laws in the Jurisdiction, including, without limitation, tax laws and exchange control regulations if any.

The information provided within this document is for education purposes only in **Bermuda**. This information is not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution would be unlawful under the securities laws of such jurisdiction or country.

In Latin America, for institutional investors and financial intermediaries only (not for public distribution). This material is for educational purposes only and does not constitute investment advice or an offer or solicitation to sell or a solicitation of an offer to buy any shares of any fund or security and it is your responsibility to inform yourself of, and to observe, all applicable laws and regulations of your relevant jurisdiction. If any funds are mentioned or inferred in this material, such funds may not been registered with the securities regulators of Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru, Uruguay or any other securities regulator in any Latin American country and thus, may not be publicly offered in any such countries. The securities regulators of any country within Latin America have not confirmed the accuracy of any information contained herein. No information discussed herein can be provided to the general public in Latin America. The contents of this material are strictly confidential and must not be passed to any third party.

In **Colombia**, the promotion of each product discussed herein is carried out through the Representative Office of BlackRock Fund Advisors, authorized by the Colombian Financial Superintendence. The transmission of this information does not constitute a securities public offering in Colombia. The products discussed herein may not be promoted or marketed in Colombia or to Colombian residents unless such promotion and marketing is made in compliance with Decree 2555 of 2010 and other applicable rules and regulations related to the promotion of foreign financial and/or securities related products or services in Colombia. With the receipt of these materials, and unless the Client contacts BlackRock with additional requests for information, the Client agrees to have been provided the information for due advisory required by the marketing and promotion regulatory regime applicable in Colombia.

In **Chile**, The securities if any described in this document are foreign securities, therefore: i) their rights and obligations will be subject to the legal framework of the issuer's country of origin, and therefore, investors must inform themselves regarding the form and means through which they may exercise their rights; and that ii) the supervision of the Commission for the Financial Market (Comisión para el Mercado Financiero or "CMF") will be concentrated exclusively on compliance with the information obligations established in General Standard No. 352 of the CMF and that, therefore, the supervision of the security and its issuer will be mainly made by the foreign regulator; In the case of a fund not registered with the CMF is subject to General Rule No. 336 issued by the SVS (now the CMF). The subject matter of this sale may include securities not registered with the CMF; therefore, such securities are not subject to the supervision of the CMF. Since the securities are not registered in Chile, there is no obligation of the issuer to make publicly available information about the securities in Chile. The securities shall not be subject to public offering in Chile unless registered with the relevant registry of the CMF.

IN MEXICO, FOR INSTITUTIONAL AND QUALIFIED INVESTORS USE ONLY. INVESTING INVOLVES RISK, INCLUDING POSSIBLE LOSS OF PRINCIPAL. THIS MATERIAL IS PROVIDED FOR EDUCATIONAL AND INFORMATIONAL PURPOSES ONLY AND DOES NOT CONSTITUTE AN OFFER OR SOLICITATION TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SHARES OF ANY FUND OR SECURITY. This information does not consider the investment objectives, risk tolerance or the financial circumstances of any specific investor. This information does not replace the obligation of financial advisor to apply his/her best judgment in making investment decisions or investment recommendations. It is your responsibility to inform yourself of, and to observe, all applicable laws and regulations of Mexico. If any funds, securities or investment strategies are mentioned or inferred in this material, such funds, securities or strategies have not been registered with the Mexican National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, the "CNBV") and thus, may not be publicly offered in Mexico. The CNBV has not confirmed the accuracy of any information contained herein. The provision of investment management and investment advisory services ("Investment Services") is a regulated activity in Mexico, subject to strict rules, and performed under the supervision of the CNBV. These materials are shared for information purposes only, do not constitute investment advice, and are being shared in the understanding that the addressee is an Institutional or Qualified investor as defined under Mexican Securities (Ley del Mercado de Valores). Each potential investor shall make its own investment decision based on their own analysis of the available information. Please note that by receiving these materials, it shall be construed as a representation by the receiver that it is an Institutional or Qualified investor as defined under Mexican law. BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión ("BlackRock México Operadora") is a Mexican subsidiary of BlackRock, Inc., authorized by the CNBV as a Mutual Fund Manager (Operadora de Fondos), and as such, authorized to manage Mexican mutual funds, ETFs and provide Investment Advisory Services. For more information on the Investment Services offered by BlackRock Mexico, please review our Investment Services Guide available in www.blackrock.com/mx. This material represents an assessment at a specific time and its information should not be relied upon by the you as research or investment advice regarding the funds, any security or investment strategy in particular. Reliance upon information in this material is at your sole discretion. BlackRock México is not authorized to receive deposits, carry out intermediation activities, or act as a broker dealer, or bank in Mexico. For more information on BlackRock México, please visit: www.blackRock.com/mx. BlackRock receives revenue in the form of advisory fees for our advisory services and management fees for our mutual funds, exchange traded funds and collective investment trusts. Any modification, change, distribution or inadequate use of information of this document is not responsibility of BlackRock or any of its affiliates. Pursuant to the Mexican Data Privacy Law (Ley Federal de Protección de Datos Personales en Posesión de Particulares), to register your personal data you must confirm that you have read and understood the Privacy Notice of BlackRock México Operadora. For the full disclosure, please visit www.blackRock.com/mx and accept that your personal information will be managed according with the terms and conditions set forth therein.

In **Peru**, this private offer does not constitute a public offer, and is not registered with the Securities Market Public Registry of the Peruvian Securities Market Commission, for use only with institutional investors as such term is defined by the Superintendencia de Banca, Seguros y AFP.

This material is for distribution to Professional Clients (as defined by the Financial Conduct Authority or MiFID Rules) only and should not be relied upon by any other persons.

In the UK and Non-European Economic Area (EEA) countries: this is Issued by BlackRock Investment Management (UK) Limited, authorised and regulated by the Financial Conduct Authority. Registered office: 12 Throgmorton Avenue, London, EC2N 2DL. Tel: + 44 (0)20 7743 3000. Registered in England and Wales No. 02020394. For your protection telephone calls are usually recorded. Please refer to the Financial Conduct Authority website for a list of authorised activities conducted by BlackRock.

In the European Economic Area (EEA): This document is marketing material. This is Issued by BlackRock (Netherlands) B.V. and is authorised and regulated by the Netherlands Authority for the Financial Markets. Registered office Amstelplein 1, 1096 HA, Amsterdam, Tel: 020 – 549 5200, Tel: 31-20-549-5200. Trade Register No. 17068311 For your protection telephone calls are usually recorded.

In **Switzerland**: This document shall be exclusively made available to, and directed at, qualified investors as defined in Article 10 (3) of the CISA of 23 June 2006, as amended, at the exclusion of qualified investors with an opting-out pursuant to Art. 5 (1) of the Swiss Federal Act on Financial Services ("FinSA"). For information on art. 8 / 9 Financial Services Act (FinSA) and on your client segmentation under art. 4 FinSA, please see the following website: <a href="www.blackrock.com/finsa">www.blackrock.com/finsa</a>.

In Israel: BlackRock Investment Management (UK) Limited is not licenced under Israel's Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 5755-1995 (the "Advice Law"), nor does it carry insurance thereunder.

In the **DIFC:** This document is intended strictly for Professional Clients as defined under the Dubai Financial Services Authority ("DFSA") Conduct of Business (COB) Rules. Blackrock Advisors (UK) Limited -Dubai Branch is a DIFC Foreign Recognised Company registered with the DIFC Registrar of Companies (DIFC Registered Number 546), with its office at Unit L15 - 01A, ICD Brookfield Place, Dubai International Financial Centre, PO Box 506661, Dubai, UAE, and is regulated by the DFSA to engage in the regulated activities of 'Advising on Financial Products' and 'Arranging Deals in Investments' in or from the DIFC, both of which are limited to units in a collective investment fund (DFSA Reference Number F000738).

In **Saudi Arabia**, This document is intended for Institutional and Qualified Clients (as defined by the Capital Market Authority) only and should not be relied upon by any other persons. BlackRock Saudi Arabia, authorised and regulated by the Capital Market Authority (License Number 18- 192-30). Registered office: 7976 Salim Ibn Abi Bakr Shaikan St, 2223 West Umm Al Hamam District Riyadh, 12329 Riyadh, Kingdom of Saudi Arabia, Tel: +966 11 838 3600. CR No, 1010479419. For your protection telephone calls are usually recorded. Please refer to the Capital Market Authority website for a list of authorised activities conducted by BlackRock Saudi Arabia. In the **UAE:** This document is intended strictly for Exempt Professional Investors.

In the State of Qatar and the Qatar Financial Centre (QFC): This document is intended strictly for sophisticated institutions.

In **Kuwait:** This document is intended strictly for sophisticated institutions that are 'Professional Clients' as defined under the Kuwait Capital Markets Law and its Executive Bylaws.

The information contained in this document, does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for or an opinion or guidance on a financial product, service and/or strategy. Whilst great care has been taken to ensure that the information contained in this document is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon. You may only reproduce, circulate and use this document (or any part of it) with the consent of BlackRock Investment Management (UK). The information contained in this document is for information purposes only. It is not intended for and should not be distributed to, or relied upon by, members of the public.

The information contained in this document, may contain statements that are not purely historical in nature but are "forward-looking statements". These include, amongst other things, projections, forecasts or estimates of income. These forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials. If you do not understand the contents of this document, you should consult an authorised financial adviser. Any research in this document has been procured and may have been acted on by BlackRock for its own purpose. The results of such research are being made available only incidentally. The views expressed do not constitute investment or any other advice and are subject to change. They do not necessarily reflect the views of any company in the BlackRock Group or any part thereof and no assurances are made as to their accuracy. Any opinions, forecasts represent an assessment of the market environment at a specific time and is not intended to be a forecast of future events or a guarantee of future results. This information should not be relied upon by the reader as research, investment advice or a recommendation. This document is for information purposes only and does not constitute an offer or invitation to anyone to invest in any BlackRock funds and has not been prepared in connection with any such offer. If you are an intermediary or third-party distributor, you must only disseminate this material to other Professional Investors as permitted in the above-specified jurisdictions and in accordance with applicable laws and regulations. Certain information contained herein has been obtained from published sources and from third parties, including without limitation, market forecasts, internal and external surveys, market research, publicly available information and industry publications. In addition, certain information contained herein may have been obtained from companies in which investments have been made by entities affiliated with BlackRock. Although such information is believed to be reliable for the purposes used herein, neither the Fund nor BlackRock assumes any responsibility for the accuracy or completeness of such information. Reliance upon information in this material is at the sole discretion of the reader. Certain information contained herein represents or is based upon forward-looking statements or information. BlackRock and its affiliates believe that such statements and information are based upon reasonable estimates and assumptions. However, forward-looking statements are inherently uncertain, and factors may cause events or results to differ from those projected. Therefore, undue reliance should not be placed on such forward-looking statements and information.

© 2025 BlackRock, Inc. or its affiliates. All Rights Reserved. BLACKROCK, BLACKROCK SOLUTIONS, iSHARES, BUILD ON BLACKROCK and SO WHAT DO I DO WITH MY MONEY are trademarks of BlackRock, Inc. or its affiliates. All other trademarks are those of their respective owners.