

# Time to reinforce ringfence around private credit

Emerging red flags a clarion call for robust monitoring, early-warning systems, and bespoke scorecards

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## Executive summary

The private credit space continues to garner significant attention from portfolio managers.

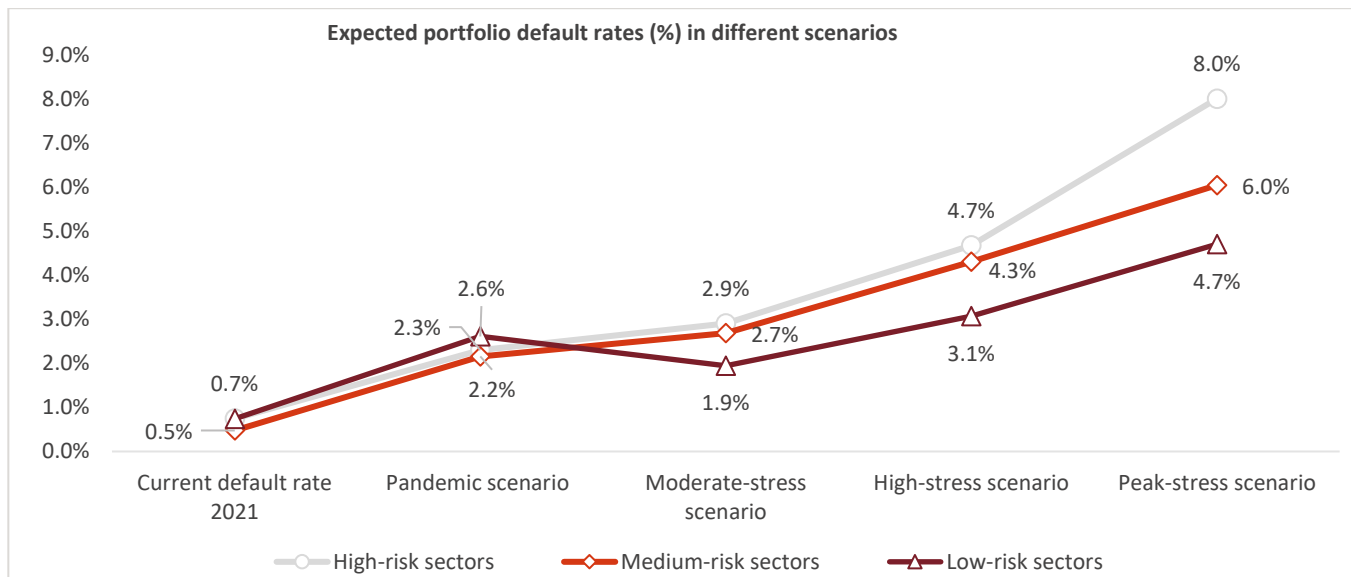
With the structural outlook positive and investor appetite expected to be steady, assets under management (AUM) is expected to log a compound annual growth rate (CAGR) of 17.4%<sup>1</sup> between 2021 and 2026, reaching \$2.7 trillion.

However, red flags are emerging. Higher interest rates, shrinking liquidity, and tougher economic conditions for borrowers are buffeting the private credit market.

CRISIL foresees a combination of factors — weakening macro environment, relaxed underwriting standards, and elevated portfolio risks — impacting the market over the medium term.

We analyzed the portfolios of over 30 lenders (private credit AUM ~\$1 trillion; funds chosen based on AUM size, data disclosure, and pure-play focus) in the United States (US) and European markets, and found:

- High- and medium-risk sectors accounted for 50.3% of the sampled private credit portfolio. The portfolio analysis also revealed elevated sector (the top single-sector exposure averaged ~37%) and borrower (the top 10 investments averaged ~54%) concentration risks.
- High-risk sectors (defined by the current distressed ratio analysis) such as healthcare equipment and services, and capital goods formed 17.3% of the total portfolio, while medium-risk sectors comprising technology hardware and equipment, and software and services accounted for 22.2%.
- In a high-stress scenario, the default rates for high- and medium-risk sectors are likely to jump 400bps and 380bps, respectively, from current rates. Meanwhile, in a peak-stress scenario, the default rates could spike as much as 730bps and 550bps for high- and medium-risk sectors, respectively.



Source: CRISIL GR&RS; For methodology, refer to Appendix C

## Rising risks call for stronger ring-fencing

The monitoring mechanism needs improvement for two major reasons. First, relaxed underwriting standards continue to the late stage of the credit cycle because of competitive pressures. Second, in search of yield, asset managers have continued to ramp up exposures to lower-grade loans and securities.

Given this, we believe private credit managers will need to focus on:

- **Enhancing credit monitoring through augmentation of resources and data:** As the pool of debt offerings grows across multiple strategies, it becomes important for fund managers to track underlying holdings from the origination to divestment stage. Credit monitoring is crucial. It includes, but is not limited to, i) periodic credit reviews and portfolio surveillance; ii) leveraging expert opinion; and iii) covenant and compliance tracking
- **Building robust in-house early-warning systems:** Lately, most private debt issues in the market have been covenant-lite. Hence, an in-house early-warning system is critical. By their very nature, covenant-lite loans have fewer restrictions and lender protections. Hence, tools or warning mechanisms (frameworks that auto-generate red flags through rule-based triggers for action) that highlight weakness in the borrower's credit profile early on will play a key role in risk management
- **Deploying bespoke scorecards and customized solutions for specialized loans:** Private debt is characterized by non-standard, non-typical specialized loan structures that are customized to suit the needs of end-borrowers. These structures cannot be evaluated using the same tools and methods as for traditional debt or standard loans. Hence, bespoke/customized scorecards that capture the unique aspects of private credit lending are crucial. These scorecards capture not only the creditworthiness of the underlying borrower, but also the solidity of the facility structure and credit enhancements.



## Red flags emerging in the private debt market

While structural drivers remain intact, fundraising has been relatively subdued in the first half of this fiscal because of the ongoing macro volatility and potential over-allocation.



### **Weakening global economy**

Rising interest rates and inflation would have a dual impact on middle-market borrowers, who will be squeezed between higher operating costs and interest payments



### **Relaxed underwriting standards**

Rise of mega-size deals, covenant-lite loans, and borrower-friendly structures has increased industry-wide credit risks



### **Rising portfolio risks**







Elevated sector and borrower concentration risks may prove lethal when blended with weakening borrower profiles

We believe investors will need to tread with caution over the next few quarters. Several warning signs indicate a potential credit stress in case of macro volatility. When viewed on a standalone basis, the below variables seem innocuous; however, a combination of these in a downward market scenario could easily lead to a market dislocation.



## Key observations across markets in the US and Europe

Globally, the two regions constitute ~95% of the private debt deals market. Both markets are growing and remain vulnerable to various risks – be it inflationary pressures, rising rates, relaxed underwriting standards, or weaker credit fundamentals among middle-market borrowers. On a macro level, the combined effect of rising rates and inflation is expected to add to pressure on middle-market borrowers – while absorbing higher costs (i.e., shipping or logistics or human capital) or servicing higher ongoing payments (over 90% of the private debt serviced is of floating nature). On an industry level, there is higher opacity; relaxed underwriting standards are essentially removing the early-warning signs that would otherwise protect the lender. There is a massive surge in covenant-lite loans that include forfeiture of protections in the underlying documentation, loosening of covenant headroom, or increasingly flexible add-backs in earnings before interest, tax, depreciation, and amortization. Finally, borrower risks profiles have weakened considerably, as noted by the latest studies and proxy default rates.

Downside triggers	Region-wise credit cycle downside risk assessment	
	US	Europe
<b>Inflationary pressures</b> 	The US economy is facing the highest inflation in 40 years. <sup>ii</sup>	Eurozone inflation continued to soar to record highs, touching 9.1% <sup>iii</sup> in August.
<b>Tighter monetary conditions</b> 	As of September, the US Federal Reserve funds target interest rate stood at 3.00%-3.25% range and is expected to rise further.	In September, the European Central Bank's main refinancing rate stood at 1.25%, the marginal lending facility was at 1.50%, and the deposit facility at 0.75%.
<b>Increase in mega-size deals and borrower-friendly structures</b> 	In 2021 alone, there were 17 unitranche <sup>iv</sup> deals exceeding \$1bn, compared with six \$1bn-plus deals in 2020.	By end-2021, we saw the mega-size deals trend pick up in the European markets as well. FNZ (UK) Ltd. raised £1.5bn <sup>v</sup> with HPS, Arcmont, Goldman Sachs Asset Management, and Hayfin.
<b>Relaxed underwriting standards</b> 	About 33% <sup>vi</sup> of the private debt deals in 2021 were covenant-lite, compared with 15% in 2020, showing growing acceptance for lower downside protection.	According to Leveraged Commentary & Data (LCD) data, the European institutional loan market is now almost entirely covenant-lite, with the structure accounting for 96% of issuance in 2021 (nearly double the volume in 2020).
<b>Weakening corporate fundamentals</b> 	S&P's latest study <sup>vii</sup> on 1,500 middle-market borrowers showed that companies had a vulnerable business-risk profile given their small size – median leverage stood at 7.3x ( <i>note that anything over 5.0x is generally rated B- or below</i> ).	S&P expects the European trailing 12-month speculative-grade corporate default rate to rise to 3.0% <sup>viii</sup> by December 2023 from 0.7% in March 2022.
<b>Rising defaults</b> 	The Proskauer <sup>ix</sup> Private Credit Default Index reported overall default rate at 1.18% as of the second quarter of this fiscal (Q1: 1.12%).	Fitch forecasts a European leveraged-loan default rate of 2.5% <sup>x</sup> in 2022 and 3.0% in 2023.

## CRISIL analysis unravels hidden risks in private credit

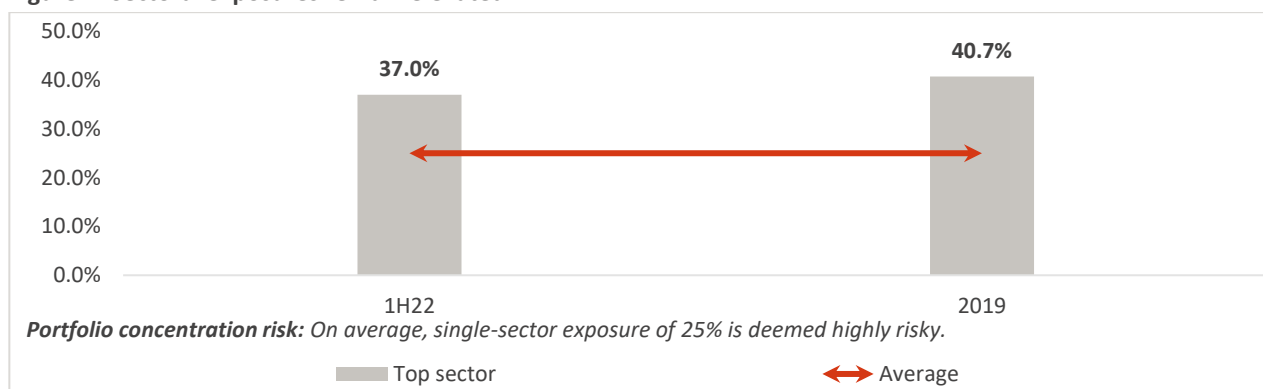
CRISIL analyzed the credit portfolios of 30+ private credit funds (chosen on the basis of AUM size, data disclosures, and pure-play focus) in the US and Europe to identify hidden risks such as portfolio concentration or high sectoral exposure. Their aggregate private credit AUM totaled ~\$1 trillion as of 1Q22.

### Findings from the CRISIL analysis

#### Portfolio-level observations

- Sector and borrower concentrations remain elevated:** Over the past three years, the single-largest sectoral exposure for these lenders has remained high — ~37% on average in 1H22 (the top rating agencies consider 20-25% exposure to a single sector to be highly risky). **The consistent growth in dry powder over the past few years, and the subsequent increase in AUM sizes should ideally have resulted in better sectoral diversification. However, portfolio managers have been focusing on a few limited sectors. As the market expands and enters a new credit cycle, these sectoral concentrations will prove riskier (especially the ones that are witnessing an increase in distressed credits).**

Figure 1: Sectoral exposures remain elevated



Source: CRISIL GR&RS

The largest sector-wise exposures comprised finance (accounting for 28.5%<sup>1</sup> of the analyzed portfolio), information technology (~22%<sup>2</sup>), and healthcare (~11%<sup>3</sup>). A further analysis of borrower concentration showed the top 10 investments ranged from 14% to 100% of the sampled portfolio. On average, ~54% of the total portfolio comprised the largest ten borrowers, implying high borrower concentration risk (refer to Appendix B for more details).

- Distressed credits are on the rise:** We have re-categorized the underlying sector exposures as high-, medium-, and low-risk, based on S&P Global’s latest distressed debt analysis that highlighted an accelerated increase in the US distressed ratio<sup>xi</sup> in July 2022 (9.2%<sup>xii</sup>, the highest since October 2020). **The range extended from 1.5% to 17.7% across different sectors, and factoring in the five-year average of ~6%<sup>xiii</sup>, we bifurcated the distressed ratio range into three sections. Distressed ratio between 0% and 6% were classified as ‘low-risk’, 6%-12% as ‘medium-risk’, and >12% as ‘high-risk’.** Overall, we noted the sampled private credit funds had tangible investments in capital goods (8.4%) and healthcare equipment and services (8.9%) – sectors that have witnessed the highest distressed ratios over the past few months.

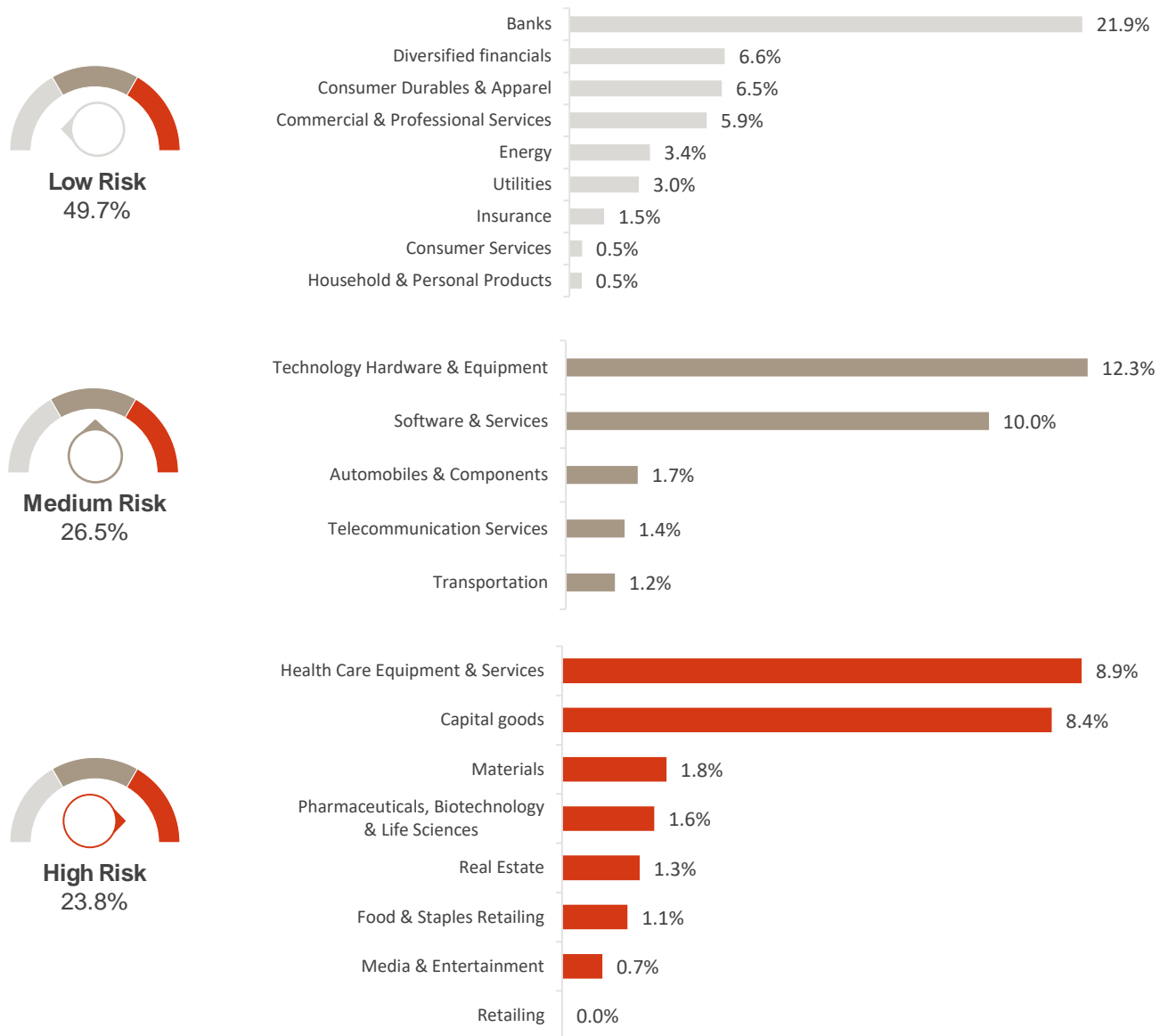
<sup>1</sup> Includes Banks and Diversified Financials

<sup>2</sup> Includes Software & Services and Technology, Hardware & Equipment

<sup>3</sup> Includes Healthcare Equipment & Services and Pharmaceuticals, Technology & Life Sciences



Figure 2: Portfolio classified as per risk categories



Source: CRISIL GR&RS

- Lender portfolios have significant exposure to high- and medium-risk sectors:** Nearly 24% of the invested portfolio was categorized as high-risk, mainly comprising loans to the healthcare equipment and services, and capital goods sectors. Around 26% was deemed medium-risk, largely consisting of loans to software and services, and technology hardware and equipment (refer to the chart above).
- Weakened borrower credit profiles:** Factoring in S&P Global Ratings' latest credit estimates for 1,500 US middle-market borrowers, the median leverage stood at 7.3x (in general, all three rating agencies categorize any leverage profile over 5.5x as 'B-' or below). Most companies had a weak or vulnerable risk profile due to the small size of the business. Further, of the top five sectors evaluated, the calculated median leverage was the highest for software sector (8.94x)<sup>xiv</sup>, followed by commercial services (8.15x) and IT services (6.9x).

## Portfolios remain vulnerable to high- & peak-stress scenarios

Early in the pandemic, most governments announced debt moratoria to help businesses overcome the economic shock stemming from lockdowns. In line with fiscal and financial policies introduced, private debt resolution strategies were also implemented. Although this provided a temporary relief, it also rendered detection of early-warning signs of loan defaults difficult, particularly in small and midsize firms. Major markets (equity, credit, and rates) predict a ~40%<sup>xv</sup> chance of a US economic contraction in the near future.

Noting the above, and to understand the underlying portfolio risks, we stressed the existing portfolio exposures with various stress scenarios – using default rates from S&P Global’s 2021 Annual Global Corporate Default and Rating Transition Study. As mentioned earlier, we shortlisted four scenarios: i) pandemic, ii) moderate-stress, iii) high-stress, and iv) peak-stress.

Expected portfolio default rates (%) in different scenarios	Current default rate 2021	Pandemic scenario	Moderate-stress scenario	High-stress scenario	Peak-stress scenario
High-risk sectors	0.7%	2.3%	2.9%	4.7%	8.0%
Medium-risk sectors	0.5%	2.2%	2.7%	4.3%	6.0%
Low-risk sectors	0.7%	2.6%	1.9%	3.1%	4.7%
<b>Total</b>	0.7%	2.4%	2.4%	3.8%	5.8%

Source: CRISIL GR&RS

- Pandemic scenario – Estimated default losses are relatively subdued.** We assessed the potential impact of pandemic default rates on the existing portfolio. We used default rates observed in 2020 and applied them to the existing exposures. The expected total portfolio default rate was 2.4%, and the expected portfolio default rates for high-, medium-, and low-risk sectors totaled 2.3%, 2.2%, and 2.6%, respectively.
- Moderate-stress scenario – High-risk sectors potentially stand vulnerable to medium-level headwinds.** Observing median default rates with one standard deviation, we aimed to analyze the portfolio impact in a medium-market-stress environment. The expected total portfolio default rate was 2.4%, and the expected defaults rates for high-, medium-, and low-risk sectors were 2.9%, 2.7%, and 1.9%, respectively.

- **High-stress scenario – Medium- and high-risk exposures potentially stand to lose twice as much as during the pandemic.** Factoring in median default rates with two standard deviation movements, we stressed the sector exposures for a high-risk and volatile market environment. The expected total portfolio default rate was 3.8%, and the expected default rates for high-, medium-, and low-risk sectors totaled 4.7%, 4.3%, and 3.1%, respectively.
- **Peak-stress scenario – Highly adverse events will have a tangible impact on the overall portfolio.** Taking the highest default rates that respective industries have seen over a 40-year period, we stressed the portfolio for a peak credit default environment. The total portfolio default rate was estimated at 5.8%, and default rates for high-, medium-, and low-risk sectors were calibrated at 8.0%, 6.0%, and 4.7%, respectively.

*We believe, in a downturn scenario, the quantum of defaults could worsen factoring in borrower concentration risk.*



## The way ahead: Robust credit monitoring, early-warning mechanisms, and bespoke scorecards

Traditionally, any turn in the credit cycle has had predictable consequences, such as rating transitions, higher default rates, and more investments in credit-risk monitoring. For the next leg of growth, private credit firms need to focus on the following factors to guard against potential defaults.

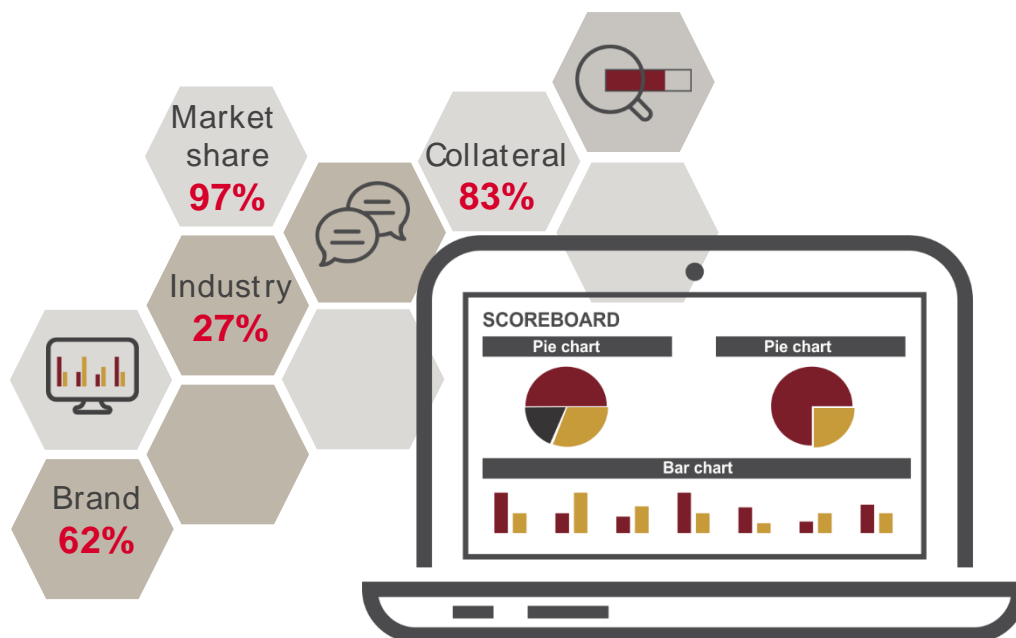
**Enhancing credit monitoring through augmentation of resources and data:** As the private debt AUM continues to grow (with offerings across multiple strategies), it has become important for fund managers to track underlying holdings from the origination to divestment stage, especially given that loans are complex and riskier than traditional offerings. Credit monitoring becomes critical considering the asset class's specialized structures, lack of transparency, and limited reporting requirements. It includes, but is not limited to, i) periodic credit reviews and portfolio surveillance; ii) leveraging expert opinion; and iii) covenant and compliance tracking.



- i) **Periodic credit reviews and portfolio surveillance:** As loan books grow, timely surveillance is key to maintaining a healthy portfolio. Lack of good financial data on borrowers can be balanced through rigorous annual and interim assessments, ensuring early capture of deterioration in the borrower's creditworthiness. We expect asset managers to employ more resources in credit monitoring and surveillance activities in the coming months.
- ii) **Leveraging expert opinion:** Credit expertise matters more than ever in these complicated markets. Specialists who understand product complexity (structural differences between senior vs unitranche/mixed vs subordinated) and can identify risks, flagging them on time, remain central to effective portfolio management. Also, talent resources who bring in experience related to sub-strategies, be it direct lending, distressed debt, infrastructure debt, real estate debt, venture debt, and mezzanine or special-situation financing, along with sector specialties are important. We already see that demand for specialist knowledge in this complex field is adding to the pressure on fund managers. In the future, regional, product, or private debt specialties will remain in high demand.
- iii) **Covenant and compliance tracking with a holistic view on holdings:** We observe that private markets' measurement and accounting systems do not interface with the reporting systems used for traditional portfolio holdings. Hence, streamlining the administration and reporting process for the investments is a critical task, which includes, but is not limited to, i) investment accounting, ii) investment reporting (for loan covenant maintenance and compliance), and iii) data aggregation across strategies, portfolios, and assets. Fund managers need to analyze the borrower's compliance information, portfolio-level accounting, and liquidity management analytics on an ongoing basis.



**Building robust in-house early-warning systems:** Lately, most private debt issues in the market have been covenant-lite; hence, an in-house early-warning system is critical. By their very nature, covenant-lite loans have fewer restrictions and lender protections. Hence, tools or warning mechanisms highlighting weakness in the borrower’s credit profile early-on will play a key role in risk management – e.g., credit assessment tools/frameworks that auto-generate red flags through rule-based triggers: i) models that utilize a range of market and fundamental indicators to generate probability of defaults, or ii) dashboards that alert you to track specific companies highlighted amber or red pin-pointing any problems.

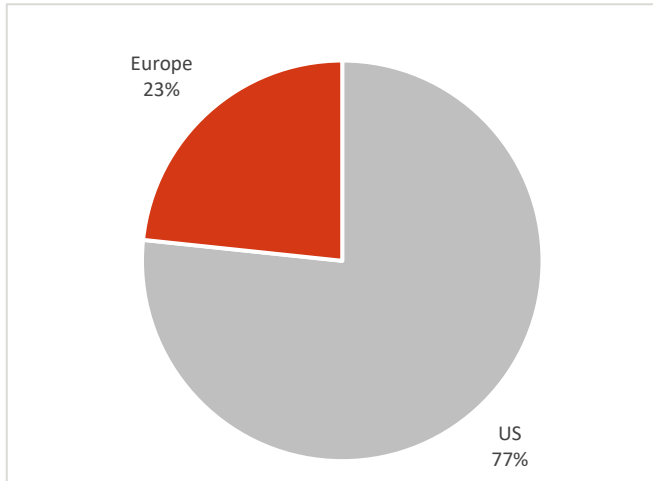


**Deploying bespoke scorecards and customized solutions for specialized loans:** Private debt is characterized by non-standard, non-typical specialized loan structures that are customized to suit the needs of end-borrowers. These structures cannot be evaluated using the same tools and methods as for traditional debt or standard loans. Hence, we need bespoke/customized scorecards that capture the unique aspects of private credit lending. These scorecards capture not only the creditworthiness of the underlying borrower, but also the solidity of the facility structure and credit enhancements.

## Annexure A: Composition of firms in the study

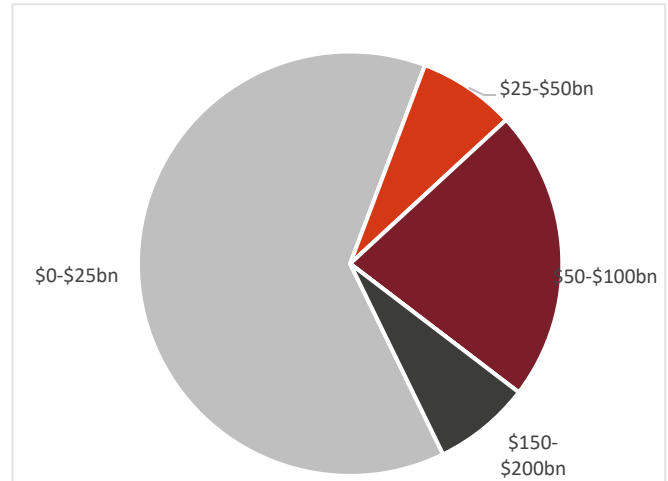
We analyzed a base sample of 30 private credit lender portfolios across the US and Europe (largest markets). The respective firms were chosen based on AUM size, data disclosures, and pure-play business focus.

**Figure 3: Breakup by region**



Source: CRISIL GR&RS

**Figure 4: Breakup by AUM size**



## Annexure B: Sector bifurcation and analysis

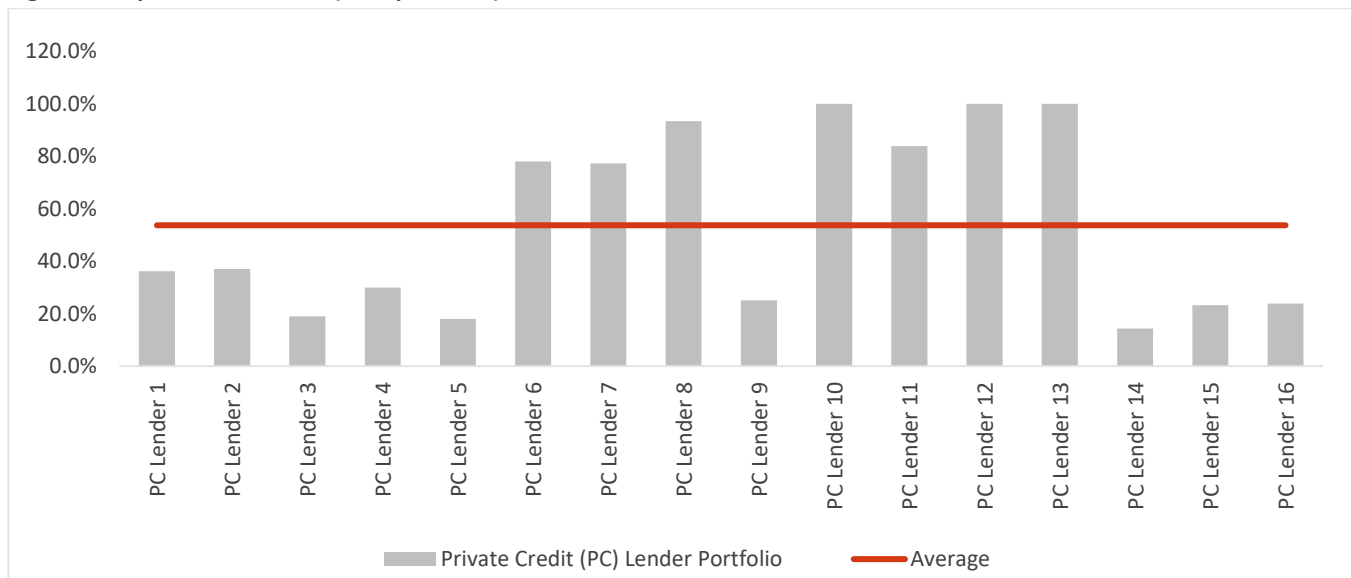
The data collected at the portfolio level was aggregated as following:

- Segregating sectoral exposures:** The exposures were categorized from the largest to smallest to understand the top 10 sectoral exposures that the respective private credit lenders had on their books. Please note that given the differences in data disclosures across the sampled portfolio, we re-categorized some sectoral exposures according to the Global Industry Classification Standard (GICS®) level 2 classification to bring consistency in the dataset.

1H22 (\$bn)	Top sector	2nd-largest sector exposure	3rd-largest sector exposure	4th-largest sector exposure	5th-largest sector exposure	6th-largest sector exposure	7th-largest sector exposure	8th-largest sector exposure	9th-largest sector exposure	10th-largest sector exposure
Retailing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Food & Staples Retailing	0.0	3.3	0.0	0.0	0.9	0.0	4.1	0.0	0.0	0.0
Materials	5.1	0.0	0.0	0.0	7.0	0.3	0.0	0.0	0.0	0.7
Capital Goods	8.0	24.0	11.2	0.2	1.6	4.7	0.5	11.5	0.0	0.0
Health Care Equipment & Services	0.5	23.9	3.0	25.4	6.2	3.6	2.8	0.0	0.0	0.0
Pharmaceuticals, Biotechnology & Life Sciences	0.0	5.0	4.4	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Real Estate	5.8	0.0	0.0	3.8	0.0	0.1	0.0	0.0	0.0	0.0
Media & Entertainment	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Automobiles & Components	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.3	7.9
Telecommunication Services	3.4	0.1	0.0	0.3	0.0	0.9	0.0	0.0	5.6	0.0
Software & Services	55.2	0.3	12.6	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Technology Hardware & Equipment	12.0	62.4	12.1	0.0	3.4	0.0	0.3	0.0	0.0	0.0
Transportation	0.0	0.0	0.1	0.0	1.0	2.4	3.1	0.0	0.0	1.9
Consumer Durables & Apparel	2.1	0.0	19.7	5.2	3.6	0.0	9.5	5.5	2.0	0.0
Consumer Services	0.0	0.0	1.4	0.1	0.0	0.0	0.0	0.0	0.0	2.3
Household & Personal Products	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0
Insurance	0.0	0.0	0.0	0.0	10.8	0.1	0.0	0.0	0.0	0.0
Utilities	0.0	7.7	0.0	0.0	0.0	4.5	0.1	0.0	9.4	0.0
Banks	144.0	11.9	3.3	0.0	1.2	0.0	0.0	0.3	0.0	0.0
Diversified Financials	0.1	0.0	25.1	10.7	0.1	10.2	0.0	0.0	0.0	2.5
Energy	21.1	0.0	0.0	0.9	0.0	0.0	0.0	0.8	0.2	2.3
Commercial & Professional Services	12.5	6.7	0.2	23.6	0.0	0.0	0.0	0.0	0.0	0.0

- Segregating sectors under high-, medium-, and low-risk categories:** The above-mentioned reclassification of sectors was further aligned with S&P Global’s latest distressed debt analysis, to ascertain high-, medium-, and low-risk sectors. The latest distressed debt analysis highlighted an accelerated increase in the US distressed ratio in July 2022 (9.2%, the highest since October 2020). The ratio ranged from 1.5% to 17.7% across different sectors, with retail/restaurants, forest products and building materials, and capital goods leading the charts (17.7%, 17.2%, and 15.3% distressed ratio, respectively). **Factoring in the five-year average of ~6%, we bifurcated the distressed ratio range into three sections: 0-6% as ‘low-risk’, 6-12% as ‘medium-risk’, and >12% as ‘high-risk’.**
- Ascertaining borrower/investment concentration risks:** We collated data on the top 10 investments as a percentage of the total portfolio to understand the level of borrower concentration in the overall portfolio. The top 10 investment concentrations ranged from ~14% to ~100% in some cases, averaging ~54% across the sampled portfolio. Please note that only 16 of the 30 sampled private credit lenders had disclosed borrower-level information.

**Figure 5: Top 10 investments (% of portfolio)**



Source: CRISIL GR&RS



## Annexure C: Portfolio stress-testing

Expected credit losses in four scenarios (\$bn)		Current default rate 2021	Pandemic (default rates 2020)	Moderate-stress (Median + Std Dev)	High-stress (Median + 2 Std Dev)	Peak-stress scenario (maximum default rate)
High Risk	Retailing	0.00	0.00	0.00	0.00	0.00
	Food & Staples Retailing	0.14	0.53	0.28	0.42	0.53
	Materials	0.15	0.16	0.56	0.94	1.95
	Capital Goods	0.38	0.95	2.06	3.26	5.91
	Health Care Equipment & Services	0.38	1.56	1.40	2.22	3.04
	Pharmaceuticals, Biotechnology & Life Sciences	0.07	0.28	0.25	0.39	0.54
	Real Estate	0.13	0.22	0.26	0.51	1.17
	Media & Entertainment	0.06	0.32	0.27	0.43	0.85
Medium Risk	Automobiles & Components	0.08	0.19	0.42	0.66	1.19
	Telecommunication Services	0.15	0.29	0.46	0.82	1.82
	Software & Services	0.22	1.52	1.81	2.90	3.68
	Technology Hardware & Equipment	0.27	1.88	2.24	3.57	4.54
	Transportation	0.21	0.32	0.29	0.43	0.52
Low Risk	Consumer Durables & Apparel	0.79	3.07	1.65	2.43	3.07
	Consumer Services	0.07	0.25	0.14	0.20	0.25
	Household & Personal Products	0.06	0.25	0.13	0.19	0.25
	Insurance	0.00	0.01	0.12	0.21	0.52
	Utilities	0.03	0.10	0.20	0.36	0.96
	Banks	0.35	0.48	1.66	2.78	4.45
	Diversified Financials	0.11	0.15	0.50	0.84	1.35
	Energy	0.58	2.46	1.25	2.02	3.58
	Commercial & Professional Services	0.71	2.77	1.49	2.19	2.77

Source: S&P's 2021 Annual Global Corporate Default and Rating Transition Study; company filings - portfolio exposures sourced from the latest 2022 filings

To analyze the impact of market stress on current portfolios, we sourced default rates for various sectors from S&P's 2021 Annual Global Corporate Default and Rating Transition Study. As mentioned above, we segregated the default rates for four scenarios, and then multiplied them by respective sector exposures of the sampled portfolios, deriving the table above on expected credit losses.

1. For the pandemic scenario, we used default rates observed in 2020
2. For the moderate-stress environment, we calibrated the median default rate plus one standard deviation
3. For the high-stress environment, we worked out the median default rate plus two standard deviations
4. For the peak-stress scenario, we considered the maximum default rate in the respective sectors in a 40-year period

<sup>1</sup> The 2022 Preqin Alternatives report forecasts that private debt will continue to grow, with AUM reaching \$2.69tn by 2026, overtaking real estate, second in AUM only to private equity and venture capital by the close of 2023.

<https://www.preqin.com/Portals/0/Documents/Alts%20in%202022%20PR%20FINAL.pdf?ver=2022-01-12-084244-293>

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- <sup>ii</sup> <https://www.bloomberg.com/news/articles/2022-06-10/us-inflation-unexpectedly-accelerates-to-40-year-high-of-8-6>
- <sup>iii</sup> <https://ec.europa.eu/eurostat/documents/2995521/14675409/2-31082022-AP-EN.pdf/e4217618-3fbe-4f54-2a3a-21c72be44c53?t=1661863346094>
- <sup>iv</sup> <https://www.fitchratings.com/research/corporate-finance/private-debt-fundraising-will-benefit-us-speculative-grade-issuers-19-04-2022>
- <sup>v</sup> According to the spring 2022 edition of Deloitte's Alternative Lending Deal Tracker
- <sup>vi</sup> According to a Fitch affiliate covenant review of the US speculative-grade issuers <https://www.fitchratings.com/research/corporate-finance/private-debt-fundraising-will-benefit-us-speculative-grade-issuers-19-04-2022>
- <sup>vii</sup> According to S&P Global Ratings' latest study (published in Feb 2022) on 1,500 middle-market borrowers <https://www.spglobal.com/ratings/en/research/articles/220209-a-credit-cycle-turn-could-expose-vulnerabilities-in-the-middle-market-12257347>
- <sup>viii</sup> <https://www.spglobal.com/ratings/en/research/articles/220518-the-european-speculative-grade-corporate-default-rate-could-rise-to-3-by-march-2023-12378671>
- <sup>ix</sup> Proskauer is a law firm, and the Index is based on US dollar-denominated senior secured and unitranche loans
- <sup>x</sup> <https://www.fitchratings.com/research/corporate-finance/european-leveraged-loan-issuance-pivots-to-private-debt-18-07-2022>
- <sup>xi</sup> The proportion of speculative-grade (rated 'BB+' or lower) issues with option-adjusted composite spreads of more than 1,000 basis points (bps) relative to US Treasuries
- <sup>xii</sup> <https://www.spglobal.com/ratings/en/research/articles/220721-default-transition-and-recovery-the-u-s-distress-ratio-accelerates-to-highest-level-since-october-2020-12446234#:~:text=The%20ratio%20is%20now%20at,slowdown%20in%20the%20U.S.%20economy.>
- <sup>xiii</sup> Sourced from Chart 1 Distress Ratio Distance From Average And U.S. Speculative-Grade Default Rate published in the S&P's article named 'Default, Transition, and Recovery: The U.S. Distress Ratio Accelerates To Highest Level Since October 2020'
- <sup>xiv</sup> <https://www.spglobal.com/ratings/en/research/articles/220209-a-credit-cycle-turn-could-expose-vulnerabilities-in-the-middle-market-12257347>
- <sup>xv</sup> Source: Bloomberg article dated August 4, 2022 – US Recession Odds Are Falling Fast, JPMorgan Trading Model Shows

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