remaco

The art of capital management, since 1947.

Private Debt Quarterly

Investment Universe Report

Q4 / 2020

Remaco · Q4 2020

Private Debt Quarterly

Prof. Pascal Böni, PhD
Prof. Dr. Heinz Zimmermann

Remaco
Hirzbodenweg 103
CH-4020 Basel
Switzerland

Phone: +41 61 319 51 51
Fax: +41 61 319 52 52
Web: www.remaco.com
E-mail: info@remaco com

The art of capital management, since 1947.

Private Debt Quarterly

Investment Universe Report

Q4 / 2020

Remaco
Hirzbodenweg 103
CH-4020 Basel
Switzerland

Phone: +41 61 319 51 51
Fax: +41 61 319 52 52
Web: www.remaco.com
E-mail: info@remaco com

Content

Tables

Fund Performance

General Partners

Largest Private Debt Funds

Funds Currently Raising

Funds by Investment Strategy

Investors

Largest investors in Private Debt by investor type

Entire Lists

Dear investor,

Private debt (PD) asset managers (GPs) are currently seeking to raise the impressive amount of USD 300 billion. That is up from approximately USD 190 billion in January 2020. The private credit market appears to offer ample investment opportunities and attractive returns. Benefitting from the post-GFC bank regulation in general and from the more recent COVID-19 crisis, GPs are currently structuring PD transactions expected to deliver strong returns for investors. These returns find a lot of attention of institutional investors managing long-term liabilities, which find themselves in a zero or low rate environment for a large fraction of their fixed income assets. These investors are attracted by the roughly 9% expected return from direct lending assets, as estimated by the Blackrock Investment Institute[1], the expected return estimate consistent with our own analysis.

As an **independent investment advisor**, we support our clients in five dimensions:

- First, we advise investors on the **PD investment strategy and process**, allowing them to construct a performing portfolio and understand PD fund performance and performance attribution, based on market data and benchmarks.
- Second, we provide **research and market data** and help them to maneuver through an attractive but not well understood and relatively young asset class.
- Third, we separate the wheat from the chaff and provide a **quarterly selection** of funds for which we believe a more in-depth due diligence may pay off.
- Fourth, we implement **comprehensive due diligence** in respect to PD funds aiming to collect capital.
- Fifth, should an investment be recommended and executed, we maintain close relationships with PD funds to assure **continuous monitoring and reporting** corresponding to the requested, sometimes individualized, institutional standards.

Figure 1. Assets under Management, Alternative Asset Classes (in trn USD)

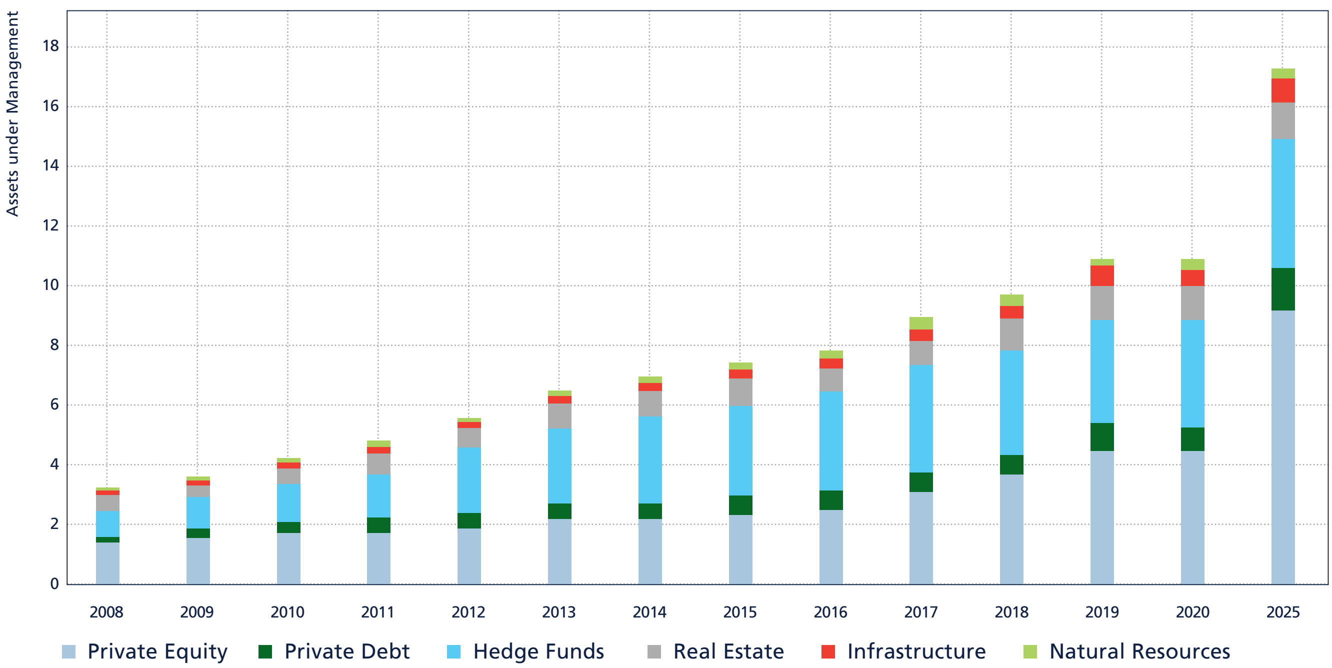

Figure 1: Assets under Management by Alternative Asset Classes. The 2020 figure is annualized based on data to October 2020. The 2025 estimate is Preqin's forecast. Sources: For the years 2008 and 2009: Preqin (2018); for the years 2010 -2023: Preqin Pro, https://www.preqin.com/campaign/future-of-alternatives-2025, retrieved from Preqin Pro on November 20, 2020

[1] Blackrock Investment Institute, analysis retrieved on October 26, 2020

Our first Private Debt Quarterly Report (henceforth "Report") is part of our service: providing research and market data. It is meant to serve as a general framework for discussion and starting point in analyzing single PD funds.

Remaco has decided to launch this Report on a quarterly basis, with the goal to support institutional and professional investors aiming to explore the PD asset class in more depth. We believe that the growth and relative importance of PD as comparted to other asset classes (see Table 1 below), deserves this attention and effort.

As of today, we expect that global private debt assets under management are in excess of approximately USD 850 billion, estimated to reach a hurdle of approximately USD 1.5 trillion, according to the estimates of Preqin, by 2025. This compares to real estate or private equity, for example, which are estimated to grow by a much smaller rate over the period 2020 – 2025. Despite its size, PD has somewhat gotten less attention than other alternative asset classes in the last ten years. This has changed in recent times. In search of yield and as PD has matured, investors now seek to diversify their portfolios by allocating capital to PD. We observe this trend not only for US investors, but increasingly also for European sponsors. Endowment plan investors, public and private pensions funds, insurance companies and foundations around the globe seek to substantially increase their allocation to private debt. On average, these investor groups aim to double or triple their allocation to PD. These investors are most interested to allocate to direct lending, mezzanine, distressed debt and special situations funds.

Our report provides you with important insights related to quantitative analyses related to investment strategy target returns and the return dispersion of PD funds. It is organized such that the reader can navigate through the private debt fund maze, based on informative tables. As such, it may be used as a starting point for any PD analysis and mark the beginning of an interesting and fruitful discussion related to PD portfolio construction.

Figure 2. Private Debt: Risk/Return by Investment Strategy

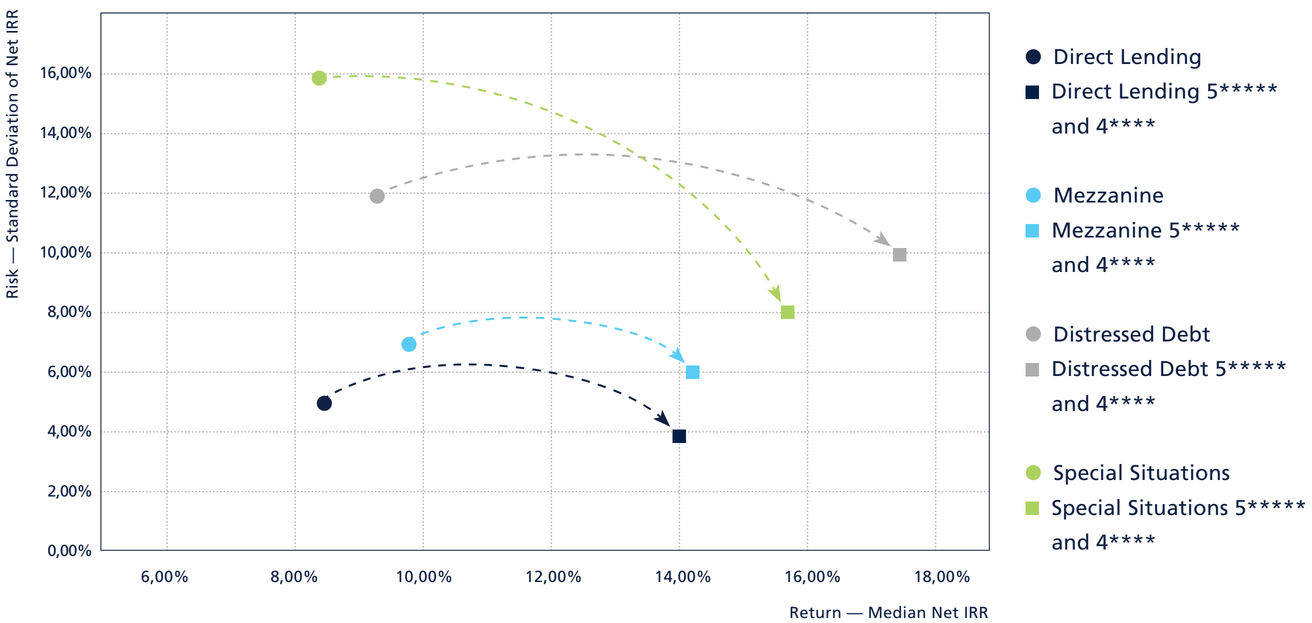

Figure 2: Risk and return by investment strategy. Circles show the cross-sectional return, proxied by the median net IRR, and risk, proxied by the standard deviation of net IRRs. Squares show the same values for funds of the 5***** and 4**** return category as defined by Remaco The data are from Preqin, October 2020.

According to our empirical analysis, PD fund performance is persistent. The probability that a top performing GP delivers consistent high performance throughout follow-on funds is very high. If so, does it pay off to select actively from the universe of PD funds? How does selection change the risk and return of PD fund investments? A first indicative answer to this question can be taken from Figure 2. We rank top performing PD funds, as indicated by the Remaco 5***** and 4**** PD fund ranking, and indicate their median return and risk. Not surprisingly and by construction, for each investment strategy, PD funds of the 5***** and 4**** PD fund ranking category provide superior returns. The interesting result is that top performing funds also display a lower risk, as proxied by the standard deviation of net IRRs.

For example, direct lending funds provide a return of 8.4% and a standard deviation of 4.9% in the cross-section of all analyzed funds. Grouping funds according to their performance, we find a substantially higher median return for the best performing direct lending funds (5***** and 4**** Remaco PD fund ranking) in the amount of 13.9%, with a risk proxy of a lower 3.5%. Obviously, this simple ranking methodology will not replace careful fund due diligence. However, we use it as a starting point in our fund selection process.

Our Report also allows you to better grasp some key statistics related to general partner (GP) size, PD fund size, regional statistics and provides an indication of who the largest investors in PD are. Moreover, our Report contains valuable industry and fund level information, mostly from Preqin, the leading data provider in PD according to our own assessment, and is based on reliable research data, analyzed with due care and following scientific best practices.

Our Report may serve you to validate your own market data and beliefs about PD fund returns and risk. Based on this validation, you may increase the efficiency in the deployment of capital available to be invested into the growing and attractive PD asset class. As the presented data also contains information on the dispersion of fund returns, it can be used to verify your assumptions related to the value at risk (VAR) and expected shortfall (ES) when investing in a diversified PD fund portfolio, both overall but also related to specific investment strategies.

It must be noted that IRRs do not take into account any systematic risk factors when assessing fund performance. We thus use additional metrics when analysing PD funds to be concidered for investment. These include multiples data and public market equivalent (PME) analyses and are based on detailed due diligence findings. As such, the presented report provides a "helicopter view" only and may not be used for any fund level selection a priori. However, it may form a good basis for an informed discussion about this fast growing and attractive asset class. It should also be noted that the fund performance results in this Report are based on data points collected in proximity to the COVID-19 crisis. Careful due diligence is thus recommended to reflect portfolio quality of a specific fund and the necessary net asset value (NAV) adjustments at the fund level.

As a final pitch: We encourage institutional and professional investors to actively discuss this report with us. As a **research driven independent investment advisor**, we are open to exchange on methodologies and findings in much detail. Correspondingly, we engage as founding partner of Tilburg University's Institute for Private Debt. Remaco is partnering up with this institute, in fact taking a leading role, to build an open platform to promote research, education and networking, in the field of private debt.

We hope this report finds your appreciation and remain open for any questions related to it. Do not hesitate to call Remaco for any topic you might want to discuss.

Sincerely yours,

Prof. Pascal Böni, PhD
Remaco CEO and Tilburg School of Ecomomics and Management, Tilburg Institute for Private Debt, Tilburg University, The Netherlands

Prof. Dr. Heinz Zimmermann
Remaco Board of Direcrtors, Department of Business and Economics, University of Basel, Switzerland

Disclaimer

remaco
The art of capital management, since 1947.

Remaco is an independent investment advisor and 100% subsidiary company of Remaco Asset Management AG. The latter is a Swiss securities firm, founded 1947, regulated by the Swiss Financial Market Supervisory Authority (FINMA). We provide independent investment advisory services to institutional and professional investors, with a special focus on private debt. We are centered around approximately 30 professionals providing PD market analysis and research, investment proposals, due diligence services as well as monitoring and reporting services. Together with our international expert access (Nexia) and our academic activity (TiPD) we consider ourselves one of the knowledge leaders in Europe with respect to private debt investing.

Nexia International

We are member of Nexia International, the 9th largest accounting and consulting network globally with 258 independent tax, audit and advisory firms employing 3,442 partners and 34,000 employees, acitive in 122 countries and 727 offices globally.

Tilburg University

We are an institutional partner of Tilburg Institute for Private Debt (TiPD), an open platform to promote research, education and networking, in the field of private debt. The institute is managed by Pascal Böni, CEO of Remaco. TiPD was founded by the departments of finance and accountancy of Tilburg School of Economics and Management, according to the Shanghai Ranking of World Universities the worldwide #6 in business administration and #26 in finance. In Europe, it ranks #2 in business administration and #3 in finance.

1.1 Private Debt Fund and GP Ranking

In our first analysis, we focus on relative attractiveness of PD fund returns by the introduction of our Remaco PD fund ranking. PD funds are ranked against all funds in the PD fund universe using past and current returns measured as internal rates of return (IRR). Our ranking provides interesting descriptive information of PD fund returns and the return dispersion per ranking category. We apply this ranking to the cross-section of all PD funds (Table 1) and provide a more granular analysis, aggregating the returns at the general partner (GP) level or at the investment strategy level (direct lending, mezzanine, special situations, distressed debt and venture debt), further down this report.

We assign five stars to the top 10% of PD funds. The subsequent 22.5%, 35%, 22.5% and 10% of funds are assigned four, three, two, and one stars respectively. To the best of our knowledge, this is the first analysis to rank PD funds based on a comprehensive cross-sectional analysis covering the global universe of PD funds for a long time-period, hence from the very first PD fund vintages in 1986 until recently. We start our analysis at the fund level, the results are presented below.

Table 1: Remaco Private Debt Fund Ranking

This table shows a Remaco analysis based on 720 PD funds and their lifetime IRR as per October 31, 2020. Rankings are assigned based on the latest available data from Preqin and other sources deemed reliable, including vintages 1986 through 2017. We rank private deb funds with a minimum size of USD 100 Mio. and exclude funds with a lifetime lower than three years in order to exclude exotic funds or returns created in the inception phase of a PD fund. We thus consider funds demonstrating reasonable lifetime performance. Each private debt fund IRR is ranked against the complete fund universe, that is against each other. The top 10% of private debt funds are assigned five stars. The subsequent 22.5%, 35%, 22.5%, and 10% of funds are assigned four, three, two and one stars, respectively.

Fund Ranking		(I) IRR	(II) Standard deviation,σ, and E[R]min./max. using ø+/- 3σ	(III) 1st and 5th percentile (left) of ranking category	(IV) N
5***** GP	Mean (Median)	25.3% (21.6%)	10.1% E[R] = -5% - 55.6%	17.7% (18.0%)	79
4**** GP	Mean (Median)	13.8% (13.5%)	1.7% E[R] = 8.7% - 18.9%	11.5% (11.6%)	156
3*** GP	Mean (Median)	9.2% (9.1%)	1.1% E[R] = 5.9% - 12.5%	7.4% (7.8%)	254
2** GP	Mean (Median)	5.1% (5.6%)	1.5% E[R] = 0.6% – 9.6%	2.1% (2.4%)	165
1* GP	Mean (Median)	-5.7% (-1.8%)	12.3% E[R] =-42.6% - 31.2%	-84.8% (-22.1%)	66

Table 1 shows the mean (median) IRRs in column (I). IRRs in the 5***** and 4**** ranking category, amount to 25.3% (21.6%) and 13.8% (13.5%) respectively. The return dispersion with a standard deviation of 10.1% is considerably higher in the 5***** ranking category as compared to the the 4**** or 3*** ranking categories, where funds show less deviation from the mean IRR.

This information is important, as it is likely, based on our empirical research, that PD fund performance is persistent across funds managed by the same GP[2].

In column (II), we show the standard deviation, σ, together with the expected minimum and maximum return of individual PD funds, calculated from three standard deviations from the mean, E[R]min./max.|3 σ. It must be noted that our expected return as shown in Table 1 is based on individual fund returns and their variance. As we use IRRs here and as this performance measure does not allow to estimate a meaningful variance-covariance matrix, the returns in Table 1 are not representative of the expected portfolio return and variance. However, column (II) shows that the expected IRRs of individual funds oscillate in a band of between -5% and 55.6% (8.7% and 18.9%) for the 5***** (4****) ranking category.

[2] Böni, P. (2019). On the pricing , wealth effects and return of private market debt. *Tilburg University, CentER, Center for Economic Research.*

Table 2: Remaco PD General Partner (GP) Ranking

This table shows a Remaco analysis based on 261 general partners (GPs) and their equally weighted fund performance as per October 31, 2020, with vintages 1986 through 2017. Rankings are assigned based on the latest available data from Preqin and other sources deemed reliable. We rank each GP against the complete GP universe, that is against each other. The top 10% of GPs are assigned five stars. The subsequent 22.5%, 35%, 22.5%, and 10% of funds are assigned four, three, two and one stars, respectively.

GP Ranking	(I) IRR	(II) Standard deviation,σ, and E[Rp]min./max. using ø+/- 3σ	(III) 1st and 5th percentile (left) of ranking category	(IV) N
5***** GP Mean (Median)	20.3% (19.6%)	3.6% E[Rp] = 9.5% - 31.1%	16.0% (16.1%)	28
4**** GP Mean (Median)	13.0% (13.0%)	1.1% E[Rp] = 9.7% - 16.3%	11.0% (11.1%)	58
3*** GP Mean (Median)	9.3% (9.3%)	0.9% E[Rp] =6.6% - 12%	7.7% (7.9%)	91
2** GP Mean (Median)	5.4% (5.7%)	1.5% E[Rp] = 0.9% - 9.9%	1.9% (2.4%)	60
1* GP Mean (Median)	-5.9% (-3.3%)	8.4% E[Rp] = -31.1% - 19.3%	-30.4% (-28.7%)	24

As shown in column (III), however, the average IRR at the first (fifth) percentile is 17.7% (18.0%) and 11.5% (11.6%) for the 5***** and 4**** fund ranking category. These values are indicating a relatively low expected absolute value at risk (VaR) or expected shortfall (ES) for a diversified portfolio of PD funds held long-term.

Methodologically comparable to the computation of Table 1 and to account for general partner (GP) skill, we calculate a ranking and performance metrics for funds managed by the same general partner (GP). The results are shown in Table 2. We exclude funds incepted in vintages 2018, 2019 and 2020 to largely exclude their investment period from our analysis. The data analyzed for this current report was cut-off at the end of October 2020. Assigning PD funds to their asset managers (GPs) reduces the average (median) IRR in the 5***** and 4**** GP ranking category to 20.3% (19.6%) and 13.0% (13.0%) respectively. The standard deviation for these two GP ranking categories, compared to the same fund ranking categories in Table 1, is further reduced to 3.6% and 1.1% respectively. With a diversified PD fund portfolio managed by leading GPs and held long-term, the expected value at risk (VAR) and expected shortfall (ES) are further reduced.

More detailed performance analyses including TVPI multiples (the sum of all distributions to LPs plus the remaining NAV, scaled by all contributions of an LP) and fund exposure to systematic market risk, using the Kaplan & Schoar (2005) public market equivalent (PME) – methodology, are available to our clients upon request.

1.2 Private Debt Fund Investment Strategies and Performance

The cross-sectional performance of PD funds presented in Tables 1 and 2 appear very attractive. In the next section, we analyze whether the cross-sectional IRRs are driven by certain investment strategies. We therefore analyze the performance of 720 PD funds across different strategies (direct lending, distressed debt, mezzanine, special situations and venture debt) and consider the vintage years as above, again excluding funds with a fund size lower than USD 100.0m. Additionally, we make a distinction between two time periods, that is the cross-section of all funds and PD fund performance for the period before 2015 and that including and after 2015. Moreover, to show if and to what extent selection impacts IRR performance, we present

Table 3: PD Fund Performance by Investment Strategy: Direct Lending

This table shows a Remaco analysis based on 720 PD funds and their lifetime IRR as per October 31, 2020, and for the direct lending investment strategy (n = 165). We show the cross-sectional IRR performance for all funds of this investment strategy in column (I), that for funds with vintage years prior to 2015 in column (II) and the IRR performance for funds launched in 2015 and later in column (III). In column (IV) we show the same statistics for funds ranked in the 5***** and 4**** fund category. Rankings are assigned based on the latest available data from Preqin and other sources deemed reliable, including vintages 1986 through 2017. The top 10% of private debt funds are assigned five stars. The subsequent 22.5%, 35%, 22.5%, and 10% of funds are assigned four, three, two and one stars, respectively. We include private deb funds with a minimum size of USD 100 Mio. and exclude funds with a lifetime lower than three years in order to exclude exotic funds or returns created in the inception phase of a PD fund. We thus consider funds demonstrating reasonable lifetime performance. Each private debt fund IRR is ranked against the complete fund universe, that is against each other. Fund performance is shown at the 5th, the 10th, the 90th and the 95th percentile additionally to showing mean (median) IRRs and their [standard deviation].

Direct Lending	(I) All funds	(II) Funds with vintage prior to 2015	(III) Funds with vintage equal to or after 2015	(IV) 5***** and 4**** PD funds
Mean (Median) [Standard deviation]	8.35% (8.40%) [4.85%]	8.03% (8.40%) [5.35%]	8.63% (8.47%) [4.39%]	14.90% (13.93%) [3.51%]
1st percentile	-10.25%	-14.70%	-10.25%	11.45%
5th percentile	2.00%	0.32%	3.40%	11.67%
10th percentile	3.80%	3.6%	3.93%	11.9%
90th percentile	13.70%	13.7%	13.93%	19.43%
95th percentile	16.30%	16.77%	16.30%	21.11%
99th percentile	21.11%	27.4%	21.11%	27.4%
Observations	165	77	88	31
Skewness	-0.42	-0.42	-0.33	+1.75

IRRs by strategy and for the 4**** and 5***** PD fund ranking category.

Institutaional investors identify skewness and downside risk as one of the most important features of risk. We therefore also provide more information on the distribution of IRRs, indicating the results at the left and right extremes of the distribution. Using our tables, investors may easily gauge for value-at-risk (VaR) and expected shortfall (ES) of a diversified PD fund portfolio and under the assumption that closed end PD fund assets are held until their liquidation, that is for a long-term period. The results by investment strategy are shown in Table 3.

Direct lending strategies include the practice of PD funds extending loans to small and medium-sized businesses, in general, in return for debt securities rather than equity. We find a mean (median) IRR of 8.35% (8.40%) for the cross-section of direct lending funds by our sample. Interestingly, the IRR for funds launched in 2015 or later show an increase in the IRR whilst reducing the standard deviation of returns (IRR) from 5.35% (for funds with vintages before 2015) to 4.39% for funds incepted in or after 2015. In relative terms, 5***** and 4**** PD funds generate an IRR that is substantially higher, that is a mean (median) IRR of 14.90% (13.93%). Also, the worst funds in the 5***** and 4**** ranking category (i.e. at the 1st percentile) generate an IRR not lower than 11.45%. Not surprisingly, fund IRRs in this ranking category are right skewed.

Table 4: PD Fund Performance by Investment Strategy: Distressed Debt

This table shows a Remaco analysis based on 720 PD funds and their lifetime IRR as per October 31, 2020, and for the distressed debt investment strategy (n = 189). We show the cross-sectional IRR performance for all funds of this investment strategy in column (I), that for funds with vintage years prior to 2015 in column (II) and the IRR performance for funds launched in 2015 and later in column (III). In column (IV) we show the same statistics for funds ranked in the 5***** and 4**** fund category. Rankings are assigned based on the latest available data from Preqin and other sources deemed reliable, including vintages 1986 through 2017. The top 10% of private debt funds are assigned five stars. The subsequent 22.5%, 35%, 22.5%, and 10% of funds are assigned four, three, two and one stars, respectively. We include private deb funds with a minimum size of USD 100 Mio. and exclude funds with a lifetime lower than three years in order to exclude exotic funds or returns created in the inception phase of a PD fund. We thus consider funds demonstrating reasonable lifetime performance. Each private debt fund IRR is ranked against the complete fund universe, that is against each other. Fund performance is shown at the 5th, the 10th, the 90th and the 95th percentile additionally to showing mean (median) IRRs and their [standard deviation].

Distressed Debt	(I) All funds	(II) Funds with vintage prior to 2015	(III) Funds with vintage equal to or after 2015	(IV) 5***** and 4**** PD funds
Mean (Median) [Standard deviation]	10.81% (9.50%) [11.23%]	12.15% (10.70%) [10.86]	5.30% (8.10%) [11.18%]	19.74% (17.43%) [9.64%]
1st percentile	-28.70%	-18.65%	-28.70%	11.58%
5th percentile	-3.20%	-0.20%	-22.11%	11.90%
10th percentile	1.50%	2.20%	-13.16%	12.40%
90th percentile	21.70%	22.00%	14.30%	29.14%
95th percentile	28.03%	29.14%	21.60%	35.70%
99th percentile	44.80%	44.80%	22.00%	78.80%
Observations	189	152	37	76
Skewness	+0.73	+1.42	-1.46	+3.49

Distressed debt funds provide capital to companies that have filed for bankruptcy or have a significant chance of filing for bankruptcy in the near future. We find a mean (median) IRR of 10.81% (9.50%) for the cross-section of distressed debt funds by our sample. Interestingly, the IRR for funds launched in 2015 or later show a significant decrease in the IRR whilst standard deviation of returns (IRR) for the two periods remains approximately the same (10.86% vs. 11.18%). Distressed debt funds appear riskier when looking at the 1st and 5th percentile of the IRR distribution and compared to direct lending funds. In relative terms, 5***** and 4**** PD funds generate an IRR that is substantially higher, that is a mean (median) IRR of 19.74% (17.43%). Also, the worst funds in the 5***** and 4**** ranking category (i.e. at the 1st percentile) generate an IRR not lower than 11.58%. Not surprisingly, fund IRRs in this ranking category are right skewed.

Table 5: PD Fund Performance by Investment Strategy: Mezzanine

This table shows a Remaco analysis based on 720 PD funds and their lifetime IRR as per October 31, 2020, and for the mezzanine debt investment strategy (n = 249). We show the cross-sectional IRR performance for all funds of this investment strategy in column (I), that for funds with vintage years prior to 2015 in column (II) and the IRR performance for funds launched in 2015 and later in column (III). In column (IV) we show the same statistics for funds ranked in the 5***** and 4**** fund category. Rankings are assigned based on the latest available data from Preqin and other sources deemed reliable, including vintages 1986 through 2017. The top 10% of private debt funds are assigned five stars. The subsequent 22.5%, 35%, 22.5%, and 10% of funds are assigned four, three, two and one stars, respectively. We include private deb funds with a minimum size of USD 100 Mio. and exclude funds with a lifetime lower than three years in order to exclude exotic funds or returns created in the inception phase of a PD fund. We thus consider funds demonstrating reasonable lifetime performance. Each private debt fund IRR is ranked against the complete fund universe, that is against each other. Fund performance is shown at the 5th, the 10th, the 90th and the 95th percentile additionally to showing mean (median) IRRs and their [standard deviation].

Distressed Debt	(I) All funds	(II) Funds with vintage prior to 2015	(III) Funds with vintage equal to or after 2015	(IV) 5***** and 4**** PD funds
Mean (Median) [Standard deviation]	10.25% (9.70) [6.84%]	10.30% (9.67%) [6.89%]	10.01% (9.76%) [6.69%]	16.22% (14.10%) [6.15%]
1st percentile	-10.80%	-6.70%	-13.50%	11.50%
5th percentile	0.62%	0.75%	0.62%	11.60%
10th percentile	3.30%	4.33%	2.00%	12.00%
90th percentile	17.82%	17.29%	19.05%	21.00%
95th percentile	20.30%	19.77%	20.35%	26.03%
99th percentile	31.00%	31.00%	21.00%	55.50%
Observations	249	206	43	91
Skewness	+1.08	+1.44	-0.85	+3.61

Mezzanine debt funds make investments in debt subordinate to the primary debt issuances and senior to equity positions. We find a mean (median) IRR of 10.25% (9.70%) for the cross-section of mezzanine funds by our sample. Interestingly, the IRR for funds launched in 2015 or later show an IRR and standard deviation comparable to that for funds with vintages before 2015. In relative terms, 5***** and 4**** mezzanine funds generate an IRR that is substantially higher, that is a mean (median) IRR of 16.22% (14.10%). The worst funds in the 5***** and 4**** ranking category (i.e. at the 1st percentile) generate an IRR not lower than 11.50%, comparable to direct lending funds. Not surprisingly, fund IRRs in this ranking category are again right skewed.

Table 6: PD Fund Performance by Investment Strategy: Special Situations

This table shows a Remaco analysis based on 720 PD funds and their lifetime IRR as per October 31, 2020, and for the special situations debt investment strategy (n = 91). We show the cross-sectional IRR performance for all funds of this investment strategy in column (I), that for funds with vintage years prior to 2015 in column (II) and the IRR performance for funds launched in 2015 and later in column (III). In column (IV) we show the same statistics for funds ranked in the 5***** and 4**** fund category. Rankings are assigned based on the latest available data from Preqin and other sources deemed reliable, including vintages 1986 through 2017. The top 10% of private debt funds are assigned five stars. The subsequent 22.5%, 35%, 22.5%, and 10% of funds are assigned four, three, two and one stars, respectively. We include private deb funds with a minimum size of USD 100 Mio. and exclude funds with a lifetime lower than three years in order to exclude exotic funds or returns created in the inception phase of a PD fund. We thus consider funds demonstrating reasonable lifetime performance. Each private debt fund IRR is ranked against the complete fund universe, that is against each other. Fund performance is shown at the 5th, the 10th, the 90th and the 95th percentile additionally to showing mean (median) IRRs and their [standard deviation].

Special Situations	(I) All funds	(II) Funds with vintage prior to 2015	(III) Funds with vintage equal to or after 2015	(IV) 5***** and 4**** PD funds
Mean (Median) [Standard deviation]	8.01% (8.20) [13.66%]	8.20% (7.86%) [14.99%]	7.57% (9.80%) [10.05%]	18.87% (15.75%) [8.05%]
1st percentile	-84.80%	-84.80%	-13.21%	11.56%
5th percentile	-8.50%	-3.70%	-8.50%	11.57%
10th percentile	-1.23%	0.46%	-6.60%	12.00%
90th percentile	20.38%	23.96%	16.70%	30.95%
95th percentile	27.84%	27.84%	27.30%	34.10%
99th percentile	41.10%	41.10%	31.50%	41.10%
Observations	91	64	27	30
Skewness	-3.16	-3.46	+0.10	+1.12

Special situations funds cover several areas including distressed and mezzanine, where loan decision or grade is defined by something other than underlying company fundamentals. We find a mean (median) IRR of 8.01% (8.20%) for the cross-section of special situations funds by our sample, slightly decreasing for funds incepted in or after the year 2015. Interestingly, the IRR for funds launched in 2015 or later show a standard deviation significantly lower (10.05%) than that of fund IRRs of funds launched prior to 2015 (14.99%). In relative terms, 5***** and 4**** special situations funds generate an IRR that is substantially higher, that is a mean (median) IRR of 18.87% (15.75%). The worst funds in the 5***** and 4**** ranking category (i.e. at the 1st percentile) generate an IRR not lower than 11.56%, comparable to those of direct lending funds. Not surprisingly, fund IRRs in this ranking category are again right skewed.

To receive our full report, please contact
pascal.boeni@remaco.com
christoph.frick@remaco.com
jennifer.musumeci@remaco.com

A PDF version of this report is also available at
www.remaco.com/research-notes/