Debt Investment Companies

Diving deep finds you the treasure

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Executive summary

We believe that to properly understand debt investment companies, they need to be analysed as lenders first, and investment companies second. To understand their specific credit, business model, accounting and growth characteristics requires detailed expertise in lending. This report employs the analyst's experience of researching debt vehicles and lending businesses for more than 30 years to tease out the investment-critical characteristics.

The debt investors category has grown exponentially in recent years. The Association of Investment Company classification of this sub-sector encompasses 38 'investments' with a further 5 in its leasing sector. We believe that the time has now come to recognise that a broad-brush categorisation is no longer appropriate, and this large diverse sector should be split into more focussed constituents. The companies are facing fundamentally different risk profiles and have a range of accounting policies, making NAV comparisons fraught with danger. They also report their NAVs at diverse intervals, further complicating comparisons across the sector. Our analysis results in the following sub-sectors: specialist lenders, secured lenders, Collateralised Loan Obligation (CLO) vehicles, peer-to-peer/platform lenders, mixed asset and leasing companies. Such an approach allows the discount/premium to NAV to be considered in its proper context rather than a muddy pool of non-comparable businesses. Given we are including leasing, we will refer to the sector going forward as credit investment companies (CIC)

In this report, we provide investors with our thoughts on the key issues for CICs. We start with thematic considerations that apply across all types of the company (understanding credit risk, the outlook at this stage of the cycle, accounting and valuation), before deep-diving into each of the sub-sectors. We have also provided investors with a simple tick-list of questions to ask each different type of company.

Attractions of CIC: high yield (7.1%); improving competitive environment, giving structural growth; specialist skills, adding value; selective stocks, trading below NAV; low correlation with other investment classes

The attractions for the sector are as follows.

- A high yield – on average 7.1%. The highest-yielding companies are Blackstone/GSO Loan Financing 12.2%, Fair Oaks Income 12.2%, Chenavari Toro Income Fund 10.1%, Doric Nimrod Air Two 9.2% and Volta Finance (herein referred to as Volta) 9.1%. The only companies yielding below 5% are NB Global Floating Rate Income (4.4%) and Alcentra European Floating Rate Income (4.6%). Such yields are likely to be attractive to income-focused investors, and dividend cover is supported, in many cases, by long-term cashflows.

- Mainstream competition from banks has reduced because of their incremental capital requirements. This has created a structural growth opportunity for the CICs, which currently have a tiny market share.

- Specialist skills allow the generation of superior returns from niche markets.

- The sector trades at a 4% discount to the December NAVs. The largest discounts among continuing companies are Chenavari Toro Income Fund 19.5%, P2P Global Investments 14.1%, Funding Circle SME Income Fund 11.5% and Volta 11.2%). On January NAVs (see Appendix 2) Volta's discount is 13.8% and Funding Circle SME Income Fund 10.3%. (the others have yet to report their January numbers).

- Given the underlying economic exposure, we would expect most of the sector to have a low correlation with equities and commodities investments.

Risks of CIC: credit is key. Greatest volatility is likely in mark-to-market (rather than mark-to-model) businesses and those with illiquid/complex investments, or in untested markets.

The main risk is credit deterioration. A gentle deterioration could be a positive, as reinvestment will be at higher spreads than the current low levels. Additionally, volumes may increase as banks' appetite to lend wanes further. These factors could offset a modest rise in provisioning. However, a rapid and sharp economic contraction will see NAVs drop in the short term, as impairments/mark-to-market losses exceed these positive trends. In the long term, cashflows could improve, but there will be short-term losses. Those companies with market-price-driven NAVs, illiquid or complex investments and those in untested markets are likely to show the greatest volatility, as we believe adverse sentiment will compound actual losses.

Exposure to interest rates (other than their impact on credit) is mixed. Funding risk is low. The sector is net long US dollars, although currency risk is company-specific.

Understanding credit risk: for direct lenders, the CAMPARI and ICE analysis is invaluable. We also consider governance, security and collections.

For indirect lenders, it is important to manage the intermediaries, including understanding the real underlying risks

We also explore where we are in the credit cycle

We review how investors should consider credit for companies investing, both directly and indirectly, in debt. For direct investors, we focus on the basic canons of lending – the CAMPARI and ICE (character, ability, means, purpose, amount, repayment and interest, and insurance, commissions and extras) analysis. We emphasise the importance of the character of the borrower and how lenders can establish a view on that. For direct lenders, we also note the importance of governance (i.e. independent credit sanctioning function), the value of different types of security, the importance of effective execution of security, monitoring and, critically, collections once an account is in arrears. For indirect lenders, we note the importance of assessing the character and ability of the introducer of business, statistical portfolio techniques and the issues looking through to underlying exposures. Additionally, diversification benefits, the process by which recoveries are managed and the option of sale are important issues. We also consider where we are in the credit cycle, and the impact on the bottom line of changes in spreads, volumes and credit impairment.

Accounting: mark-to-model (including IFR 9) vs. mark-to-market is an important distinction, with the latter likely to show increased volatility. IFRS9 has accelerated the recognition of losses, although underlying economics are unchanged. Hardman & Co's approach to adjusted accounting is outlined.

On accounting, the key distinction we draw is between companies that are required to adopt mark-to-model methodologies, as opposed to using mark-to-market approaches. We include IFRS9 as a mark-to-model approach, as impairments are assessed using management expectations of future losses based off modelled outcomes. Both mark-to-model and mark-to-market methodologies have merits, but the mark-to-market approaches are likely to lead to more NAV volatility, as they will reflect sentiment-driven changes, as well as cashflow expectations. We also give a brief review of the move to IFRS9 accounting and the associated recognition of impairments on an expected loss, rather than incurred loss, basis. This has accelerated when losses have been incurred, thus reducing near-term profits. The underlying economics, cashflows and total profit are all unchanged. We also show our "Hardman & Co adjusted accounts" to better reflect dividend cover. The impact of foreign exchange on the NAV/profit for leasing companies is also highlighted.

Three approaches to valuation

We have undertaken three approaches to valuation: i) yield, ii) discount/premium to NAV, and iii) Gordon Growth Model (GGM). Given the high yield of the sector, we believe the yield approach is likely to be given a significant weight by investors. We note the range of premia/discounts to NAV and comment on these in detail in each of the sub-sector sections later in the report. There is an argument that, as financing companies, the GGM best reflects the value added by management, especially where intellectual capital is being deployed.

NAV total return – sector average on Hardman & Co basis: 15.3% p.a.

We have adopted an approach based off the dividend being withdrawn, rather than the industry standard dividend reinvested basis, to reflect the attractive yield, making the sector an income, rather than a capital, play. On this basis, the sector has an average NAV return of 15.6% over three years, with the highest growth being shown by Fair Oaks at 43.4%, followed by Volta at 22.4%, GCP Asset Backed Income at 21.9%, Starwood European Real Estate Finance at 21.7% and Real Estate Credit Investments at 20.6%.

Specialist lenders can exploit market opportunities in niche areas and illiquid debt, which require sector-specific skills, where markets are non-core or uneconomic for banks. The sector can be a rewarding space for those with specialist skills to identify such opportunities.

The average specialist lender is trading close to par to December 2018 NAV (ranging from BioPharma Credit, at a 5.5% premium, to JPMorgan Global Convertibles Income, at a 5.5% discount). They have an average yield of 5.5% (highest: TwentyFour Select Monthly Income at 7.2%). We detail in the company description table on p25 each specialist lender's specific focus and the associated unique portfolio characteristics. For the sub-sector as a whole, UK exposure is relatively limited. We also note that the companies in this sub-sector, on average, have more concentrated portfolios than the total sector average. The key to understanding this sub-sector is to appreciate how the use of specialist skills/intellectual capital can add value by identifying when pricing does not reflect risk. Such opportunities arise where i) the borrower's economic sector requires specific skills to be understood properly, ii) the size of the market is unattractive for mainstream lenders to compete, iii) the market is illiquid, iv) the risk/capital profile is unattractive for a bank, v) the area is seen as strategically non-core to competitors, and vi) the potential returns for the individuals making that assessment are higher in an investment company than a mainstream lender. We also note the opportunity to add value through specialised deal structures, including early repayment penalties.

Secured lenders: we explore the nature of security and how it impacts on NAV calculations, as well as the importance of proper execution and monitoring.

The average UK property-secured CIC is trading at a premium of 1.4% to December 2018 NAV (highest: Real Estate Credit Investments at 5.2%), while the average for other secured lenders is a 1% discount. The average property-secured CIC has a yield of ca.6.6%, while the average for other secured lenders is 7.0% (highest: SQN Asset Finance C shares at 7.9%). We highlight the attractions of security in realisation values, its underpinning of mark-to-model valuations (real estate being the most secure) and the lower risk profile for invoice finance businesses. We also note the importance of execution and ongoing monitoring to security values and how the basis of valuation (e.g. open market vs. forced sale) can impact on value. We also note that the change in Crown Preference should have no effect on fixed security holders, but could impact those with UK floating charges. This change in Crown Preference could have an impact on borrowers if their customers are likely to default.

CLO sub-sector: among the highest yields and discounts to NAV, despite superior three-year returns. Perceived complexity for a relatively simple underlying risk is an issue.

The CLO sub-sector has among the highest yields and the highest discounts to NAV, despite generally generating superior three-year NAV returns. We discuss in detail the factors that may be driving the anomaly, including i) the perceived complexity of relatively simple underlying cashflows, ii) valuation methodologies that mainly have external verification, and iii) potential sentiment-driven NAV volatility, which could mask long-term cashflow opportunities. We have included sections describing the market and showing that the exposure is to a broad portfolio of loans. CLO is simply a wrapper to get that exposure. We also highlight the opportunities in this market and how investment in different tranches of CLO securities carry different risks.

Peer-to-peer/platforms: structural growth from dis-intermediating banks and technology. Risks are credit management, collection and, especially, an unproven model in a recession.

This sub-sector has diverse valuations, with a range of a 14% discount to December 2018 NAV (P2P Global Investments) to a 13% premium (Honeycomb). The yields range from 5.3% (Funding Circle SME Income Fund) to nearly double this level (VPC Speciality Lending). We discuss the opportunities, as capital requirements increase the relative attractiveness from dis-intermediating banks and technology facilities' platform developments. On the risk side, we note that this is a rapidly evolving market, with credit losses above like-for-like lenders, and one that is untested through a recession. Developments across the globe are not universally positive for the market outlook.

Mixed asset debt companies are diverse

The three companies in the mixed asset sub-sector are, by their nature, diverse. Chenavari Toro Income Fund and TwentyFour Income Fund have some similarities to our CLO sub-sector, but we believe the underlying asset class (notably investments in residential mortgage-related securities) has the potential to make comparisons misleading. Chenavari Toro Income Fund has the highest discount to December 2018 NAV (19.5%) and one of the highest yields (10.1%) in the sector.

Leasing companies: attractive yield but accounting makes NAV comparisons meaningless

The leasing sub-sector has an above-average yield (8.4%), with all the companies yielding over 6.7% and a high of 9.2% (Doric Nimrod Air Two). It is a very focused sector (aircraft or shipping), with highly concentrated portfolios that are dependent on niche skills. We note that the accounting makes NAV comparisons with other debt companies meaningless and introduces significant profit volatility that bears no resemblance to underlying cashflows. For example, there are major timing differences in the recognition of foreign exchange movements, with lease receivables only recognised over the period of the lease.

Wind-down/harvesting

Another specialist sub-sector contains companies that are in wind-down/harvesting phases. The market's expectations of realisation values over the near term make these companies non-comparable with the others in the debt sector, and valuations are driven by company-specific issues, not sub-sector dynamics.

Hardman & Co tick-lists

In Appendix 1 in this report, we have provided investors with a standard simple tick-list of questions to ask companies in the different sub-sectors. Clearly, there will be company-specific questions, but these lists are intended to remind investors of some over-arching sub-sector issues.

Current NAV: for comparability, we have used December NAV wherever possible. In Appendix 2, we show the latest NAVs.

In order to enhance comparability, we have, throughout the report, used end-December 2018 NAVs and portfolio concentrations. While some companies provide NAVs daily and some provide early monthly updates, others do not. We have included, in Appendix 2, the latest NAV updates, how these differ from the December year-end, and the dates of the NAV. We do not believe they change the business messages through the report, as none of the movements are material and the average change across the whole sector is 0.6%. The outlying largest single movements have been in JGCI (+4.2%), BPCR (3.8%), Volta (+3.1%) swing in January and Fair Oaks -3.1%.

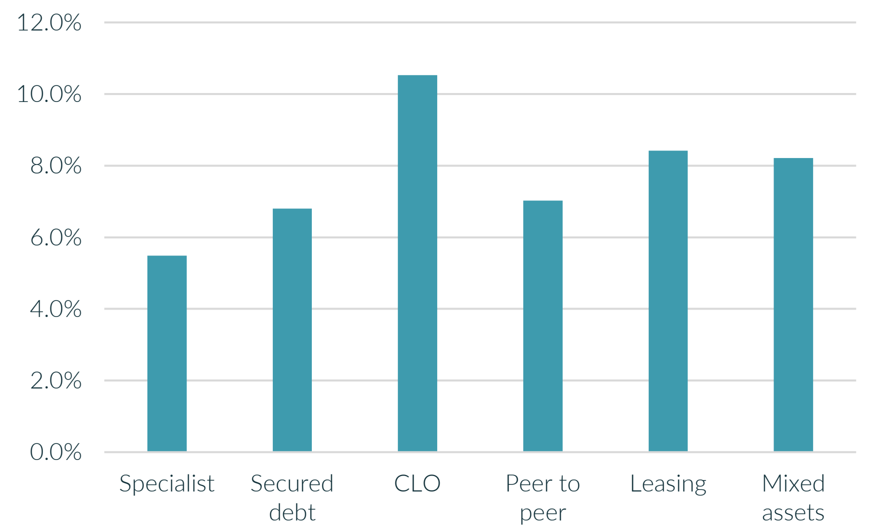
Sector overview

Attractions

High yield in the main, generated from predictable income streams, many from multi-year commitments

The historical average annual yield is high across all of our sub-sectors. As can be seen in the first chart below, all sub-sectors 12-month historic yield is over 5.5%, which is comfortably more than the FTSE 100 projected yield for 2019. In the main, these dividends are generated from predictable interest income streams, rather than being dependent on potentially volatile capital gains or losses. For many of the funds, the underlying lending is multi-year.

Average yield by sub-sector (%)



Source: Hardman & Co Research; wind-down sector excluded; prices as at 21 February

As can be seen in the following chart, all the stocks invested in CLOs and most leasing-asset businesses exceed the sector average.

Historical 12-month yield by company (%)

Source: Hardman & Co Research; prices as at 21 February

Structural growth, as mainstream banks squeezed out by capital requirements or specific skill requirements. Technology also supports structural growth for some.

Mainstream competition from banks has been severely affected by incremental capital requirements, and they have significantly retrenched to commodity products in large- scale markets. This focus has created opportunities in more specialist markets that require tailored underwriting, specialist knowledge and, often, human skill or bespoke IT and/or data analytics. We believe there is a structural growth opportunity for specialist lenders, secured lenders (especially property) and CLO funds. In the platform space, technology gives access to information and customer bases that was unthinkable a few years ago, again potentially creating structural growth.

Structural growth from low market share

The total assets in CICs, including leasing ones, are under £15bn. While materially larger than the peer-to-peer sector, this is a tiny part of the overall lending market. By way of comparison, according to UK Finance, UK banks provide total commercial lending facilities of £263bn, and the market for gross residential mortgage lending was £21bn in December 2018 alone. We also note that many of the lenders are focused on SMEs, and we believe this is likely to be a structural growth market in the UK, driven by socio-economic trends such as greater self-employment.

Specialist skills paid more in investment companies than mainstream lenders

Most of the CICs exploit intellectual capital, especially in niche areas such as sector-specific lending, creditworthiness or product structuring. The potential rewards for individuals with those skills is materially higher in a CIC than in a mainstream bank.

Uncorrelated to stocks, bonds, real estate and commodities markets

We also note that the sector's cashflows have a different economic sensitivity from equities/commodities, and thus create an asset class that should have a low correlation to those investments. This will particularly be the case for lenders who are marking to model rather than marking to market (in our classification, this applies to most specialist and secured lenders whose accounting for impairments is the standard adopted by banks and lenders, i.e. IFRS9).

Many companies at a material discount to NAV

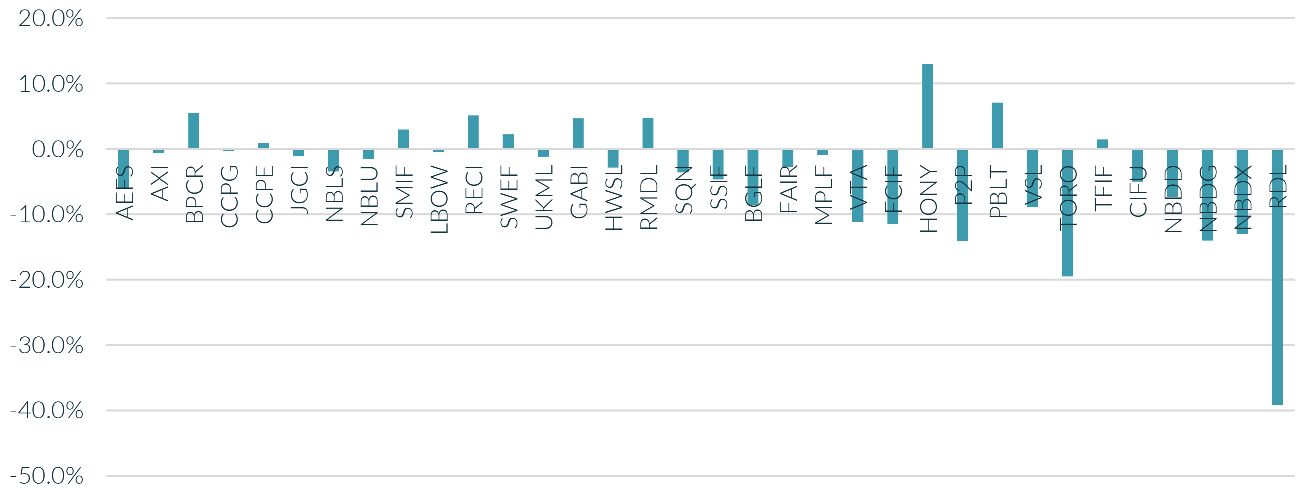
There is quite a range of premium/discounts to the accounting NAV. We note that the leasing NAVs reflect unrealised (and, in our view, massively overstated) foreign exchange losses – so we have excluded them from the chart. The sub-sectors with the highest discounts are the CLO and wind-down sectors.

Sub-sector average discount/premium to December 2018 NAV (%)

Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

As can be seen in the chart below, all the wind-down companies are at a discount to NAV, as are most of the CLO companies. The peer-to-peer sub-sector has a diverse mix between a large discount and a large premium.

Company share price discount/premium to December 2018 NAV (%)



Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

Risks

Credit risk a key issue. Sharp deterioration will see near-term NAV reduction but may create good reinvestment opportunities for long-term profit growth.

Credit risk is the key risk. We believe impairments are very likely to rise from current low levels, but it is important to understand all the underlying dynamics of the profit and loss impact. Spread widening and higher volumes are both likely, and these create positive long-term earnings potential.

- If the environment sees a gentle credit deterioration, the positive factors may outweigh the negative ones. If the credit deterioration is sharp, then impairments and mark-to-market losses will exceed any income and volume benefits. The likely speed and scale of worsening credit should be considered by investors. It is worth noting that, in the long term, the benefit from widening spreads can be material, as they get locked into portfolios that, in due course, see improving credit again.

Non-standard lenders likely to see greater volatility

- Non-standard businesses are likely to see more benefit from wider spreads (customers are less sensitive to an extra 1% to loans being charged at 15% than ones at 5%), and they are likely to see a greater benefit to volumes as mainstream lenders withdraw. However, non-prime, non-standard lenders are also likely to see a worse-than-average credit deterioration.

Market risk: companies subject to mark-to-market valuations likely to see more NAV volatility in short term

For those companies with market-priced investments, the sentiment effect is likely to exaggerate underlying cashflow expectations. We expect greater NAV volatility in businesses whose assets are marked to market than those whose NAV is driven by mark-to-model valuations. We include lenders using IFRS9 impairment methodology as marking to model for this purpose.

Interest rate risk

The sector's exposure to rising interest rates is mixed. Perhaps the biggest element is the macroeconomic effect that rising rates may have on asset quality. The direct income effect for some reflects a focus on floating rate notes or derivatives. We also note that a number have invested in equity securities where, again, the effect of rising rates is mixed (we detail the key sensitivities to the CLO sub-sector in the section below).

Funding risk very modest

One of the key features of the sector is that gearing in the investment companies themselves is generally very low (although there may be gearing in some of their investments). Where there is gearing, it has i) been kept very modest by the standards of finance companies, let alone banks, or ii) been structured to minimise the risk of the forced sales of assets at distressed prices. The issue for us is not 'do these companies face a liquidity crunch?' but more 'would they be able to access equity funding to take advantage of repricing opportunities?' At the time when they would be most wanting to raise funds, the underlying markets could appear most vulnerable.

Incremental regulatory risk modest

We note that these investment companies are subject to the same regulatory environment as other investment companies, including producing Key Information Documents (KIDs) and, where appropriate, requiring potential users of their websites to go through a compliance procedure before getting access to information. The former is subject to market-wide concerns and, while the latter may limit potential investors, it also reduces the risk of mis-selling claims/post-event regulation in due course.

Where we do see some risk of regulation is to underlying markets. For example, lending to SME is currently unregulated in the UK, but this could change. We believe that, in the event of material numbers of retail investors losing money on peer-to-peer platforms, that market could become subject to materially tighter regulation and potentially mis-selling claims. The effect of this secondary regulation could be to disrupt the origination of new business and management of existing portfolios/collection processes.

Currency risk

Many of the companies have non-sterling investments and thus generate currency exposure. This is managed through funding hedging (i.e. matching liabilities to the asset, as seen in the aircraft leasing sub-sector), derivatives and running open exposure. We believe the sector overall has a net long US dollar position and would be a beneficiary if sterling were to weaken against the dollar – but it is very stock-specific. We detail the currency mix for each company in the sections below.

Understanding credit risk

Impairment recognition is art, not science

Before diving into the detail, we highlight that the recognition of losses reflects managements' views and assumptions overseen by auditors within accounting rules. Provisioning is an art, not a science, and investors should recognise this and give credit to managements that are conservative in other areas of their business, as they are also likely to be conservative in impairments.

Direct investments

Losses can never be excluded, but following the canons of lending reduces the probability of a loss event and its severity should default occur

We review the "cradle to grave" process by which the loan funds that are directly investing in loans should manage credit risk (portfolio investor considerations are given in the section below). While losses can never be excluded, where an investment company adopts sensible practices in assessing credit, monitoring positions once a loan has been made and taking appropriate security, they can be reduced. These processes should moderate both the probability of default and the severity of loss should a default occur.

Assessing credit

We believe that the basic principles of lending apply just as much to a debt fund as they do to any other balance sheet lender. They are sometimes called the "Canons of Lending" or the "CAMPARI and ICE" analysis, as detailed below.

CAMPARI and ICE: The canons of lending

Requirement	Hardman & Co Comment
Character	The background and experience of the individuals or businesses is essential to determining future success. There is a material element of subjective assessment of the borrowers, and includes whether the borrowers will be willing to make repayments if they have the ability to do so. Character can apply to both corporates and individuals – so, for example, a company with a rapid growth culture is likely to be more at risk of over-trading than a company with a conservative growth culture. We believe that the closer lenders are to customers (both physically and in terms of relationship), the better they are able to assess the borrowers' character. "Kicking the tyres" can be invaluable.
Ability	What kinds of skills does the personal borrower have and, for corporates, what are their sustainable competitive advantages? Does the borrower have the right management experience and skills? Quantitative measures include past performance and evidence of financial acumen.
Means	This focuses on the resources of the borrowers to make repayments. We believe the key measure should be cashflow. Having security is a useful backstop but can be expensive and time-consuming to enforce.
Purpose	Is the loan appropriate for the purpose for which it is being used, and to what extent does the nature of the borrowers change if they get the loan? A loan for an investment that itself generates returns is a different risk from, say, debt consolidation.
Amount	Is the amount of the loan proportionate to the purpose, and to what extent are the borrowers putting their own resources at risk, as well as those of the lenders? A 100% loan to value proposition is not only higher-risk because there is more debt, but also because the borrowers have nothing financially to lose if they cannot make payments.
Repayment	What sources of income are being used to repay the debt? A single source is higher-risk than diversified income streams. A corporate borrower with one major client is much more at risk that one with dozens. This also ties into the purpose requirement, in that the business development funded by the borrowing may generate incremental income (or cost).
Interest	Does the interest rate reflect the risk – both now but also the probable volatility of risk through the duration of the debt? The risk-adjusted return is more important than the rate alone (like-for-like loans with 20% interest and 5% loss rates are more profitable than ones with a 1% loss rate that charge 5%).
Insurance	Security is important, but we believe should not, in isolation, be the basis for lending, except in very exceptional circumstances. Investors need to be aware of the priority of the security in the event of claims. It is also worth noting that the execution of security is very important (see section below).
Commissions	Investors need to not only consider the interest rate, but also other income generated from the loans, including fees and commissions for things like arrangement, monitoring, insurance, etc.
Extras	In some cases, the nature of facilities generates significant extras. For example, we believe BioPharma Credit's niche is highly likely to see early redemptions. The make-good and penalty clauses built into its documentation mean that, when there is an early repayment, BioPharma Credit effectively receives income for a period when it is not actually lending.

Source: Hardman & Co Research

Governance

Risk decision should be separate from origination

An important governance point is that loans should be sanctioned by an investment committee – not by the team that originates and assesses the loan. In small lenders, this is not always possible, but an independent risk control process is important. Security values should ideally also have external valuers' support and be stress-tested in different scenarios.

Value of security

Value of security is only what it can be sold for, often in forced sale conditions

Investors should appreciate that the nature of security materially affects its value to a lender. For example, there is likely to be a lower realisation if the assets i) have limited secondary markets, e.g. specialist equipment of highly regulated assets, ii) are subject to technological obsolescence, iii) are leveraged tax leases, or iv) are highly mobile and so may be "lost" in the collection process.

Execution of security

Properly executing security is vital. This sounds simple and basic but, for example, in HBOS case, ca.52% of cases had issues.

One further consideration investors need to make is that execution risk is a material issue. By way of example, we highlight s344 p88 of the *FCA "the Failure of HBOS PLC A report by the FCA and PRA*"(Hardman & Co emphasis), where over half of the security HBOS has taken may not have been effective.

"The risk was increased by failures to perfect the security arrangements. In a meeting with the FSA it was reported that following ***a sample check of security 52% had issues****. Similarly, the Bank of England, when reviewing a pool of property loans put forward as collateral, noted that* ***HBOS had not registered its security interest on the property for a third of the loans****. However, risks to the adequacy of security had been known: the CCRC recorded that* ***valuation clauses were often negotiated out of contracts, or that clients would only accept a valuation every seven years****, and that in practice it was difficult to get valuations. In February 2007, it had been discovered that* ***almost 20% of valuations recorded in the division's systems were unattributed and therefore could not be relied upon. In effect HBOS had no or very weak security against a significant proportion of commercial property loans and was aware its security cover was potentially ineffective."***

Monitoring and review once a loan has been made

Both customers and value of security need to be monitored regularly. You cannot just do it when the loan is originated.

The early identification of accounts at risk is crucial to limiting credit losses. This means that lenders need to have effective monitoring of, and to establish a close working relationship with, their borrowers. Where ongoing control is simply left to waiting to see if payments are made, and then chasing at a later stage, the probability of loss will be higher.

Collection process

Collections vital to level of end loss

Collecting debts can be just as important to ultimate returns as the initial lending decision. For some CICs, the outsourcing of collections under experienced supervision may be the only practical option. Such an approach should ensure that appropriate and experienced expertise is brought to bear and moderates ongoing costs. However, there are likely to be higher charges in the event of default, and these may not be recoverable from the borrower. We are not unduly concerned if a company uses outsourcing arrangements, as long as there is an effective process in place.

Portfolio management

Diversification is an important risk management tool

Even specialist managers with a small number of borrowers should aim to have diversification of risk. This may be by geography, product or end-customer base. We note, for example, that BioPharma Credit is financing a range of life science products and is not dependent on just one. In contrast, we note that most of the aircraft leasing companies are concentrated primarily on three airlines.

Indirect investments

The underlying "CAMPARI and ICE" principles still apply to those companies making indirect investments (such as CLOs), but their execution is different, and such companies also need to adopt incremental portfolio techniques.

Need to know introducer

- The investment company needs to assess how the introducer/manager of loans is applying the CAMPARI & ICE principles. They need to judge the character and ability of the intermediary and how they are managing credit.

Need to look through to underlying assets. For some, this is complicated by seniority of underlying and seniority of debt in intermediary

- In addition, there is a need to look through the intermediaries to be able to assess the underlying exposure, which may be complicated by the fact that the vehicle in which they are investing is churning its portfolio. The investment company needs to know not only who the counterparty is, but also the seniority of debt that is being held. A CLO holding an AAA security may lose nothing in a default, while, for the same counterparty, investors in lower tranches may lose their whole investment.

Statistical modelling and technology important

- There tends to be greater dependence on statistical modelling, rather than subjective opinion. This has advantages (e.g. removing personal biases) but also disadvantages (e.g. a reliance on historical behaviour).

Tend to be more diversified

- Traditional diversification approaches tend to have more weight. By their nature, these companies have more underlying counterparties; this, in itself, generates diversification. However, portfolios are also typically modelled to achieve a sector/geographical/duration diversification that is simply not possible with, say, many specialist lenders. The dangers of being highly concentrated direct lenders can be seen in the ca.10% share price falls of several leasing companies when Airbus announced it would no longer make A380s in mid-February 2019.

May have more data, and so more input into IFRS9 calculations

- Impairment calculations for those using IFRS9 can often be based off a broader experience, and so may rely less on management judgement than more focused portfolios. It does not mean all companies are directly comparable, but there should be less volatility than where individual losses in specialist situations are trying to be judged.

Recovery of underlying not always in control of lender

- The recovery of debt is typically not under the direct control of the investment company. It is undertaken by the intermediary (say the peer-to-peer platform or CLO) and so assessing the recovery procedures of these intermediaries is an important element of credit control for portfolio lenders.

Option of sale

- CLO investment companies have the option of selling their investments in the CLO instrument if there is concern about underlying losses. A company could report zero credit losses if it sold all positions early in arrears. There will still be an economic loss, but it will not be reported as a default.

Where are we in the credit cycle?

Upside opportunities

Potential for spreads to widen and income to increase

For several years, credit spreads have been tightening and covenants on new loans have been weakening (anecdotally to a level of enforceability in some areas that is weaker than in 2007). While this has created some capital gains, it has overall been a challenging reinvestment environment. Concern about credit is likely to see wider spreads, meaning that the underlying income on reinvestment is likely to improve. The balance of increased income against increased credit loss will be dependent on the speed of credit deterioration and the duration of loans (and hence their rollover to higher rates). A slow, steady decline could see greater bottom-line profitability.

More mis-pricing opportunities

Not all assets are likely to show the same rate of deterioration and, in particular, sentiment towards specific sectors/sub-sectors is likely to create mis-pricing opportunities. Non-mainstream investments, such as CLOs, are likely to see more volatility (and so short-term NAV volatility). However, such conditions also create a significant long-term value creation opportunity.

In its equity raise at end-November, TFIF specifically highlighted opportunities from market disruption

We note that, in its 26 November 2018 Market update and intention to issue new ordinary shares statement, Twenty-Four Income Fund stated, "The recent volatility in equity and credit markets has, however, finally spilled over into the European ABS market, pushing spreads in some parts of the market to levels that we have not seen since 2016. We strongly believe that the market is now mispricing risk in this sector, as it has many times before, presenting an excellent opportunity to issue further capital to the benefit of both existing and new shareholders. Fundamental performance in the underlying loan pools remains stable, and within expectations, indicating that the derating of the sector is due to risk sentiment across all markets, driven mainly by geopolitical events. Typically, such instances offer a short-lived opportunity to access significant value." In its 12 January 2019 conference call, CVC Credit Partners European Opportunities fund also noted that it was seeing price differentials and dislocated assets.

Volume upside as mainstream lenders withdraw

There may be volume upsides for alternative financers as mainstream lender appetite to lend reduces. For example, historically, banks' willingness to lend to commercial property has significantly weakened in downturns, and current capital regulations may exacerbate this historical trend. Borrowers may look to alternative financers for their facilities.

Downside risk

Rising defaults likely to see MTM losses and IFRS9 impairments

The speed of any deterioration in credit will be critical to losses relative to reinvestment opportunities. Increased defaults are likely to see falling capital values (for those marking to market) and increased impairments (for those using IFRS9/marking to model).

Effect on sentiment-driven MTM hard to predict but highly probable market will over-react

In addition to likely actual losses, a potentially more important unknown for those marking to market is the effect on sentiment and the degree to which market prices are likely to over-react relative to long-term value. The uncertainty when credit losses are rising means that the market applies a higher discount rate than it might be expected to apply over a whole cycle, and consequently market prices might be expected to fall below long-term values.

We also note that some sectors are untested in a recession and their losses are unclear

The relative immaturity of some sectors means that most of its business models have yet to be tested in a serious downturn, especially in terms of collections. We also note that some underlying markets, such as peer-to-peer lending, are untested. The uncertainty created by this lack of track record may compound any falls in NAV.

Accounting

Management culture important

As we noted earlier, accounting is a science, not an art, and an important factor is management culture. As significant elements of management judgement are used in reaching accounting conclusions, if a management is generally conservative in its approach across its business, it is also likely to be so in its accounting assumptions. This is a subjective but important assessment. There are certain specific issues that then apply to CICs, which we detail below.

Mark-to-model or mark-to-market

Investors need to clearly understand how the basis of accounting impacts the valuation of the fund, especially given the focus on NAV discount/premium adopted for many investment companies. Some of the key considerations include the following.

Merits in both approaches

- We see merits in both marking to market and marking to model. The latter better reflects the expected long-term cashflows that the investment company may expect to earn. It is free from the potentially extreme sentiment-driven price movements that create unnecessary and unrealistic NAV volatility. However, such an approach does not reflect the likely value of assets if the investment company becomes a forced seller.

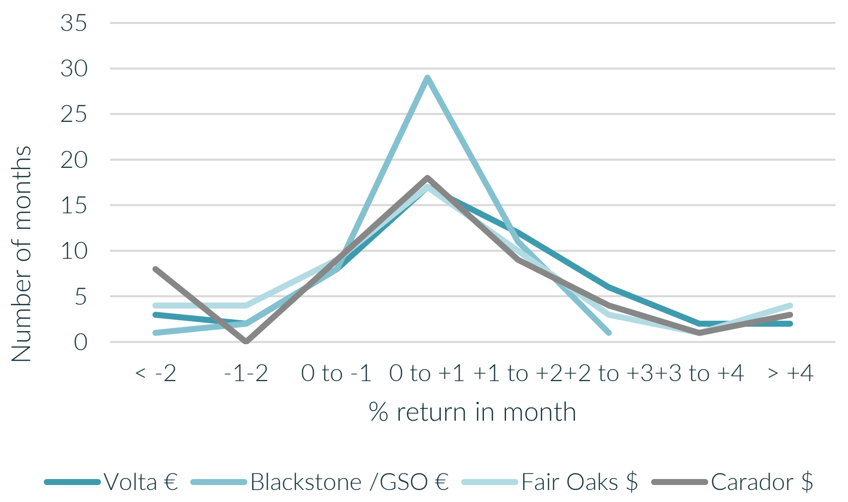
IFRS9 is a form of marking to model

- Conceptually, IFRS9 is form of marking to model, in that it reflects the expected loss based off a range of management expectations (and the probability assigned to each). IFRS9 is a hybrid, in the sense that the starting point is the gross loan value, which is a known, hard, fact. The IFRS9 impairment modelled calculations are then based off experience and, for large portfolios, with a long credit history, are likely to show with some confidence the expected credit outcome. They are, of course, dependent on customers continuing to behave as they have historically (and changes to bankruptcy laws can affect this dramatically). While it is not the same as some mark-to-model approaches, it is still likely to show less NAV volatility than mark-to-market approaches, which reflect investor sentiment as well as expected changes to cashflows.

Marking to market companies likely to see more volatility

- NAV returns on marking to model are likely to be significantly less volatile than returns on marking to market. Taking the CLO funds by way of example, Blackstone GSO is the only one that marks to model and, as can be seen in the chart below, it has had twice the number of months when it has delivered monthly returns in the range of 0%-1% compared with the other CLO companies. It does not have the same outliers, so in periods when markets are scared and writing down assets, its NAV does not show the same drop as those marking to market. Also, in periods when markets are scared, its discount to NAV may be expected to rise relative to peers (as its NAV will not have fallen to the same degree). We believe the current relative discount is illustrative of this.

CLO companies: number of months with different returns over past five



Source: Company Factsheets, Hardman & Co Research

Some CIC accounting is mark-to-model, others mark-to-market. Our sub-sector allocations bring greater accounting compatibility than the broad "debt investment companies".

The table below summarises the predominant basis for accounting for each company. We note that each methodology is not totally exclusive – a company that primarily marks to market may have some illiquid assets that have been marked to model.

Primary basis of accounting (LSE ticker)

Sub-sector	Mark-to-model (incl. IFRS9)	Mark-to-market
Specialist	BPCR,	AEFS, AXI, JGCI, NBLU, SMIF, CCPE,
Secured debt	LBOW, RECI, SWEF, UKML, GABI, HWSL, SSIF, SQN	RMDL,
CLO	BGLF	FAIR, MPLF, VTA
Peer-to-peer	FCIF, HONY, P2P, PBLT, VSL	
Mixed assets		TORO, TFIF, MGCI

Source: Hardman & Co Research, Company report and accounts

To be clear, the accounting basis a company adopts is significantly determined by its assets. We do not believe it is a choice as such, but investors should be aware of the impact it has.

We also note that for many companies the accounting for its loans is at amortised costs. For those that account on a fair value basis there is disclosure on where the inputs to valuation have come from.

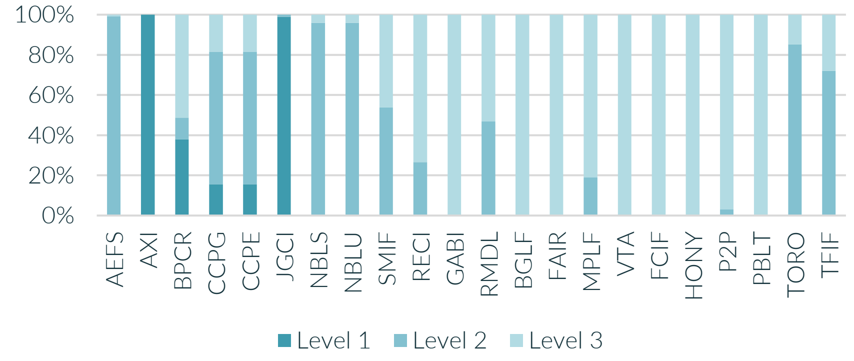
- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities. Investments, whose values are based on quoted market prices in active markets and are therefore classified within Level 1, include active listed equities. The quoted price for these instruments is not adjusted;

- Level 2 – inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices). Financial instruments that trade in markets that are not considered to be active but are valued based on quoted market prices, dealer quotations or alternative pricing sources supported by observable inputs are classified within Level 2. As Level 2 investments include positions that are not traded in active markets and/or are subject to transfer restrictions, valuations may be adjusted to reflect illiquidity and/or non-transferability, which are generally based on available market information; and

- Level 3 – inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The figure below shows the range of these companies from those whose inputs are totally liquid market price driven (AXI, JCGI) to those where there is no observable market data.

Source of inputs for those companies with material fair value estimates



Source: Company Annual Report and Accounts, Hardman & Co Research

IFRS9

New accounting standard recognises losses earlier, and so defers profits. The underlying cashflows and economics are unchanged – so purely an accounting timing issue.

Many lenders have been subject to the recent change in accounting standards. The key to the new approach is that it brings forward the recognition of impairments from when the loan becomes distressed to when it is originated. It moves the recognition from an incurred loss to an expected loss basis. There is no change in underlying cashflows or in the ultimate profit, but by recognising impairments earlier, there is less profit upfront and more later. The effect can be material – for the Funding Circle SME income fund, the unaudited 2018 interim profit was £677k after the impairment charge had been increased by £3.7m due to IFRS9.

The IFRS9 calculation of impairments takes a range of possible outcomes and assigns a probability to each.

Range of outcomes reflects management view

- Anecdotally, we understand that the range of outcomes has been broad (with, for example, significant differences between the worst and base-case assumptions), making precise comparisons between companies difficult. Accordingly, we revert to our opening comment about provisioning being an art, not a science, and recommend investors recognise that companies whose culture is more aggressive are likely to show this trait in their provisioning calculations too.

Provisioning pro-cyclical

- If a recession becomes more likely, a higher weighting is applied to the worst outcomes, and this introduces cyclicality into the calculation. As a new standard, it is currently unclear how this cyclicality will compare with the historical approach of recognising impairments when a loan is in distress.

Lower-risk businesses less of an impact on transition

- Lower-risk businesses are likely to be less affected by IFRS9 than higher-risk ones. We note, for example, that UK Mortgage Limited advises that it believes the transition to IFRS9 will reduce its NAV by only a minimal 0.2%.

Numerous quoted companies have given detailed presentations on the effect of IFRS9 – with varying degrees of complexity. For those wanting more detail than our brief commentary above, we believe the *International Personal Finance IFRS9 presentation* is helpful, not least because it has a range of businesses with differing effects. High-growth businesses (such as IPF Digital) have a greater transition effect than slower-growth ones. This presentation also shows the impact on revenue.

Hardman & Co adjusted accounts

Getting to real dividend cover

Statutory accounts for mark-to-market companies need adjusting to see real dividend cover

The statutory accounts for some companies are not helpful in that they mix volatile, mark-to-market capital movements into the income statement. This creates not only a lack of visibility for each company but also makes comparisons between companies less robust. It may, therefore, be appropriate to consider creating adjusted accounts that strip out these anomalies and get a better perspective of the underlying profitability and dividend cover.

We would typically strip out i) unrealised gains/losses, ii) FX movements, and iii) net gain of IR derivatives, and adjust management fees to the new level of profitability

By way of example, on page 41 of our report on Volta, "Delivering the structured finance opportunity", published on 5 September 2018, we outlined the adjustments we made to get a clearer view. We stripped out i) unrealised gains/losses, ii) FX movements and iii) net gain of IR derivatives. We left in realised gains, which, although volatile, have been converted into cash, and some capital gains may be expected to form part of the normal course of business. We also backdated the current management fee structure and adjusted it to the new level of profitability. We believe that, after these adjustments, investors have a much clearer view on the real extent to which the dividend is covered.

Impact of Hardman & Co adjustments on Volta Finance dividend cover, 2014-20E

€	2014	2015	2016	2017	2018E	2019E	2020E
Dividend	0.60	0.62	0.62	0.62	0.62	0.62	0.62
Statutory EPS	1.22	1.31	0.34	1.06	0.62	0.90	0.92
Statutory div. cover (x)	**2.0**	**2.1**	**0.5**	**1.7**	**1.0**	**1.5**	**1.5**
Hardman & Co adj. EPS	0.82	0.98	0.80	0.77	0.84	0.90	0.92
Hardman & Co div. cov. (x)	**1.36**	**1.58**	**1.29**	**1.24**	**1.36**	**1.45**	**1.49**

Source: Hardman & Co Research, Volta Finance

Leasing: accounting for foreign exchange

Leasing accounting totally different and includes unrealised foreign exchange gains/losses that may never be realised

Investors should also be aware that accounting for foreign exchange for leasing companies leads to distortions when comparing NAV. We consider that there is an artificial variance, as the accounting does not capture all cashflows at the same exchange rate (see leasing section in this report for more detail). The effect can be highly significant. By way of example, the Amedeo Air Four Plus (ticker: AA4) September 2018 interim accounts reported that the group saw a £116m unrealised foreign exchange loss. This can be compared with:

- a £110m unrealised gain in the prior year comparative;
- post-finance-cost, pre-tax profits of £33m; or
- period-end net assets of £593m.

Valuation

Yield

Sector average 7.1%

We believe this sector can be compared with REITS in that earnings are largely paid away to shareholders. One of the key attractions for the whole sector is its yield (with an average of 7.1%). The individual company yields are given in the chart below (we have excluded companies in wind-down phase). As can be seen, the highest-yielding companies are concentrated in the CLO and leasing space.

Historical 12-month yield (%)

Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

We detailed, in the section on accounting above, how we believe that, when considering dividend cover, investors should focus on adjusted accounts to get a better reflection of the cash generated. This is especially the case for companies marking to market their assets.

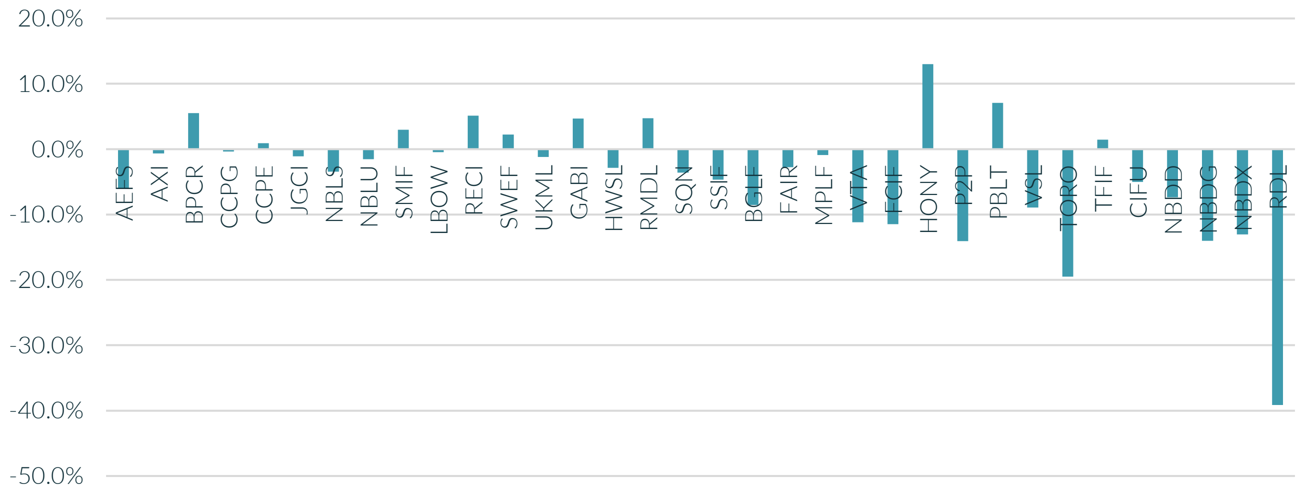
Discount/premium to NAV

Distribution of discount/premium to NAV reflects i) accounting basis, ii) security, iii) complexity, and iv) uncertainty

Like other investment companies, it is fair to consider the premium/discount to NAV. For consistency, we have applied the current price to the end-December 2018 NAV (details of more recent NAV announcements are given in Appendix 2). As can be seen in the chart below, most debt funds trade at premiums/discounts of +/-5% of NAV, with secured funds generally at small premia. The greatest discounts are in CLO, peer-to-peer and investment companies in wind-down. While individual discounts are clearly open to debate and company-specific issues, we believe this distribution reflects:

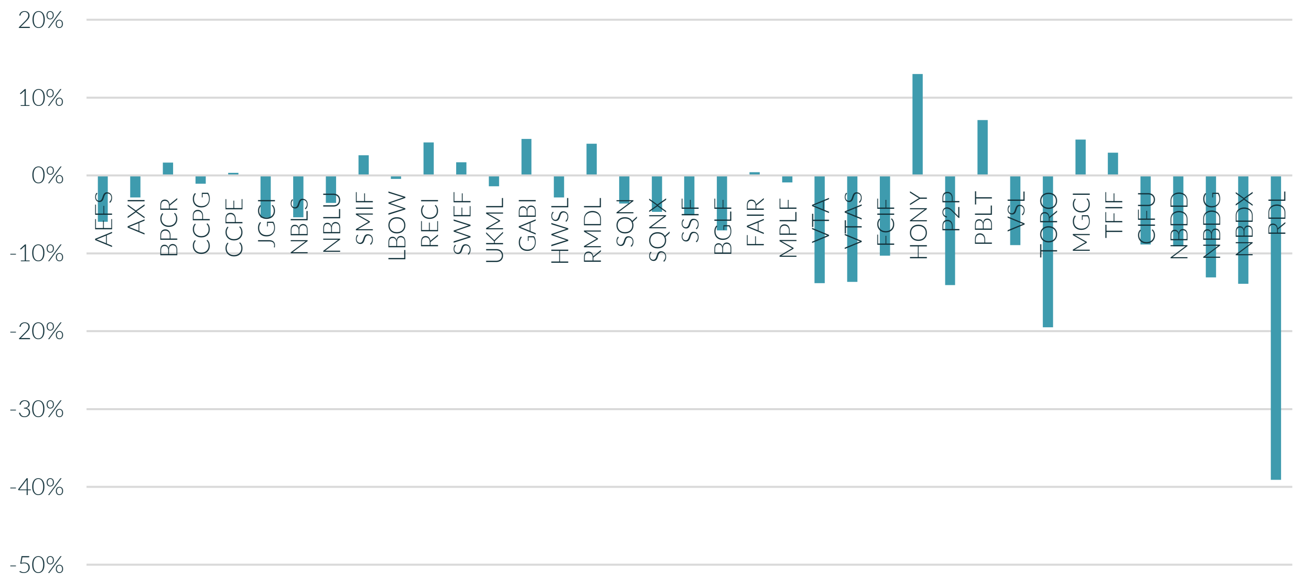
- Companies using IFRS9 have an NAV that includes anticipated losses (but not future income) and, as such, trading at a premium is not unreasonable.
- Marking-to-market companies are likely to have more NAV volatility than marking to model, and appear to be generally trading at a discount.
- Secured lending is likely to have less volatility than unsecured income.
- Companies that are perceived to be complex, even if the underlying cashflows are relatively simple, appear to be trading at a discount.
- Where there is more uncertainty (e.g. the realisable value in a wind-down), the companies are trading at a discount.

Company share price discount/premium to December 2018 NAV (%)



Source: Company Factsheets mainly for December, Hardman & Co Research; prices as at 21 February

Company share price discount/premium to latest NAV (%)



Source: Company latest NAV announcements (see Appendix 2), Hardman & Co Research prices as at 21 February

We have provided the current discounts above but investors should note the varying dates for NAV as detailed in Appendix 2.

Discount management

Discount can be helped by buy-backs, but this can create liquidity issues; it also worsens expense ratios and can send mixed messages re growth prospects.

There are a number of tools that can be used to manage the discount. Many companies have policies that allow them to buy back shares if the discount is above a certain level for a specified time. Others use intermittent tender offers. We believe the key considerations are as follows.

- On the upside, it creates a buyer for the shares. It may be perceived as putting a cap on the discount, which the market might then close itself. It is likely to reduce the discount in the short term.
- On the downside, it could create liquidity problems, the capital can be better deployed in the fund (subject to the level of discount), it shrinks the business and so worsens the total expense ratio, and it sends a very mixed message,

especially if, over the medium term, there are new investment opportunities, which would see the company come back to the market for further equity funding.

- Investors should be aware that IFRS9 penalises growing companies compared with the previous accounting approach as it takes impairments on origination of the loan. The flipside is that shrinking companies do better under the new approach. We do not believe this is a reason to do a buy-back but investors should be aware it is a consequence of doing so.

Gordon Growth Model

GGM reflects value added by a business and its growth prospects. Methodology supports premia to NAV for businesses delivering superior returns.

It may be argued that the CIC's business is the same as that for quoted speciality finance companies. One approach to valuing the latter companies is to use the Gordon Growth Model (GGM). This approach considers the value added by the company, whether its sustainable return on equity is above its sustainable cost of equity, and how the business is growing. The formula is:

Price/book value = (Return on equity – growth in equity) / (Cost of equity- growth).

Thus, a company with a 20% ROE and a 10% COE, but no growth, should trade at 2x book value ((20-0)/ (10-0)), while a business with a 15% ROE and a 10% COE, but growing at 7.5%, should trade at the higher rating of 3x book value (15-7.5)/(10-7.5).

Adopting such an approach would suggest that those companies with a clear competitive advantage, and so sustainable returns above cost of capital, should trade at a premium to NAV.

NAV returns

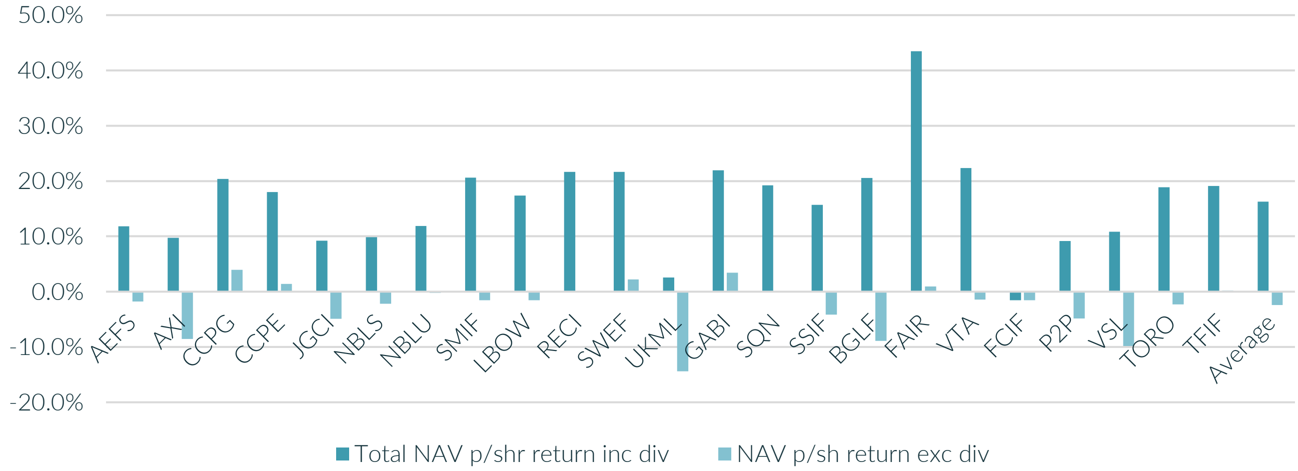
Hardman & Co basis

Six companies delivered 20% returns over three years (dividend extracted basis)

Taking a three-year perspective, the average total NAV return (defined as end-2015 NAV per share to end-2018 NAV per share, plus any dividends) for companies in the sector has been 15.3% (i.e. ca.5% p.a.). There are six companies that have delivered in excess of 20% over this period (Fair Oaks being the highest, at 43.4% with Volta second, at 22.4 %), while the lowest level has been ca.1% p.a. over the period. Two others have seen ca.2% p.a. returns.

We note that, like REITS, this return is driven by dividend income, with most of the earnings over the period being paid out to shareholders. Indeed, we note that, on average, the NAV return for the sector, excluding dividends paid, has averaged -3%.

Three-year NAV per share growth, including and excluding dividends (%)



Source: Company Factsheets, Hardman & Co Research

Dividends on a reinvested basis

We note that the standard basis quoted by companies reflects dividends on a reinvested basis, as is common across investment companies. Such an approach compounds returns relative to the approach we have adopted through this report. We assume that, as one of the key attractions in the sector is its yield, income is likely to be withdrawn, rather than reinvested. The differences are not generally material, even for high dividend stocks (e.g. Volta's company basis return is ca.0.2% p.a. higher than our own, at 0.7% over the three years). The exception is peer-to-peer CIC where the accounting change to IFRS9 saw NAVs decline and company performance reports look through the accounting change while we have focused on stated NAVs.

The methodology of calculating the dividend re-invested basis is important. Volta's April 2018 factsheet reported the return since inception at 9.6% p.a. against March's 11.2% p.a. despite the actual performance in April being +0.9%. We understand the drop was due to a change in approach at Bloomberg.

Sub-sector: specialist lenders

We have identified seven investment companies (some with multiple security classes) for which there is a specific market with clearly defined characteristics. Some of these characteristics are the nature of the loans, while others are the origination source.

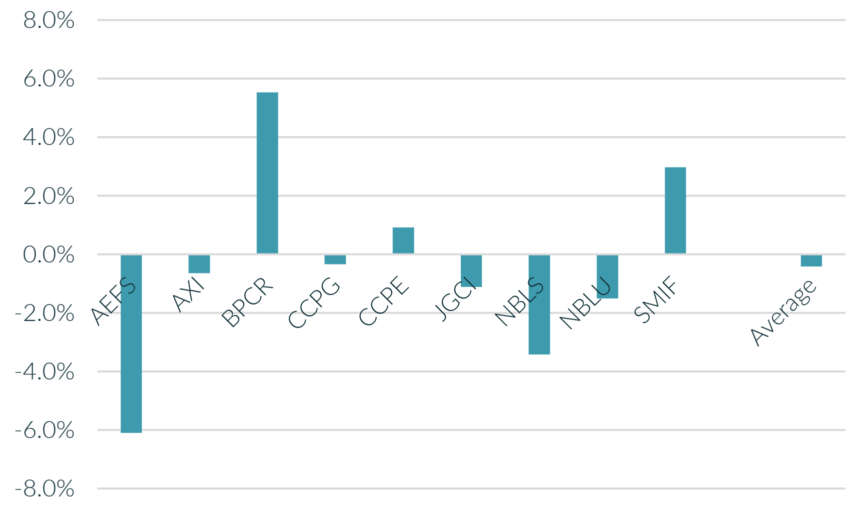
Specialist lenders – summary

Name	Ticker	Currency	Net assets (m)	NAV 1-year growth*	NAV 3-year growth*	NAV 5-year growth*
Alcentra European Floating Rate Income	AEFS	£	147	2.3%	11.8%	19.9%
Axiom European Financial Debt	AXI	£	77	-8.0%	9.7%	n/m
BioPharma Credit	BPCR	$	1,380	7.4%	n/m	n/m
CVC Credit Partners European Opps	CCPG	£	367	1.1%	20.4%	29.2%
CVC Credit Partners European Opps	CCPE	€	131	0.2%	18.0%	25.9%
JPMorgan Global Convertibles Income	JGCI	£	122	-5.5%	9.2%	7.8%
NB Global Floating Rate Income	NBLU	$	55	-1.2%	9.8%	10.7%
NB Global Floating Rate Income	NBLS	£	673	-0.5%	11.9%	12.5%
TwentyFour Select Monthly Income	SMIF	£	164	-1.3%	20.6%	n/m

*Source: Company December 2018 portfolio reports (or latest before that), Hardman & Co Research; *Growth in NAV calculated as change in reported NAV + reported dividends*

The average specialist lender is trading close to par to NAV, with the highest being BioPharma Credit (at a 5.5% premium) and the lowest Alcentra European Floating Rate Income (at a 6.1% discount).

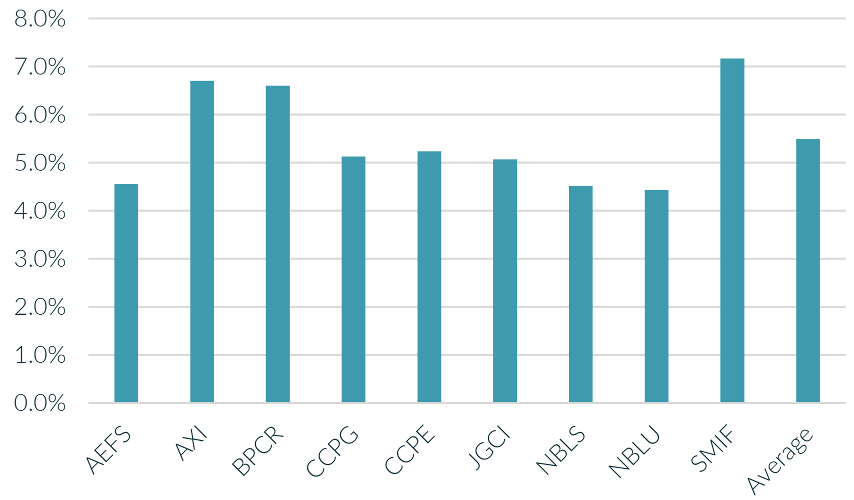
Discount to December NAV for specialist lenders (%)



Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

The average specialist lender yield is 5.5%, slightly below the average for debt companies as a whole. The lender with the highest yield is TwentyFour Select Monthly Income (at 7.2%) and the lowest NB Global Floating Rate Income (at 4.4%). TwentyFour Select Monthly Income, as the name implies, makes steady monthly distributions (recently 0.5p per month), with a slightly larger payment in October (2018: 1.05p).

12-month historical yield (%)



Source: Hardman & Co Research Prices as at 21 February

As we detail in the company description table on the next page, each of the specialist lenders has a particular focus, and this has created unique portfolio characteristics. For the group as a whole, UK exposure is limited. We also note that the companies in this sub-sector, on average, are more concentrated than the sector average. There are also selective companies with illiquid or lowly-rated/unrated securities.

Some key portfolio highlights

Ticker	Currency/country / region	Asset mix (% GAV)	Largest exposures	Rating split
AEFS	€ 73%, £ 21%, $ 5% UK 22%, France 19%, Germany 14%, Netherlands 11%, Luxembourg 6%, US 6%, Spain 4%	Senior secured loans 87%, Senior secured bonds 4% Second lien loans 4%	Stada 2.45% NAV Oberthur Technologies 2.4% Cabot Financial 2.1% 104 issuers in total.	n/a
AXI	€ 59%, £ 29%, $ 11%, DKK 1% UK 31%, France 13%, Spain 13%, Italy9%, N/lands 9%	Liquid relative value 17%, less liquid relative value 28% Restructuring 16%, special situations 16%, mid-cap 21%	Achmea 6.7% NAV, BNP Paribas 6.5%, Shawbrook 5.8% Casers 3.3%	A 5.7%, BBB 34.1%, BB 39.1%, B 14.6%, below B 6.4%
BPCR	n/d	n/a	Cash $364m, Tesaro $322m (repaid Jan 2019), Sebela $189m, Novocure $150m Amicus $150m	n/a
CCPE/CCPG	€ 57%, £ 14% $ 29% UK 23%, US 17%, Germany 12%, France 12%	Loans 62%, Senior secured bonds 15%, 2nd lien loans 6% structured 2%	Dubai World (2.8% GAV), Civica 2.7%, Celsa 2.6%	BB4%, B61%, CCC9%, Not Rated 26%
JGCI	Americas 54%, Asia 23%, Europe 23%	n/a	Banks 17%, Real Estate 15%, Consumer Non-cyclical 13%, Industrial 13% Other fin 12%	Investment grade 25%, Sub-investment grade 30%, Not Rated 46%
NBLU/NBLS	€ 15%, £ 2%, $ 83%	Secured loans 91%, Secured Bonds 8%, Unsecured bonds 1%	Largest 1.6%. Sector: Bus Equip & Services 10% Electronics 8% Tel 7% Health Care 7% Hotels & Casinos 7% Financial Intermediaries 5%	BBB 4%, BB 36%, B 56%, CCC & below 3%, Not Rated 1%
SMIF	Europe 51%, UK 39%, N America 5%, S America 2%, Asia 1%	Banks 34%, ABS 32%, High-yield EU 13%, Insurance 10%	Nationwide Perp 3.5% Coventry Perp 3.1% Shawbrook 2.2%	AAA/cash 2%, BBB 11%, BB24%, B43%, Not rated 20%

Source: Company December Monthly reports, Hardman & Co Research;

Summary company descriptions

Ticker	Company description
AEFS	Alcentra European Floating Rate Income's investment objective is to provide its shareholders with regular quarterly dividends and the opportunity for capital growth. The Company invests either directly or, through sub-participation, indirectly in floating rate, secured loans or high-yield bonds issued by European and US corporate entities predominantly rated below investment grade or deemed by the investment manager to be of a corresponding credit quality www.aefrif.com Manager: Alcenta
AXI	Axiom European Financial Debt's investment objective is to provide shareholders with an attractive return, while limiting downside risk, through investment in the following financial institution investment instruments: (i) Regulatory capital instruments, being financial instruments issued by a European financial institution which constitute regulatory capital for the purposes of Basel I, Basel II or Basel III or Solvency I or Solvency II; (ii) Other financial institution investment instruments, being financial instruments issued by a European financial institution, including without limitation senior debt, which do not constitute regulatory capital instruments; and (iii) Derivative instruments, being CDOs, securitisations or derivatives, whether funded or unfunded, linked or referenced to regulatory capital instruments or other financial institution investment instruments. http://axiom-ai.com/web/en/axiom-european-financial-debt-fund-limited-2/#1470484204012-f0d260c2-b9cf Manager: Axiom Alternative Investments SARL
BPCR	BioPharma Credit's objective is to generate long-term shareholder returns, predominantly in the form of sustainable in distributions from exposure to the life sciences industry. The Company primarily invests in corporate and royalty debt secured by cash flows derived from sales of approved life sciences products. The Investment Manager will select investment opportunities based upon in-depth, rigorous analysis of the life sciences products backing an investment as well as the legal structure of the investment. A key component of this process is to examine future sales potential of the relevant product which is affected by several factors, including but not limited to; clinical utility, competition, patent estate, pricing, reimbursement (insurance coverage), marketer strength, track record of safety, physician adoption and sales history. http://bpcruk.com Manager: Pharmakon Advisors
CCPE / CCPG	CVC Credit Partners European Opportunities Fund's investment policy is to invest predominantly in companies domiciled, or with material operations, in Western Europe across various industries. The company's investments are focused on Senior Secured Obligations of such companies, but investments are also made across the capital structure of such borrowers. The Company invests through Compartment A of CVC European Credit Opportunities S.à r.l. (the "Investment Vehicle"), https://www.ccpeol.com/about-us/our-overview/ Manager: CVC Credit Partners Investment Management Limited.
JGCI	JPMorgan Global Convertibles Income aims to provide investors with a dividend income, combined with the potential for long term capital growth, from investing in a globally diversified portfolio of convertible securities. https://am.jpmorgan.com/gb/en/asset-management/gim/per/products/d/jpmorgan-global-convertibles-income-fund-ltd-ordinary-shares-gg00b96sw597#/overview Manager JP Morgan
NBLU / NBLS	The NB Global Floating Rate Income Fund Limited ("the Fund") targets income generation whilst seeking to preserve investors' capital and give protection against rising interest rates. The Fund's managers seek to generate this yield by investing in a global portfolio of below investment grade senior secured corporate loans with selective use of senior secured bonds, diversified by both borrower and industry. www.nbgfrif.com Manager Neuberger Berman
SMIF	The Fund aims to generate attractive risk-adjusted returns, principally through monthly income distributions, by investing in a diversified portfolio of fixed income credit securities. The Fund will invest in a diversified portfolio of fixed income credit securities that exhibit an illiquidity premium, and which the Portfolio Managers believe represent attractive relative value. These securities will include (but are not limited to): corporate bonds, asset-backed securities, high yield bonds, bank capital, Additional Tier 1 securities, payment-in-kind notes and leveraged loans. Uninvested cash or surplus capital or assets may be invested on a temporary basis in cash and/or a range of assets including money market instruments and government bonds. The Fund may also use derivatives. https://twentyfouram.com/funds/twentyfour-select-monthly-income-fund/ Manager: TwentyFour Asset Management LLP

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

Case study: non-mainstream lending

Value creation opportunities in non-mainstream lending. May reflect sector-specialist skills, size of market, illiquidity, bank capital requirements and the relative pay for staff, in addition to credit quality.

Non-mainstream lending can take many forms, including sector specialism (BPCR in pharmaceuticals, AXI in financials), non-investment credit ratings (AEFS, NBLU/NBLS) and product specialism (JGCI, SQN/SQNX). The key commonality is the use of specialist skills/intellectual capital to exploit pricing, which does not reflect the real underlying risk. Such opportunities may arise for a range of reasons, including:

- specialist skills to understand borrowers' market;
- the size of the market is unattractive for mainstream lenders;
- the market may be illiquid;
- the risk/capital profile is unattractive for a bank;
- the area may be seen as strategically non-core to mainstream lenders; and
- the potential returns for the individuals with the right skills are higher working in an investment company than a mainstream lender.

Complexity creates opportunity but may not be immediately valued by investors

The important issue is to identify what skills are required and how sustainable an advantage is being created. Being involved in non-standard markets has opportunities, but it can also lead to illiquidity and the associated questions over the realisable NAV.

Case study: early repayment premium

If loan book likely to churn, superior returns can be generated from make-whole/pre-payment penalties built into product offering

Specialist lenders use their intellectual capital and niche market positioning to earn superior returns. An example of this is BioPharma Credit, which lends to life science companies that have developed products for which forward sales have been agreed. Its target companies are ones at relatively early stages of development, where these forward sales have yet to show in cashflows. Consequently, most banks are uncomfortable with their limited financial track record. Over time, as the borrowers establish proven track records, they can refinance at lower rates than they pay BioPharma Credit. To offset this risk, the documentation includes "make-whole" and "pre-payment penalty" clauses, which means that BioPharma generates an income even when a loan is repaid. Taking the example of its largest loan to Tesaro, which was repaid in January 2019, BioPharma Credit will receive $45.7m as make-whole and pre-payment. This represents 14.2% of the $322.0m principal advanced or the equivalent of what the company would have received had the loan remained outstanding for another 15 months or so. BioPharma can now redeploy the proceeds in new loans and it has the potential to generate two sets of income from the same commitment.

Payments received by BioPharma Credit on its Tesaro loan

Value ($m)	Tranche A	Tranche B	Total
Principal amount	222.0	100.0	322.0
Accrued interest	1.5	0.7	2.2
Make-whole amount	21.1	14.9	36.0
Pre-payment premium	6.7	3.0	9.7
Pay-off amount	**251.3**	**118.6**	**369.9**

Source: Hardman & Co Research

Such a model has the advantage of earning returns even when the lender is repaid, but comes with the downside that, as the portfolio churns, new loans continually have to be originated.

Sub-sector: secured lenders

Secured lenders can be split into property secured and those backed by other assets

We have split the secured lenders into two further sub-categories: those secured on property (four companies) and those secured on other assets (another five companies). Looking across the sub-sector, its key advantages include predictable income streams (many multi-year) and multiple levels of security often in business-essential assets. Property-backed lenders have the advantages of high-quality security, while the other asset-backed lenders typically have broad portfolio diversification. The sector largely adopts IFRS9 accounting.

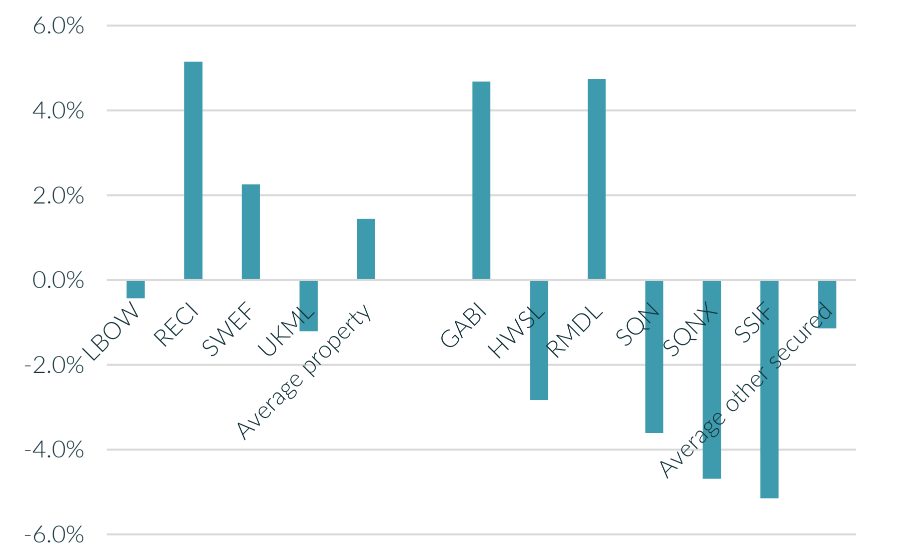
Secured lenders – summary

Name	Ticker	Currency	Net assets (m)	NAV 1-year growth***	NAV 3-year growth***	NAV 5-year growth***
Property-backed						
ICG-Longbow Senior Secured UK Prop. Debt Inv *.	LBOW	£	121	4.5%	17.4%	28.3%
Real Estate Credit Investments	RECI	£	250	7.2%	21.6%	44.5%
Starwood European Real Estate Finance	SWEF	£	385	6.9%	21.7%	36.2%
UK Mortgages **	UKML	£	228	2.4%	2.5%	n/a
Other asset-backed						
GCP Asset Backed Income	GABI	£	387	7.2%	21.9%	n/a
Hadrian's Wall Secured Investments	HWSL	£	142	4.7%	n/a	n/a
RM Secured Direct Lending	RMDL	£	107	5.3%	n/a	n/a
SQN Asset Finance	SQN	£	484	5.4%	19.3%	n/a
SQN Asset Finance Income C shares	SQNX	£	484	7.7%	22.0%	n/a
SQN Secured Income	SSIF	£	51	4.9%	15.7%	n/a

*Source: Company latest portfolio reports, Hardman & Co Research; * October report **November report ***Growth in NAV calculated as change in reported NAV + reported dividends*

The average UK property-backed debt investment company is trading at a premium of 1.4% to December 2018 NAV, while the average for other secured lenders is a discount of 1%. The highest premium for a property-backed company is Real Estate Credit Investments (at 5.2%). The notable discount is SQN Secured Income, which trades at a discount of 5.1%, despite its middle- of-the-range NAV return performance over one and three years.

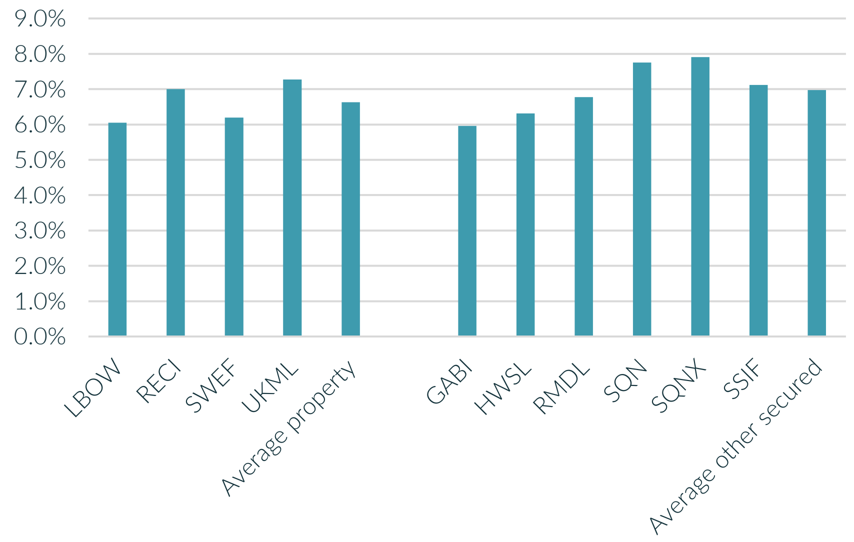
Discount/premium to December 2018 NAV for secured lenders (%)



Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

The average UK property-backed debt investment company has a yield of 6.6%, while the average for other secured lenders is 7.0%. The highest premium-yield-backed company is SQN Asset Finance (C shares at 7.9%).

12-month historical yield (%)



Source: Hardman & Co Research; prices as at 21 February

As can be seen in the table below, the UK forms a much higher proportion of this sub-sector than specialist lenders. There is typically much more concentration in the property-backed companies (not surprising given that the average deal size is materially higher than other asset-backed lenders).

Some key portfolio highlights

Ticker	Asset mix (% GAV)	Largest exposures	Regional/rating split
LBOW*	Retail 19%, Industrial/Distribution 27%, Mixed use 31%, Office 15%	£22.4m (51% LTV), £20m (69% LTV)	London 27%, South East 9%, North West 21%, National 21%, South West 13%
RECI	52% loans, 48% bonds Loans: 38% Mixed use, 32% Residential	Lisbon £35.2m (60% LTV) London £30.4m (45% LTV)	UK 70%, France 11%, Germany 9%, Italy 5%
SWEF	Hospitality 41%, Retail 13%, Light Indl. 11%, Res for sale 9%, Office 8%	£54.1m (Dublin hotel) £45.9m (UK regional hotels)	Spain 30%, Ireland 23%, UK 33%, Hungary 10%, France 3%
UKML	Buy to let (purchased) 78%, fwd. flow BTL 4%, fwd. flow owner-occupied 17%	8,855 underlying borrowers, average loan size £157k	National coverage
GABI	Social Infrastructure 39%, Property 41%, Energy and Infrastructure 14%, Asset Finance 6%	Portfolios: Residential (9.6%), Buy to let (5.6%) Student accommodation (5.4%)	National Coverage Senior debt 63%, Mezzanine 37%
HWSL	Manufacturing 25%, Professional 16%, Admin. & Support 14%, Prop. & Const. 17%, Retail 6%	Property Trading (£10.5m) Manufacturing (£8.4m) Engineering (£8.0m)	n/d
RMDL	Corporate loans 56%, Project Finance 20%, Asset Finance 24%	Forecourt operator (£8.7m), Business Services (£7m)	n/d 35 loans in fund
SQN / SQNX	Agriculture 19%, Waste Processing 14%, Transportation 12%	Vehicles & helicopters (£39m) Anaerobic digestion (£34m)	UK 69%, US 16%, France 6%, Ireland 3%
SSIF	11 direct loans, 72 platform loans	UK name 9.6% portfolio European name 5.1% portfolio	UK 75%, US 12%, Europe 12%, UK offshore 2%

*Source: Company December Monthly reports, Hardman & Co Research; * LBOW October Factsheet*

Summary company descriptions

Ticker	Company description
LBOW	The objective of the Company is to construct a portfolio of UK real estate debt related investments predominantly comprising loans secured by first ranking fixed charges against Commercial Property investments, with the aim of providing Shareholders with attractive, quarterly dividends, capital preservation and, over the longer term, a degree of capital appreciation. https://www.lbow.co.uk/ Manager: CG-Longbow, the real estate debt division of Intermediate Capital Group plc.
RECI	RECI's investment objective is to provide shareholders with a levered exposure to a portfolio of Real Estate Credit Investments with stable returns in the form of quarterly dividends. ….the Company invests and will continue to invest in real estate credit secured by commercial or residential properties in Western Europe, primarily in the UK, France and Germany. Assets include i) secured real estate loans, debentures or any other forms of debt instruments. (ii) listed debt securities and securitised tranches of real estate related debt securities, (iii) other direct or indirect opportunities, including equity participations in real estate. http://www.recreditinvest.com Manager: Cheyne Capital Management (UK) LLP
SWEF	The investment objective of Starwood European Real Estate Finance Limited is to provide Shareholders with regular dividends and an attractive total return while limiting downside risk, through the origination, execution, acquisition and servicing of a diversified portfolio of real estate debt investments (including debt instruments) in liquid markets in the UK and the wider European Union's internal market. http://www.starwoodeuropeanfinance.com Manager: Starwood European Finance Partners Limited, an indirect wholly-owned subsidiary of the Starwood Capital Group.
UKML	UK Mortgages is a listed closed-ended investment fund which invests in a diversified portfolio of good quality UK residential mortgages. The fund has nearly 9,000 underlying borrowers with buy to let and owner-occupied loans. https://twentyfouram.com/funds/uk-mortgages-fund/ Manager: TwentyFour Asset Management LLP.
GABI	The Company's investment objective is to generate attractive risk-adjusted returns primarily through regular, growing distributions and modest capital appreciation over the long term. The Company seeks to meet its investment objective through a diversified portfolio of investments which are secured against, or comprise, contracted, predictable medium to long term cash flows and/or physical assets. The Company's investments will predominantly be in the form of medium to long term fixed or floating rate loans which are secured against cash flows and/or physical assets which are predominantly UK based. The Company's investments will typically be unquoted and will include, but not be limited to, senior loans, subordinated loans, mezzanine loans, bridge loans and other debt instruments. The Company may also make limited investments in equities, equity-related derivative instruments such as warrants, controlling equity positions (directly or indirectly) and/or directly in physical assets. https://www.graviscapital.com/funds/gcp-asset-backed/about Manager: Gravis Capital Management Ltd
HWSL	The Company's investment objective is to provide Shareholders with regular, sustainable dividends and to generate capital appreciation through exposure, directly or indirectly, to primarily secured loans originated across a variety of channels, assets and industry segments. The Company targets an annualised dividend of at least 6 pence per Ordinary Share, which is expected to grow over time. The Company invests in loans, which are predominantly secured upon a variety of asset types. The types of loans that the Company targets includes the following: General commercial Loans to businesses: Equipment finance; Specialised Financial Services (Specialised financial services companies provide finance to SMEs in the form of loans, leases or other financial contracts). https://hadrianswallcapital.com/ Manager: Hadrian's Wall Capital Limited
RMDL	The Company aims to generate attractive and regular dividends through investment in secured debt instruments of UK SMEs and mid-market corporates and/or individuals including any loan, promissory notes, lease, bond, or preference share (such debt instruments, as further described below, being "Loans") sourced or originated by the Investment Manager with a degree of inflation protection through index-linked returns where appropriate loans in which the Company invests will be predominantly secured against assets such as real estate or plant and machinery and/or income streams such as account receivables. https://rmdl.co.uk/ Manager. RM Capital,
SSIF	The SQN Secured Income Fund is designed to provide shareholders with attractive risk-adjusted returns predominantly through investment in a range of SME loan assets and secured lending opportunities, diversified by way of asset class, geography and structure. Whereas the SQN Asset Finance Income Fund is focused on hard assets, the SQN Secured Income Fund seeks investment opportunities collateralized by a broader range of assets such as, but not limited to, receivables, real property, tax credits, and loan portfolios and other pools of financial assets. Investments are originated directly and through third-party alternative finance platforms addressing underserved segments of the market. http://www.sqncapital.com/managed-funds/sqn-secured-income-fund/about/ Manager: SQN Capital Management, LLC
SQN / SQNX	SQN Asset Finance's objective is to provide its Shareholders with regular, sustainable dividends and to generate capital appreciation through investment, directly or indirectly, in business-essential, revenue-producing (or cost-saving) equipment and other physical assets. http://www.sqncapital.com/managed-funds/sqn-asset-finance-income-fund/about/ Manager: SQN Capital Management

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

Attractions of secured lenders

Security can reduce probability of loss, as well as loss in the event of default

The loss in the event of default for secured lenders is materially lower than that for unsecured lenders. The willingness and ability to provide security are also evidence of character per our CAMPARI analysis above. Real estate property as security is especially valuable, in that the asset cannot be removed.

Should underpin accounting

Security not only has a realisation value, but it is also likely to underpin mark-to-model (including IFRS9) valuations. Compared with unsecured lending, we would expect i) a lower assumed loss rate, ii) lower stress case loss rates, iii) a lower probability of worst-case loss scenarios, and iv) greater confidence in loss numbers. All these factors are also likely to benefit investor sentiment.

Nature of security critical to its value

The nature of the security affects these values. A large portfolio of residential mortgage debt is likely to see more benefit than a concentrated portfolio of specialist developer borrowers. The premium attributed to UK Mortgages may, in part, reflect this relative benefit.

Invoice financing should be low-risk business

A well-managed factoring/invoice finance business can rely on the income stream from the borrower, but also from the end invoice payer. In most cases, the invoice payer has a very different credit risk profile from the borrower. This may be in the form of scale (SME borrowers may have large corporate clients), sector (a manufacturer may have retail clients) or geography (e.g. exporters). The benefit for investors is that having two diversified cashflow streams to repay debt is materially lower-risk than relying on one.

Risks for secured lenders

Managing security is important to its value

As we noted earlier, the execution of security documents, regular independent valuations, security that is unlikely to move during borrower distress and security that can be sold in liquid markets are all important to the scale of benefit received from being secured.

Multiple valuations for same assets, depending on how they are to be sold. Forced sales in distressed markets can easily be 30% below open market valuation.

It is also worth noting that there can be several valuations for the same property. The current, well maintained value, with a seller that is willing to wait some time, will be materially higher than the forced sale of an asset that has fallen into disrepair, as the borrower can no longer afford to maintain it. Historically, such a valuation would, for bank credit purposes, be taken at 70% of the market value (and banks still incurred material losses on, say, commercial real estate).

Change in UK crown preference likely to be adverse for floating charge holders. Unlikely to affect property secured, but could have an impact on other asset-backed.

From 6 April 2020 in the UK, HMRC will become a secondary preferential creditor. This claim will rank in priority to floating charge holders and unsecured creditors, but not certain primary preferential creditors, such as employees. Floating charge holders and unsecured creditors could see increased losses, as the prior ranking of HMRC's claim will dilute the realisations available to pay their claims. HMRC's claim will still rank behind lenders' fixed charges, but this could have an indirect impact on borrowers if their customers then default. An example could be a property company whose retail customers fail to see less of a recovery, and this could, in turn, have an impact on lenders to the property company.

Need to be sure borrower is with alternative lender for the right reason and not adverse credit selection

As with all non-mainstream lenders, one key consideration is why borrowers would choose to use them rather than their own bank. There are many good reasons for this (service levels, depth of relationship, certainty of finance, dissatisfaction with banks' overall offering, rates and charges, level of security required, limited bank lending appetite for that sector), but investors need to be confident that it is not an issue of adverse selection, i.e. that the borrowers could not get finance on the same terms from their bank, and went to the alternative provider as a last resort.

Sub-sector: Collateralised Loan Obligation (CLO)

CLO lenders – summary

Name	Ticker	Currency	Net assets (m)	NAV 1-year return*	NAV 3-year return*	NAV 5-year return*
Blackstone/GSO Loan Financing	BGLF	€	363	6.2%	20.6%	n/a
Fair Oaks Income	FAIR	$	384	0.6%	43.4%	n/a
Marble Point Loan Finance	MPLF	$	168	-12.3%**	n/a	n/a
Volta Finance	VTA	€	282	0.1%	22.4%	46.6%

*Source: Company December Monthly reports, Hardman & Co Research; *Growth in NAV calculated as change in reported NAV + reported dividends; ** since inception in February 2018*

In our sub-sector allocation, there are four CLO-focused funds. We have allocated the Chenavari Toro Income Fund (CIFU) to mixed assets, as that business has a significant residential mortgage underlying exposure, which is not present in our sub-sector. In addition, CIFU was put into a manged run-off in December 2018, and so is in our wind-down sub-sector.

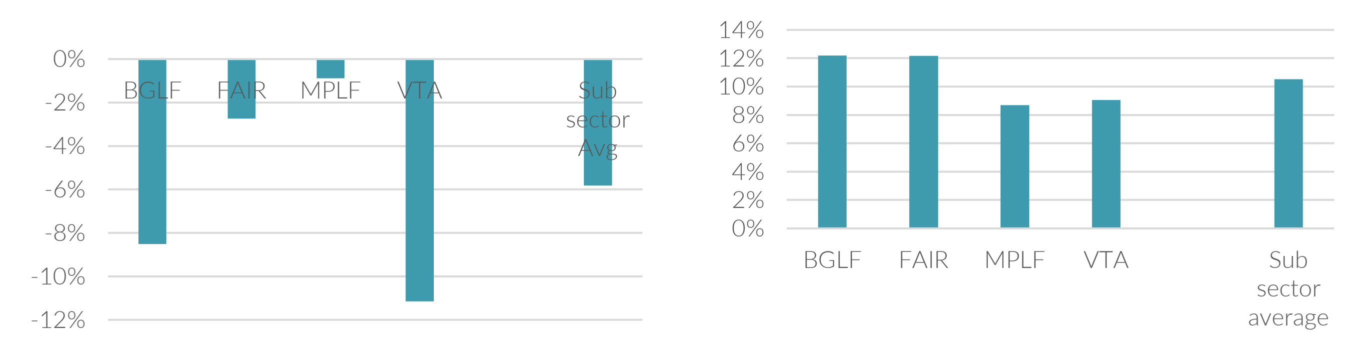
High yield – all companies above debt sector average

The sector yield is high. Most of the companies are targeting returns on equity in excess of 10%, reflecting the niche focus of this sub-sector and these returns are largely paid away in dividends. We explored, in the accounting section above, how investors could look through the accounting and focus on the long-term interest and coupon income, which supports these dividend payments.

BGLF only one to mark to model => need to factor this into its discount to NAV

In measuring the NAV discount, it must be noted that BGLF's accounting is marked to model, while the others are primarily marked to market. In 4Q'18, the others saw their NAVs fall, as market sentiment saw volatile underlying prices. On a like-for-like basis, it is probable that BGLF's NAV is higher than would be reported by peers, and its discount to NAV reflects this (i.e. it is higher than that of its peers).

Current share price discount to December NAV (%) | **12-month trailing yield (%)**



Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

Some key portfolio highlights

Name	Currency/Country Mix	Asset mix (% GAV)	Largest exposures	Credit ratings
BGLF	USA 57%, France 8%, Luxembourg 7.5%, N/lands 5.6%	US CLO equity 43%, Euro CLO equity 37%, loans 18%	Largest 1.1% portfolio, top 5 5%	Moodys: BA 19.2%, B 78.1%, C 2.3%, Not rated 0.4%
FAIR	$ 99%, € 1%, USA 91%, Canada 2%	Primarily CLO equity	Largest 0.68% gross assets, top 5 3.29%	BBB- 1%, BB+ 3%, BB 7% BB- 11%, B+ 20%, B 42%, B- 14%
MPLF	$ 100%	CLO equity 63%, CLO debt 8%, Fee partic. 3%, NAV fund sub. 18%, LAF equity 8%	Largest 1.2% portfolio, top 5 5.2% Healthcare 13.7%	Baa 1%, Ba 20%, B 75%, Caa and below 4%
VTA	€ 72%, $ 27%, CHF 1%	CLO debt 39%, CLO equity 33%, Bank Bal sht. Trans. 15%	Largest 0.65% NAV, top 5 2.5%, top 10 3.38%	BB 36%, B 2%, CC 1%, Not rated 61%

Source: Company December Monthly reports, Hardman & Co Research

Largest exposure analysis is complicated by level of CLO seniority in which the investment company has invested and the level of seniority of the underlying debt

The largest exposures need to be treated with a degree of caution for CLOs. The investment company is trying to look through the CLO structure to get to the underlying risk. However, the type of both the CLO and the borrower instruments affects the real risk. A holder of a highly-rated borrower instrument may incur no loss, while one holding a lower-rated one may incur losses. Similarly, if the investment company holds CLO equity, it will bear the first loss of the CLO, but if an AAA debt is held from the same CLO, there may be no loss.

Need to manage cov-lite and "adjusted earnings" structures in underlying debt

Recent market trends have seen lending covenants weaken. One senior credit manager advised that, in his view, the get-out clauses in many instruments were now such that enforceability was weaker than in 2007. Managing cov-lite exposures is also important in considering the largest exposure risk. We note that there has been an increasing tendency to use adjusted earnings in many covenants, making them less strong than prior documentation.

Summary company descriptions

Ticker	Company description
BGLF	The Company's investment objective is to provide Shareholders with stable and growing income returns, and to grow the capital value of the investment portfolio by exposure predominantly to floating rate senior secured loans directly and indirectly through CLO Securities and investments in Loan Warehouses. The Company seeks to achieve its investment objective through exposure (directly or indirectly) to one or more risk retention companies or entities established from time to time ("Risk Retention Companies"). https://www.blackstone.com/the-firm/asset-management/registered-funds#c=blackstone-gso-loan-financing-limited Manager: Blackstone GSO
FAIR	Fair Oaks Income Ltd is an investor in US and European CLOs or other vehicles and structures which provide diversified exposure to high-yielding, floating-rate senior-secured loans and which may include non-recourse financing. Enhanced returns are achieved through our active involvement in deal origination and ability to exercise control rights as an independent investor. https://www.fairoaksincome.com/ Manager: Fair Oaks Capital
MPLF	MPLF's investment objective is to generate stable current income and grow net asset value by earning a return on equity in excess of the amount distributed as dividends. MPLF is invested in a diversified portfolio of US dollar denominated, broadly syndicated floating rate senior secured corporate loans owned via collateralised loan obligations ("CLOs") and related vehicles http://www.mplflimited.com/ Manager: Marble Point Credit Management LLC ("Marble Point").
VTA	Volta's investment objectives are to seek to preserve capital across the credit cycle and to provide a stable stream of income to its Shareholders through dividends that it expects to distribute on a quarterly basis. ... it seeks to attain its investment objectives predominantly through investment in a diversified portfolio of structured finance assets. Volta's investment strategy focuses on direct and indirect investments in, and exposures to, a variety of assets selected for the purpose of generating cash flows for the Company. The assets that Volta may invest in either directly or indirectly include but are not limited to: corporate credits; sovereign and quasi-sovereign debt; residential mortgage loans; commercial mortgage loans; automobile loans; student loans; credit card receivables; leases; and debt and equity interests in infrastructure projects (the "Underlying Assets"). http://www.voltafinance.com/ *Manager AXA IM*

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

What is a CLO? – simplified example

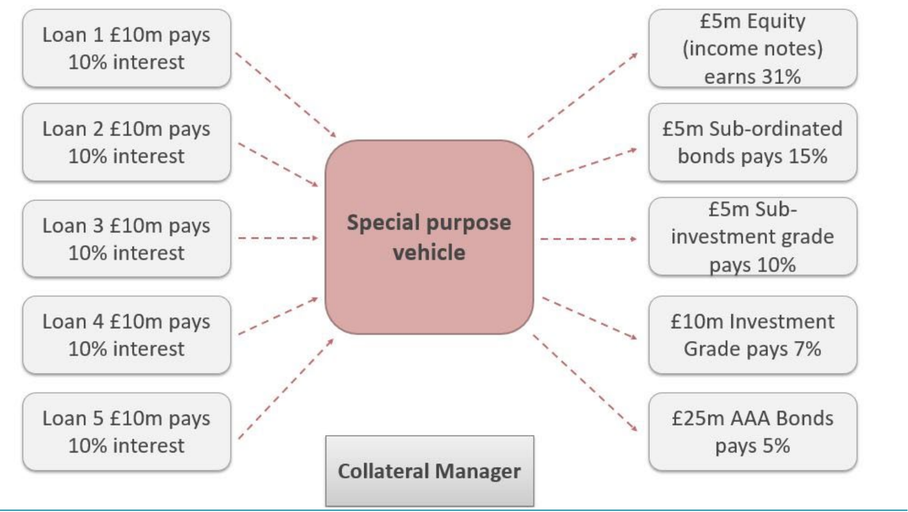
CLOs are just portfolios of loans

As illustrated in the figure below, a CLO structure is, at its heart, very simple. A portfolio of loans is acquired by a company (a special-purpose vehicle) that funds the purchase by issuing a mix of different tranches of bonds (CLO debt tranches) and "income notes" (CLO Equity tranche). The interest received from the loan portfolio is used to pay, firstly, the coupons on the CLO debt tranches, and then all the excess cashflow is for the profit of the "equity" tranche.

Individual loans are pooled, and different tranches of debt at different interest costs are issued as funding

The example below is simplified to illustrate how a CLO works. If we take five individual loans of £10m, each of which pays an interest rate of 10%, driven by the market perception of the risk of loss, these loans generate total interest of £5m. The SPV issues tranches of bonds, some of which are repaid ahead of others in bankruptcy. As the probability of all five loans simultaneously going into default is low, such bonds carry a lower coupon than each of the individual loans. In the example below, we assume that £25m of bonds could be perceived as at low risk of loss, and so pay only 5% coupons. With different tranches of bonds carrying a different risk of loss, they each carry a different coupon, with any residual profit attributable to the equity holders. In principle, the structure of a CLO SPV is exactly the same as that for a bank that takes a broad portfolio of credit risk and funds itself from a broad range of sources, each of which carries a different interest cost.

Simplified example of CLO structure



Source: Hardman & Co Research

Such a structure has advantages for all the interested parties:

Loan originators have additional source of funding

- The originators of the loans (usually, but not necessarily, banks) have access to different sources of finance and can manage the credit risk on their books. They will often service the loans in the SPV (for a fee) and keep their relationship with the borrowing customer. It is capital-efficient for the originators, as they do not need to hold capital against the loans sold to the SPV – but still earn origination fees.

Different tranches meet different investor appetites

- By pooling multiple loans and dividing them into tranches, relatively safe ones can be created, which pay lower interest rates and are designed to appeal to conservative investors. The structure also creates higher-risk tranches, which appeal to higher-risk investors by offering a higher interest rate.

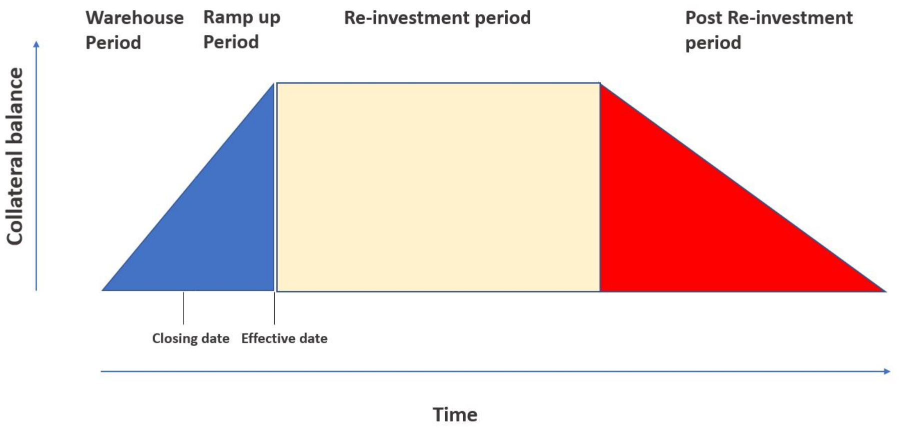
Lower overall funding cost

- The overall cost of money to businesses should be reduced as the CLO structure increases the supply of lenders (attracting both conservative and risk-taking lenders).

Loans initially go into a warehouse as the CLO pool of loans is built up

A typical lifecycle for a CLO is shown in the figure below. In the initial stages, the collateral manager acquires assets on behalf of the CLO using a warehouse facility financed by a bank. Once a closing date has been reached, loans previously warehoused are transferred to the CLO, and the CLO moves into the "ramp-up period, when further assets are acquired. The size of the CLO is set shortly after. For a set period, the cash generated from the borrower may be reinvested in new loans, with the collateral manager trading assets on behalf of the CLO. After a set period, the CLO goes into a wind-down phase and any cash is no longer reinvested but used to repay the CLO debts and, ultimately, the equity holders.

Simplified example of CLO lifecycle



Source: Hardman & Co Research

CLOs build in a number of tests and covenants to ensure that all investors know the risks they face

To ensure that potential investors in CLO securities know the risks they are taking, and also to ensure consistency over time, CLO structures build in a series of tests for the portfolio of underlying loans. Inter alia, these include:

- over-collateralisation: the market value of outstanding loans has to exceed the value of non-equity liabilities;
- interest coverage;
- weighted average spreads (WAS);
- lifetime of loans (WAL); and
- credit rating factor (WARF).

While the terminology might appear somewhat unfriendly for generalist investors, we believe it provides a useful trend analysis for the underlying market. In particular, the rating agencies provide regular updates using such measures and commenting on the associated risk.

CLO opportunities in the real world

Risk/reward optimisation

Different tranches of CLO instruments provide varying opportunities for those with flexible mandates

The different tranches of CLO debt mean that investors can select how much risk they want and for what reward from a portfolio of CLO securities with distinct risk/reward characteristics. This also creates arbitrage opportunities, where specific tranches of loans might be mis-priced for the reasons identified in the section below.

Mis-pricing opportunities in CLO market

In a world with perfect information and transparency, each tranche of CLO funding would price perfectly to reflect the risk in the underlying assets. In the real world, this is not the case, and we highlight below several potential sources of mis-pricing. We do not believe investors should be concerned about these issues. In principle, they are identical to most other (non-CLO) investments, and they create the opportunities for CLO investment companies to earn superior returns.

Lack of understanding of real credit exposure

- Some in the market focus on the gross exposure of a credit, not the real risk. Where a borrower has a loan of 100, the amount at risk will be somewhere between 0 and 100, depending on things like the collateral. Where investors focus on the gross 100 at risk, they will materially undervalue a well-secured loan. Investors need to appreciate both the probability of default and the degree of recovery in the event of default.

Lack of understanding often related to sentiment

- The lack of understanding of a specific credit risk is often related to sentiment towards a broader sector or market. A current example would be the view that retail is having a bad time, so all retailers are marked down. In the CLO market, there are the same opportunities to identify specific companies/borrowers, which might do well in a challenging market.

Rating constraints can affect investor behaviour and, with it, pricing

- Rating constraints can distort some investor behaviours. Insurance companies generally cannot buy tranches below BBB, and this creates a mis-pricing between BBB and BB tranches. While investors try to anticipate rating changes, significant pricing mis-matches might occur when a rating rapidly changes[?], and some investors become forced sellers.

Uncertain economic outlook could lead to flight to safety

- Sentiment can be both positive and negative. For credit markets where there is an uncertain economic outlook, there could be a flight to safety, creating a potential investment opportunity where real risk has not been priced.

Illiquidity-driven price opportunities

- Trading in many CLO instruments is generally thin, creating illiquidity-driven price opportunities. In its 2017 Report and Accounts, Volta noted that non-mainstream structured credit investments, like warehouse and capitalised manager vehicles, offered a higher return, due partially to their illiquidity. A forced seller may well have to take a material discount to the real value. Similarly, a large seller may have few buyers to match its scale (another example of a competitive advantage from being part of the larger AXA IM). It is also worth noting that illiquidity will affect different markets to varying degrees over time.

Characteristics of CLO equity vs. debt

As noted above, CLOs give an end-investor a wide choice of risk/return options from low- yielding, low-risk debt, through higher-risk tranches of loans to equity-like instruments. CLOs operate as financing companies: every quarter, the CLO receives income from the loan portfolio, pays the interest due on the financing and expenses, and pays any remaining available cash (effectively its funding margin) over time to investors in its equity. CLO equity can take the form of preference shares, income notes or subordinated bonds. CLO equity gives investors a different risk profile. In particular, we note:

CLO equity takes upside if credit losses are below expectations, but bears first losses in downside

- It sees the upside from CLO structures being more profitable than expected. Current credit losses are below those built into initial pricing assumptions, and it is the equity elements that capture this benefit. CLO equity bears the first risk of loss, and so is more sensitive to credit deterioration should that happen.

Equity benefits when underlying loans are reset

- In favourable economic conditions, underlying loans may reset (i.e. keep the same terms but extend the duration). The overall profitability of the CLO rises, to the benefit of the equity holders.

Active refinancing can be a mixed bag. Refinancing of underlying loans reduces CLO profitability…but CLOs can refinance their own debt. Key is to identify which specific vehicles will see a net benefit.

- In good economic conditions, the underlying assets might see greater repayments, with limited opportunity for the CLO to invest. However, such strong markets also mean that CLO debt tranches might also be refinanced, improving the CLO profitability. Volta mentioned in 1H'FY18 that "Another reason to purchase more CLO equity tranches is the fact that the strong appetite that currently exists for CLO debt, especially on the senior tranches, means that new CLO documentation incorporates much more favourable terms for equity tranches than previously as senior debt holders are more flexible than before. These terms mainly concern the provision of more flexibility in terms of reinvestment capabilities and a greater ability to pay to the equity tranche the capital gains that could be generated by the CLO manager."

Interest rate sensitivity

Rising rates help income from floating rate underlying loans in due course; many have "floors", so will not see benefit from initial rate increases.

- The underlying floating rate loans held by the CLO should generate more income. However, we understand that many underlying loans are currently subject to floors (for example, a loan might pay 2% over three-month LIBOR with a floor of 4%, which means it pays 4% if LIBOR is at 0%, 1% or 2%). Initial rises in rates might not lift the underlying loans off their floor rates, and the CLO residual profit will fall if it has floating rate debt. This reduces the value of CLO equity.

Defaults likely to rise with rising rates, and this will affect sentiment

- Higher defaults will initially be borne by the CLO equity. The debt elements might see falls in price well beyond the likely economic loss (driven by illiquidity, uncertainty and negative sentiment), but the equity will take the bigger hit.

Rising rates might see more refinancing with mixed effects

- Refinancing activity triggered by rate moves can be mixed. Refinancing, which is beneficial to the underlying borrowers, is initially adverse for CLO equity holders, although resets, by extending the duration of cashflows, might see some long-term benefit. Restructuring by CLOs of their debt is generally beneficial to the equity holders, with improved terms/cheaper rates.

Basis risk between one- to three-month LIBOR could be an issue

- The difference between one-month and three-month $LIBOR (basis risk) was an average of 15bps during 2017, but it widened sharply in 1Q'18 (end of April 2018 47bps), although it fell back somewhat in 2Q'18, to 27bp by end-July. A bigger gap is negative for CLO equity investors, as loan borrowers can typically opt to switch from three-month to one-month LIBOR (and ca.60% of the US broadly syndicated loan market has done so, vs. 25% two years ago). CLOs' liabilities typically do not have this flexibility and continue to pay interest based on three-month LIBOR.

Trading spread on CLO equity above debt

- The trading spread on equity is somewhat higher. We understand that, in normal trading, the bid-ask spread is 0.2%-0.4% on best-quality debt, ranging up to 1%-1.5% on CLO equity. In a stress scenario, these increase to 1%-2% and 4%-6%, respectively.

Factors concerning the discount to NAV

The sector has an above-average discount to NAV and is offering an above-average yield. We discussed these issues in great detail in our reports on Volta (*Delivering the structured finance opportunity,* published on 5 September 2018, and *Investment opportunities at this point of the cycle,* published on 14 January 2019). We believe the key issues are:

Perceived complexity could be issue. Real exposure is highly diverse portfolios of largely corporate debt.

- The complexity of the terminology masks the relatively simple underlying risk. These businesses ultimately earn cash from large portfolios of primarily corporate loans. Several boards have taken several steps to broaden knowledge of the market and so ensure that there is a better understanding of the real (NAV) volatility. Part of this has involved engaging sponsored research houses to distribute the message to the widest possible audience. Further listings (such as Volta's sterling listing on the LSE) have been made to facilitate more trading/awareness.

Checks and balances are in place to ensure valuations reflect real prices

- The discount could reflect concerns that the NAV is not truly representative of the value of the business, because the modelling/valuation assumptions do not reflect a realisable value. We detailed in our September report why we believe Volta adopts appropriate valuation techniques and that the approach of its peers is similar.

Mark-to-market will introduce volatility in uncertain times

- There is the potential for MTM volatility in periods of uncertainty. We note, for example, that Volta reported a -4.8% NAV move in December 2018, but its early January NAV estimate shows a +3% move that month. In our January note we explored, in some detail, how sentiment could see market price movements well beyond likely changes in cashflow. Trying to precisely time the best possible entry point could miss the underlying long-term opportunity.

Other companies

We note there are some other companies active in CLOs, which are quoted but which do not fall into the CIC space.

- Tetragon Financial Group (ticker TFG, website: www.tetragoninv.com, End December 2018 NAV $2,189m ($22.48 p/share), share price $11.65). This business is classified as a flexible investment under the AIC categorisation but started life as a CLO investor. It now, as the categorisation implies, has a broad portfolio with ca.30% in private equity in asset managers, 20% in event-driven equities, convertibles and quantitative strategies, and just 13% in bank loans via CLOs.

- Livermore (ticker LIV, website: http://www.livermore-inv.com, market cap £68m, latest NAV (June 2018) $175m). This company is classified as being in financial services. The company's investment strategy is described on its website as: "The Company's primary investment objective is to generate high current income and regular cash flows. The financial portfolio is constructed around fixed income instruments such as Collateralized Loan Obligations ("CLOs") and other securities or instruments with exposure primarily to senior secured and usually broadly syndicated US loans. The Company has a long-term oriented investment philosophy and invests primarily with a buy-and-hold mentality, though from time to time the Company will sell investments to realize gains or for risk management purposes. Strong emphasis is given to maintaining sufficient liquidity and low leverage at the overall portfolio level and to re-invest in existing and new investments along the economic cycle."

Sub-sector: peer-to-peer/platform

Peer-to-peer/platform lenders – summary

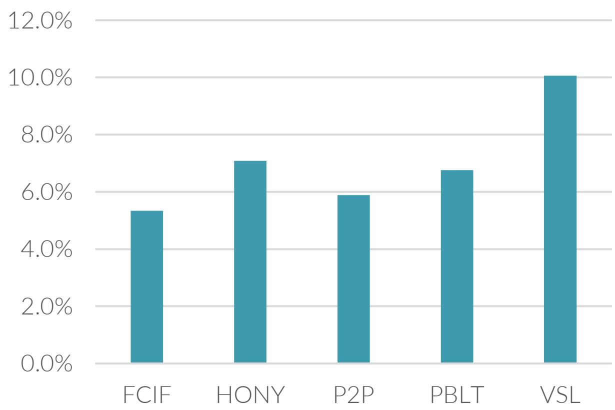
Name	Ticker	Currency	Net assets (m)	NAV 1-year growth*	NAV 3-year growth*	NAV 5-year growth*
Funding Circle SME Income Fund	FCIF	£	322	0.8%	-1.5%%	n/m
Honeycomb	HONY	£	401	7.6%	n/m	n/m
P2P Global Investments	P2P	£	733	2.3%	9.2%	n/m
TOC Property Backed Lending	PBLT	£	n/a	n/a	n/a	n/a
VPC Speciality Lending	VSL	£	307	7.8%	10.8%	n/m

*Source: Company December 2018 portfolio reports (or latest before that), Hardman & Co Research; *Growth in NAV calculated as change in reported NAV + reported dividends*

The NAV growth, we quote in the table above includes the change in accounting to IFRS9, which reduces the NAV (our calculations look at the reported NAV at end-2018 on prior years). We note that P2P Global Investments, for example, quotes a one-year NAV return of 5.2% to end-December 2018 (Hardman basis 0.7%), which reflects the performance in the year excluding this accounting effect.

Current share price premium/discount to December NAV (%)

12-month trailing yield (%)



Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

Some key portfolio highlights

Ticker	Country/Currency	Asset mix (% GAV)	Largest exposures	Regional/rating split
FCIF	UK: Prop. & Construction 18%, Wholesale/Retail 18% Profess 11%, Manufact 11%	US: Prof., Scientific & Tech 17%, Retail 15%, Healthcare 12%, Accom & food 10%	9,302 loans Largest 0.2% NAV	UK 64%, USA 19%, Cont. Europe11%, cash 6%
HONY		Consumer 49%, Property 39%, SME 11%	76,500 loans (average ca.£5k). Loans > £0.5m, 9% GAV	National
P2P	£746m continuing portfolio: SME 34%, Real Estate 49%, Consumer 16%	£231m run-off portfolio: 96% consumer, 4% SME	Australian Auto loans £27m, UK property £20m US Rapid Fin. Serv. £20m	n/d
PBLT	n/d	n/d	n/d	n/d
VSL	USA 74%, UK 9%, Caribbean 12%, Europe 2%, Mexico 2%, Kenya 1%	Consumer 91%, SME 9%	Balance sheet loans 85%, Equity 8%, Securitisation residual 3%, Marketplace loans 2%	n/m

Source: Company December Monthly reports, Hardman & Co Research;

Summary company descriptions

Ticker	Company description
FCIF	Funding Circle SME Income Fund's objective is to provide shareholders with a sustainable and attractive level of dividend income by lending to small businesses. It has raised over £300 million, to provide investors with access to a diversified pool of loans originated through Funding Circle's marketplaces in the UK, US, Germany and the Netherlands, and an attractive level of dividend income. There are no fund management or performance fees charged at the Company level. http://fcincomefund.com/ Manager: Self-managed by Board
HONY	Honeycomb Investment Trust plc (the "Company") is a specialist lending fund whose investment objective is to provide shareholders with an attractive level of dividend income and capital growth through the acquisition of interests in loans made to consumers and small business as well as other counterparties. The Company may also make investments in selected equity securities that are aligned with the Company's strategy and that present opportunities to enhance the Company's returns from its investments. The Company believes that consumer and SME loans are an asset class that has the potential to provide active returns for investors on a risk-adjusted basis, and that changes in the focus of mainstream lenders together with the implementation of new models that make the best use of data, analytics and technology, provide an opportunity to deliver attractive products to borrowers while generating attractive returns for the Company. The Company and the Investment Manager seek to acquire credit assets which meet the specified underwriting criteria through three routes; (1) organically originate and acquire through referral partners which source opportunities; (2) acquiring seasoned portfolios; and (3) providing senior and mezzanine structured loans secured on portfolios of consumer and SME loans. Partners include the UK's largest unsecured loan broker; a UK retail point of sale finance broker; and a number of financial institutions. https://www.honeycombplc.com/ Manager: Pollen Street Capital Limited
P2P	P2P Global Investments PLC is a UK listed investment trust. The company is dedicated to investing in credit assets originated by non-bank lending platforms and other originators of specialist lending assets globally. The Company partners with specialist lenders who offer attractive products based upon understanding of particular sectors and target customer groups. These players are often better at serving these markets based upon focus, expertise, efficiency and entrepreneurialism. The Company specialises in investing in small size private credit assets across SME, consumer (secured and unsecured), real estate and trade finance asset classes through strategic partnerships which encompass marketplace lending platforms, balance sheet lenders and other non-bank loan originators. The Company invests in the USA, Europe and Australasia and actively seeks opportunities in other markets. https://www.p2pgi.com/ Manager: PSC Eaglewood Europe LLP. The Investment Manager has delegated certain of its responsibilities and functions, including its discretionary management of the Company's portfolio of credit assets, to Pollen Street Capital
PBLT	TOC Property Backed Lending Trust PLC investment objective is to provide shareholders with a consistent and stable income and the potential for an attractive total return over the medium to long term while managing downside risk through: (i) a diversified portfolio of fixed rate loans predominantly secured over land and/or property in the UK; and (ii) in many cases, receiving the benefit of an associated profit share usually obtained by acquiring (at nil cost) a minority equity stake (usually 25%) in the relevant borrower project development vehicle. The direct lending portfolio is centrally focused on short to medium term debt obligations (principally property backed loans) that have been originated or issued by Tier One Capital and other direct lending platforms. http://www.tocpropertybackedlendingtrust.co.uk/ Manager: Tier One Capital Limited ("Tier One" or the "Investment Adviser"). Tier One has developed a direct lending offering that provides an opportunity which sits between conventional lending and the emerging peer-to-peer platform market. Tier One uses its direct lending and credit expertise to source funds for borrowers, broker facility agreements and then offer continued support and guidance to borrowers through the lifespan of their loan.
VSL	The Company seeks to generate an attractive total return for shareholders consisting of dividend income and capital growth via investments across a diverse portfolio of various online lending providers, asset classes, geographies (primarily U.S. U.K., Europe and Australia) and credit bands. The Company generates investment income from exposure to Portfolio Company originated consumer and small business loans including corporate and trade receivables in accordance with certain investment limits and restrictions to ensure diversification of the Company's portfolio is maintained and that concentration risk and credit exposure is mitigated. In addition, the Company may also make direct equity investments, or receive warrants to purchase equity stakes in such Portfolio Companies. https://vpcspecialtylending.com/ Manager: Victory Park Capital Advisors, LLC.

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

Opportunities from peer-to-peer

Strong growth in market peer-to-peer lending (outstanding loans up a third in 12 months to end-September 2018), driven by bank capital requirements and technology. Investment company growth provides diversified funding for the platforms.

Total lending facilitated by Peer2Peer Finance Association (P2PFA) was approaching nearly £11bn by the end of September 2018, with the most pronounced growth continuing to be found in lending to small businesses (cumulative lending £7.2bn). The end-September loan book was £4bn (3Q'17 £3.0bn), with £934m of gross new lending in 3Q'18. There are ca.281k borrowers (234k individuals) and 149k lenders. Peer-to-peer platforms have been trying to smooth demand for loans, with people willing to invest in the platforms by diversifying their funding sources and accessing semi-institutional money. This has fuelled the growth of investment companies to take their share of this structural growth.

We believe a key driver to the growth in peer-to-peer has been the increase in bank capital requirements, which means that, like for like, there is an increased financial benefit in dis-intermediation. This has been alongside the development of technology, which allows investors better access to information, risk control and portfolio management tools. As peer-to-peer achieves greater scale, it is likely to see increased credibility, as well as the opportunity for lenders on the platforms to diversify portfolios.

Three-year return below peers, but bigger IFRS9 effect

Relative to other debt companies, the platform lenders are trading at significant discounts. While, on headlines, this may appear partially justified by historical performance (sub-sector average three-year NAV growth ca.11%, vs. sector at 15), we note that the implementation of IFRS9 is likely to have had a more adverse effect on peer-to-peers than other lenders.

Factors regarding above-average NAV discount

Peer-to-peer untested in recession

Peer-to-peer market untested through a recession

We note that retail investors using the platforms have yet to experience a serious economic downturn. It is unclear what their behaviour will be; nor is it certain how the politicians/regulators may respond to significant numbers of retail investors losing money. Some in the market have concerns that the platforms are driven by technology, rather than credit controls, and this could have adverse effects in a downturn. Should the platforms have an adverse performance in a downturn, this would impact on those funds that have invested in platform loans and on sentiment to these names.

Above-average credit losses

Starts with above-average credit losses

Remote lenders typically incur higher like-for-like losses than local lenders (by way of example, a remote lender cannot hear of a likely factory closure in the way a local lender can), and peer-to-peer is no different in this regard. Taking Funding Circle as an example, we note from the *statistics* tab of its webpage that the expected annual losses on the 2018 cohort is 3.0% to 3.8%. Funding Circle's losses and yields of just under 10% can be compared with a lender such as 1pm, which has losses of ca1% and yields in the mid-teens, and with mainstream SME bank lenders reporting minimal losses. There has also been a deterioration in recent credit (2014 cohort 1.8% to 2.1%). The sharp fall in the Funding Circle Holdings and the Funding Circle Income Fund share prices in early December, after Funding Circle warned of credit deterioration in specific cohorts of lending, shows how investor sentiment was affected.

Funding Circle stress test surprisingly low

We also note the stress test conducted by Funding Circle in late 2017, which indicated that it expected returns to fall by between 1.7% and 2.4% in a recessionary scenario. Bearing in mind that the platform losses are already significantly above mainstream lenders (indicative of above-average risk), we were surprised that the increase in losses would be so much less than the increase experienced by banks in historical recessions.

International concerns

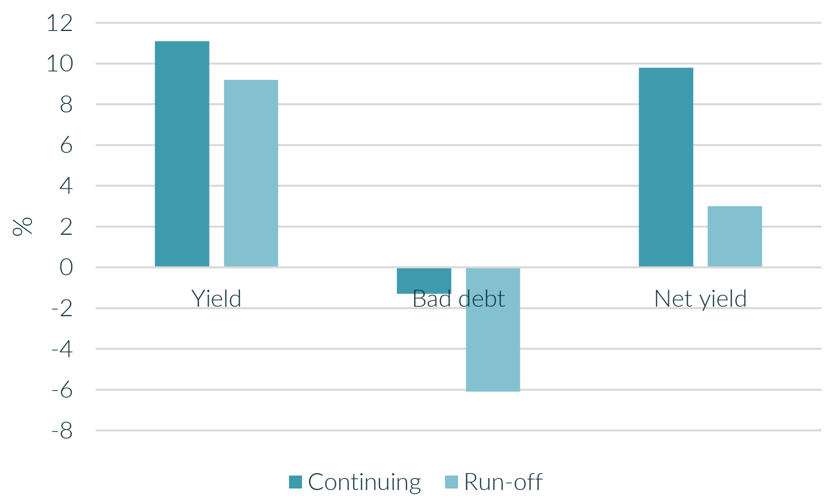
We note that the press coverage on an international basis could raise concerns. Bloomberg reported on 3 January 2019 that, in China, the number of operators fell by 50% in 2018, and speculated that there could be a further reduction to as few as 300 by the end of 2019. Sector net monthly lending growth is now under 100bn yuan, against ca.250bn yuan at the peak. Lending Club in the US has seen its share price fall from $27.9 in December 2014 to a current level of $3.37.

Rapidly evolving market, which creates uncertainty and potential for material changes in direction/portfolio mix

Rapidly evolving market

As noted in the table on page 38, all the companies in this sub-sector have been quoted for less than five years. The platform market is evolving rapidly in distribution, product and customer focus. P2P hosted an investor day on 16 January 2019 (presentation), which highlighted the changes it had made. Its historical focus on consumers has reduced sharply (16% of continuing portfolio against 96% of the run-off portfolio). With such a dramatic shift, there is a risk that investors will take time to focus on the opportunity from the new model, rather than the risks from the old model.

Comparison of continuing and run-off portfolios in P2P (%)



Source: P2P Global Investments, Hardman & Co Research

Sub-sector: mixed assets

We have three companies (shown in the table below) with relatively broad mandates, which do not easily fit into our other sub-sectors. Arguably, Chenavari Toro Income Fund could be in the CLO sub-sector, but its weighting to residential underlying assets is a differentiator.

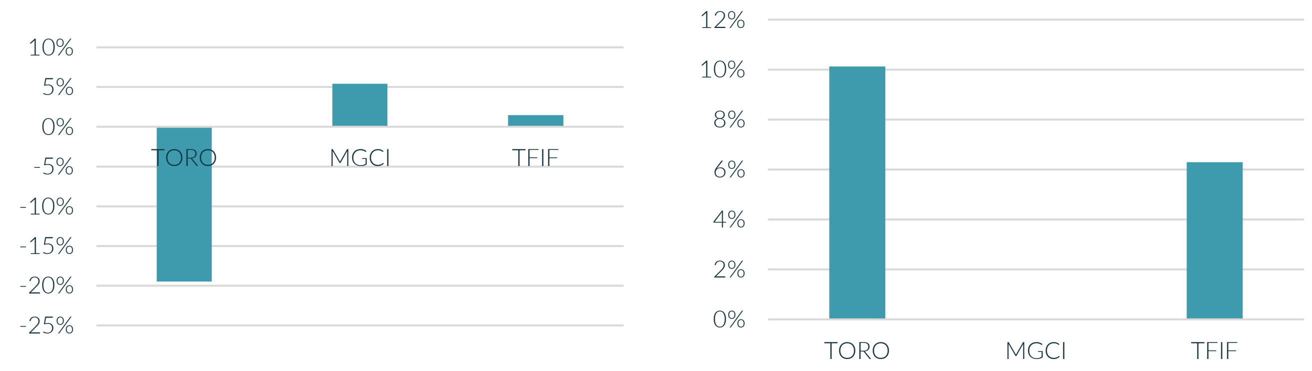
Mixed-asset lenders – summary

Name	Ticker	Currency	Net assets (m)	NAV 1-year growth*	NAV 3-year growth*	NAV 5-year growth*
Chenavari Toro Income Fund	TORO	€	321	6.5%	18.9%	n/d
M&G Credit Income Investment Trust	MGCI	£	122	n/a	n/a	n/a
TwentyFour Income Fund	TFIF	£	470	2.4%	19.1%	31.2%

*Source: Company December 2018 portfolio reports (or latest before that), Hardman & Co Research; *Growth in NAV calculated as change in reported NAV + reported dividends*

As can be seen in the chart below, Chenavari Toro Income Fund is trading at a material discount to NAV (the largest in the whole debt company space), and its yield of 10.1% is one of the highest.

Current share price premium/discount to December NAV (%) | **12-month trailing yield (%)**



Source: Company Factsheets, Hardman & Co Research; prices as at 21 February

Some key portfolio highlights

Ticker	Country/Currency	Asset mix (% GAV)	Largest exposures	Regional/rating split
TORO	€ 94%, £ 6% Subordinate 60%, Mezzanine 19%, Senior 11%	Corporate 59%, Residential Real Estate 26%, SME 2%, Consumer 2%, Cash 11%	Top 1 7.37% Top 5 31.7%	Spain 20%, UK 11%, Ireland 10%, France 10%, Germany 10%, USA 9%, N/lands 5%
MGCI	UK 73%, Ireland 12%, US 5%, Germany 4%, Italy 2%, Sweden 2%, N/lands 2%, Luxem. 1%	Private funds and bonds 8% Public ABS 20%, Public bonds 33%, cash 39%	58 holdings. M&G European Loan GBp C-H 7.1% BRASS_6 A RegS 2.5% WARW_1 B RegS 2.0%	AAA 12%, AA+/AA 5%, A+/A/A- 4%, BBB+ 10%, BBB 9%, BBB- 9%, Non-Investment grade 5%, Not rated 7%
TFIF	UK 45%, Netherlands 15%, Germany 12%, France 8%	Residential MBS 48%, CLO 37%, Consumer ABS 10%	n/d	A or better 13.5%, BBB 18%, BB 18%, B 29%, CCC/UR 22%

Source: Company December Monthly reports, Hardman & Co Research

Summary company descriptions

Ticker	Company description
TORO	The investment objective of Chenavari Toro Income Fund Limited (the "Company" or "Toro") is to generate an absolute return through credit or loan investments, direct or indirect, in diversified sectors of the economy, and through the origination of credit portfolios. The investment strategy has three arms to it: (i) Public ABS Strategy (21% portfolio): Picking securities primarily backed by loans to companies and consumers that appear mispriced by the market. (ii) Private Asset Backed Finance Strategy (10% portfolio): Through the Portfolio Manager, the Company will leverage on the extensive relationships it has with European Banks and retail credit firms in order to gain access and invest in private asset backed finance transactions that are otherwise unlisted and difficult to source. (iii) Direct Origination Strategy (59% portfolio): The Company will primarily invest in potentially attractive opportunities arising from newly introduced EU/US regulations that require originators to retain economic interest in their own transactions. This strategy benefits from the team's sourcing and structuring capabilities. As a result, the Company receives enhanced economics on the retained interest. https://www.chenavaritoroincomefund.com Manager: Chenavari Investment Managers
MGCI	Launched 14 November 2018. The Company aims to generate a regular and attractive level of income with low asset value volatility. The Company seeks to achieve its investment objective by investing in a diversified portfolio of public and private debt and debt-like instruments ("Debt Instruments"). Over the longer term, it is expected that the Company will be mainly invested in private Debt Instruments, which are those instruments not quoted on a stock exchange. https://www.mandg.co.uk/adviser/funds/credit-income-investment-trust/gb00bfyyl325/ Manager M&G
TFIF	The fund aims to generate attractive risk-adjusted returns, principally through income distributions by investing in a diversified portfolio of UK and European asset backed securities. These securities, whilst fundamentally robust, do not offer enough liquidity for daily priced OEICs, but are well suited to a traded closed-ended vehicle, where investors can obtain liquidity via the exchange. https://twentyfouram.com/funds/twentyfour-income-fund/ Manager: TwentyFour Asset Management

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

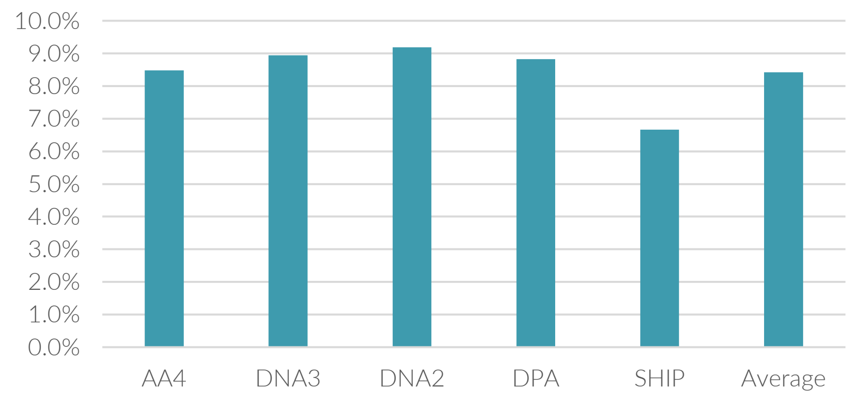
Sub-sector: leasing companies

A very specialist sub-sector of financing investment companies is the leasing businesses. Given the difference in accounting (assets booked at cost), concentration risk (typically very few customers and assets) and transport focus (mainly airlines and ships), we believe that trying to review them in the same way as the other sub-sectors would add little value.

The concentration risk means that announcements by specific airlines/manufacturers can have a material effect. For example, Amedeo Air Four Plus and Doric Nimrod Air Two & Three share prices all fell ca.10% when Airbus announced in mid-February that it will no longer produce A380s, a core part of their portfolios.

The sector has an above-average yield (8.4%), with all the companies yielding over 6.7% and a high of 9.2%.

Yield for leasing companies (%)



Source: Hardman & Co Research; prices as at 21February

Accounting: sensitivity to foreign exchange

Foreign exchange accounting does not reflect likely cashflows

We do not believe that it is fair to compare the discount to NAV for this sub-sector with the other debt businesses, because of the significant accounting differences in calculating the NAV. IFRS accounting requires the use of a sterling historical cost of the assets, and the value of the US dollar debt is translated at the spot exchange rate on every statement of the financial position date. In addition, US dollar operating lease receivables are not immediately recognised, but are accrued over the period of the leases. In actuality, the US dollar operating leases should offset the US dollar payables on amortising loans. The foreign exchange exposure in relation to the loans is thus almost entirely hedged by the funding, but this is not reflected in the accounts. We believe that this introduces an artificial variance between what the accounts show, and that the effect is so material as to undermine comparisons.

Impact of unrealised foreign exchange movements on profit and loss

£m	AA4	DNA2	DNA 3
1H'FY19			
Profit pre Fx	32.7	26.2	13.7
Unrealised Fx	-116.4	-33.0	-24.0
% of profit	-356%	-126%	-176%
1H'FY18			
Profit pre Fx	32.0	35.4	18.6
Unrealised Fx	110.7	35.2	25.1
% of profit	346%	99%	134%

Source: Company report and accounts, Hardman & Co Research

HARDMAN&CO.

Summary company descriptions

Ticker	Company description
Amedeo Air Four Plus (ticker AA4)	The company's investment objective is to obtain income returns and a capital return for its shareholders by acquiring, leasing and then selling aircraft. The Company currently has a Portfolio of eight A380, two B777-300ER and four A350-900 aircraft, all on long-term leases to either Emirates, Etihad or Thai. The Company will consider investment opportunities and will potentially raise additional equity capital through the issuance of shares to purchase A380s, B777s, A350s and other aircraft types. http://www.aa4plus.com/ Manager: Amedeo Limited
Doric Nimrod Air Two and Three Tickers DNA2 and DNA3)	DNA2 has purchased seven Airbus A380-861 aircraft, which it is leasing to Emirates Airlines, the national carrier owned by the Investment Corporation of Dubai, based in Dubai, United Arab Emirates. DNA2 will seek to provide investors with income and capital returns through investment in assets. DNA2 is receiving income from the leases and its directors intend to target a gross distribution to shareholders of 4.5 pence per Share per quarter (after costs and payment of any fees) after all seven aircraft have been purchased, amounting to a yearly distribution of 9% based on the initial placing price of 200 pence per share. http://www.dnairtwo.com/home.html DNA3's investment objective is to obtain income returns and a capital return for its Shareholders by acquiring, leasing and then selling aircraft. To pursue its investment objective, DNA3 will seek to use the net proceeds of placings and other equity capital raisings, together with debt facilities (or instruments), to initially acquire Airbus A380 aircraft which will be leased to one or more major airlines. The Company will have the ability to acquire additional aircraft if, in the view of the Board the acquisition of such additional aircraft would not have an adverse material effect on the Company's target income distributions. DNA3 aims to provide Shareholders with an attractive total return comprising income, from distributions through the period of the Company's ownership of the Assets, and capital, upon the sale of the Assets. http://www.dnairthree.com/home.html Manager: Amedeo Limited (formerly Doric Lease Corporation)
DP Aircraft (ticker DPA)	The Company's investment objective is to obtain income returns and a capital return for its Shareholders by acquiring, leasing and then, when the Board considers it is appropriate, selling aircraft. DP Aircraft I Limited, a Guernsey based company, was launched in October 2013. To date the Company has acquired four Boeing 787-8 aircraft, with two leased to Norwegian Air Shuttle ASA and two leased to Thai Airways International PCL. The Company took over the Norwegian aircraft, LN-LNA (previously EI-LNA) and LN-LNB (previously EI-LNB), on 9 October 2013 and the Thai aircraft, HS-TQC and HSTQD, on 18 June 2015. Since these dates all lease obligations have been met in full by Norwegian and Thai and no incidents of note concerning operations of the aircraft have occurred. http://www.dpaircraft.com/home.htm Manager: DS Aviation GmbH & Co. KG,
STufton Oceanic Assets (ticker SHIP)	Tufton Oceanic Ltd has been a specialist fund manager in the maritime and energy markets since 2000 and has been focused on financial services to these industries since its inception in 1985. Since 2013, the Investment Manager has invested c. US$1.1 billion of capital in 70 vessels. http://www.tuftonoceanicassets.com/

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

Sub-sector: wind-down/harvesting

A number of companies are now in wind-down/harvesting mode. Their valuations are driven by likely sale realisations and costs of closure, rather than the underlying assets. We note that, as the business shrinks, its expense ratio worsens and, as a known seller of assets, it may not achieve the same price as a "normal" seller. That said, the managements are fully aware of these issues, and take action to mitigate them. This may include holding assets to maturity, rather than forced sales or, as in the case of CIFU, giving investors the opportunity to roll over their investment into an alternative (in this case Blackstone/GSO Loan Financing Limited).

Some key portfolio highlights

Ticker	Country/Currency	Asset mix (% GAV)	Largest exposures	Regional/rating split
Carador Income Fund (CIFU)	n/d	CLO equity 84%, mezz. notes 6%, cash 10%	Largest 0.76% (CLO investments), top 5 3.49% U/L 1,226 corporates	NR 84%, BB/B 6%, cash 10%
NB Distressed Debt (NBDD) *	$ 75%, BRL 13%, €12%	PE 38%, Public equity 23%, Private notes 14%, Trade claims 13%	Lodgings & casino 27% surface transportation 13%,	US 76%, Brazil 13%, Lux 9%, Germany 2%
NB Distressed Debt New Global shares (NBDG) *	$ 77%, € 19%, DKK 4%	PE 41%, Bank debt 23% Public equity 22% Private notes 11%	Lodgings & casino 19% (sector 38%), Shipping 15%Auto comp 9% (sector 9%), Com real estate 7% (sector 7%)	US 73%, Spain 11%, N/lands 7%, Marshall Islands 5%, Denmark 4%
NB Distressed Debt Extended Life shares (NBDX) *	$ 82%, € 11%, BRL 5%	PE 33%, Bank debt 19%, Private notes 19%, Public equity 18% Trade claim 5%	Lodgings & casino 11% (sector 23%), Auto comp 9% (sector 9%), Shipping 8% (sector 14%),	US 74%, Marshall Islands 8%, Brazil 5%, N/lands 4%, Lux 4%
Ranger Direct (RDL) **	n/d	Platform debt 39%, Commercial real estate 20%, Business loans 17%	Secured 98%, unsecured 2%	USA 77%, UK 10%, Australia 7%, Canada 6%

*Source: Company December Monthly reports, * September 2018 ** November 2018, Hardman & Co Research*

Summary company descriptions

Ticker	Company description
CIFU	The Company's investment objective is to produce attractive and stable returns with low volatility compared to equity markets, by investing in a diversified portfolio of equity and mezzanine tranches of CLOs and senior tranches of cashflow CLO transactions backed by senior secured leveraged loans. A managed wind down was approved in December 2019. http://www.carador.co.uk/ Manager: Blackstone GSO
NBDD / NBDG / NBDX	NB Distressed Debt Investment Fund Limited's ("NBDDIF") primary objective is to provide investors with attractive risk-adjusted returns through long-biased, opportunistic stressed, distressed and special situation credit-related investments while seeking to limit downside risk. NBDDIF's holdings are diversified across distressed, stressed and special situations investments, with a focus on senior debt backed by hard assets. The Ordinary Share Class was subject to an investment period which ended on 10 June 2013 and the Extended Life Share Class was subject to an investment period which ended on 31 March 2015. The New Global Share Class ("NBDG") was created in March 2014 in order to capture the growing opportunity in distressed debt globally. NBDG's investment period ended on 31 March 2017, https://www.nbddif.com/ Manager: Distressed Debt team at Neuberger Berman:
RDL	RDL will pursue a managed wind-down of investments. As part of the realisation process, the Company may exchange existing Debt Instruments issued for equity securities in the lending platform where, it is unlikely to be able to otherwise realise such Debt Instruments. http://www.rangerdirectlending.uk/ Ranger Alternative Management II, LP

Source: Descriptions taken directly from company websites accessed February 2019, Hardman & Co Research

Appendix 1: Hardman & Co tick-sheets

Hardman & Co – specific questions for specialised lenders	
Question	Management response
Strategic	
What are your competitive advantages creating barriers to entry and so superior returns?	
Are there particular aspects of your product offering that generate incremental returns (e.g. early repayment penalties)?	
How large a market share do you have in your chosen niche?	
How liquid would the market be if you tried to on-sell any positions, and what would be the cost in doing so?	
To what extent do you earn higher returns by being willing to accept more (leveraged) risk and to what extent is it about exploiting opportunities where a lack of understanding means risk may have been mis-priced?	
What competitive advantage does the asset manager have to deliver superior returns?	
What discount management programmes are in place?	
Valuation	
Can you give details of how you get to your IFRS9 impairment calculation?	
What external verification (other than auditors), if any, is there to verify valuations?	
Do you have any measure of the credit volatility seen by your niche in a range of economic scenarios?	
Risk	
What are the major economic/regulatory/competitive risks that would change the market dynamic?	
What is the process by which you assess counterparty creditworthiness?	
How do you monitor ongoing creditworthiness of counterparties?	
In the event of a borrower getting into arrears, how is this managed?	
How would the collection of debt be enforced in the event of the counterparty defaulting? What expertise does the team have in collections?	
How many staff have left in the past three years, and how is the risk of key personnel leaving managed?	
How is currency exposure managed?	
What is the overall interest rate sensitivity and what are the key dynamics driving it?	
Where the business has a broad geographical spread, what is the expertise in some of the smaller jurisdictions?	
Reinvestment	
How can we be confident that there will be material reinvestment opportunities to deploy maturing debt?	

Source: Hardman & Co Research

Hardman & Co – specific questions for secured lenders

Question	Management response
Strategic	
To what extent do you earn higher returns by being willing to accept more (leveraged) risk, and to what extent is it about exploiting opportunities where a lack of understanding means risk may have been mis-priced?	
What competitive advantage does the asset manager have to deliver superior returns?	
How broad a range of asset classes does the mandate/managers' expertise allow?	
What discount management programmes are in place?	
What is the portfolio approach to managing risk – are there elements in the portfolio that have materially different risks from others, and how is this managed?	
Why would borrowers come to you, rather than to their bank?	
For property lenders, do you see yourself as a property company that happens to invest in debt, or are you a debt company that specialises in real estate?	
Valuation	
Can you give details of how you get to your IFRS9 impairment calculation?	
What external verification (other than auditors), if any, is there to verify valuations?	
Do you have any measure of the credit volatility seen by your niche in a range of economic scenarios?	
What would the value of security be on a forced sale basis?	
Risk	
What evidence can you provide that security has been effectively executed?	
What measures are in place to ensure security is effectively monitored, and to what extent is this external?	
What has been the historical recovery rate on the security taken?	
How would the collection of debt be enforced in the event of the counterparty defaulting? What expertise does the team have in collections?	
What is the overall interest rate sensitivity and what are the key dynamics driving it?	
Does the change in Crown Preference have any direct or indirect effects, and what is its likely impact on borrowers?	
What is the exposure to high-risk sectors (such as retail) and how is this risk managed? Have CVAs had a material effect?	
What are the resale market conditions should the security need to be realised? How specific are the assets that form the security to the borrower, or is there general demand for them?	
For invoice finance providers, what are the characteristics of the end-invoice payers compared with the borrowers?	
Reinvestment	
How can we be confident that there will be material reinvestment opportunities to deploy maturing debt?	

Source: Hardman & Co Research

Hardman & Co – specific questions for CLO lenders	
Question	**Management response**
Strategic	
To what extent do you earn higher returns by being willing to accept more (leveraged) risk and to what extent is it about exploiting opportunities, where a lack of understanding means risk may have been mis-priced/above expected yields earned?	
To what extent is income generated from trading assets, as opposed to coupon/interest/ dividend receipts?	
How broad a range of asset classes (CLO equity, debt, warehouse facilities, CLO-like structures) does the mandate/managers' expertise allow?	
What discount management programmes are in place?	
What competitive advantage does the asset manager have to deliver superior returns?	
What is the portfolio approach to managing risk – are there elements in the portfolio that have materially different risks from others, and how is this managed?	
Valuation	
Can you outline the independence of the valuation methodology, including what external checks are put in place?	
Where external market prices have been taken for illiquid instruments, how do you ensure that the price is a realistic one and not one reflecting the market-maker's book?	
Have there been any realisations close to valuation dates, and have these been at a premium/discount to the reported valuation?	
Risk	
How are the largest exposures calculated? Can you provide details if you adopt a weighting by type of security?	
How are the sector exposures calculated? To what extent are gross exposures weighted by the seniority of the security?	
What proof do you have that your investments have delivered lower defaults/losses than the market as a whole?	
How do you manage covenant-lite/adjusted earnings exposure in underlying loans?	
How would the fund cope with a financial crisis like 2008/2009?	
How is currency exposure managed?	
How do you monitor the performance of specific CLO managers? How is the manager risk perceived relative to the portfolio risk? Would you invest in a median manager but with a sectoral exposure that you want?	
What is total number of underlying loans?	
What is the overall interest rate sensitivity and what are the key dynamics driving it?	
Reinvestment	
What is the process by which new investments are identified?	

Source: Hardman & Co Research

Hardman & Co – specific questions for peer-to-peer/platform lenders

Question	Management response
Strategic	
To what extent do you earn higher returns by being willing to accept more (leveraged) risk, and to what extent is it about exploiting opportunities where a lack of understanding means risk may have been mis-priced/above expected yields earned?	
How big a market do you see peer-to-peer becoming, and what is both your current market share and share of that ultimate pot?	
What arrangements are in place to manage the assets should a platform get into difficulties?	
What is your view on the risk that regulators may impose penal restrictions on all platforms if one platform sees a material number of retail investors lose money?	
Once bank capital requirements stabilise, to what extent are they likely to become more aggressive competitors?	
How do you assure investors that the platforms have the appropriate credit culture and are not driven by technology?	
How will peer-to-peer markets evolve if alternative assets start to reprice (e.g. bank deposit rate rising with market increases)?	
Valuation	
Can you give details of how you get to your IFRS9 impairment calculation?	
What external verification (other than auditors), if any, is there to verify valuations?	
What is the likely scale of the impact on the valuation of assets if the platform faces difficulties?	
Risk	
What confidence do you have that the platform has the systems in place to manage a recession when none of them have been through that economic outlook?	
What are the credit losses incurred by the platforms compared with like-for-like lenders?	
How does a platform assess the character of borrowers when they are remote? To what extent is being remote, and so unaware of, say, a local factory closure, an impediment?	
To what extent are there international problems with peer-to-peer read-across for the markets you are in?	
On an ongoing basis, what is the recovery rate, and how does it compare like-for-like with other lenders? How are collections managed on a day-to-day basis?	
P2P Global Investments went through a major restructuring – what do you believe drove the need for this, and what confidence can we have that you will not need to do the same?	
What is the overall interest rate sensitivity and what are the key dynamics driving it?	
Reinvestment	
What is the process by which new investments are identified?	

Source: Hardman & Co Research

Appendix 2: current NAVs

In order to give the best comparability between companies, we have used throughout this report the end-December 2018 reported NAVs. In the table below, we show the NAV used in our report and the most recent NAV. As can be seen in the table below, our allocation to sub-sectors brings greater comparability in the frequency of NAV reporting than a broad sector view.

Table title – Four columns, five rows

Ticker	NAV used in report	Most recent NAV	Change	Latest premium/discount (%)	Date of NAV	Frequency
Specialist						
AEFS (p)	103.3	103.1	**-0.2%**	-6.0%	19-Feb	Daily
AXI (p)	90.08	92.11	**2.3%**	-2.8%	20-Feb	Daily
BPCR (US$ c)	100.44	104.27	**3.8%**	1.7%	31-Jan	Monthly
CCPG (£)	1.0762	1.0839	**0.7%**	-1.1%	01-Feb	Weekly
CCPE (€)	1.0404	1.0464	**0.6%**	0.3%	01-Feb	Weekly
JGCI (p)	89.8	93.9	**4.6%**	-5.4%	20-Feb	Daily
NBLS (p)	92.15	94.05	**2.1%**	-5.4%	19-Feb	Daily
NBLU (US$ c)	94.68	96.67	**2.1%**	-3.5%	19-Feb	Daily
SMIF (p)	88.76	89.1	**0.4%**	2.6%	20-Feb	Weekly
Secured Property						
LBOW (p)	99.63	99.63	**0.0%**	-0.4%	31-Oct	Quarterly
RECI (p)	163.1	164.5	**0.9%**	4.3%	31-Jan	Monthly
SWEF (p)	102.68	103.27	**0.6%**	1.7%	31-Jan	Monthly
UKML (p)	83.51	83.65	**0.2%**	-1.4%	31-Dec	Monthly
Secured other assets						
GABI (p)	101.74	101.74	**0.0%**	4.7%	31-Dec	Quarterly
HWSL (p)	97.77	97.77	**0.0%**	-2.8%	31-Dec	Monthly
RMDL (p)	96.98	97.62	**0.7%**	4.1%	31-Jan	Monthly
SQN (p)	97.31	97.31	**0.0%**	-3.6%	31-Dec	Monthly
SQNX (p)	98.14	98.14	**0.0%**	-4.7%	31-Dec	Monthly
SSIF (p)	96.73	96.73	**0.0%**	-5.1%	31-Dec	Monthly
CLO						
BGLF (€)	0.8963	0.8824	**-1.6%**	-7.1%	31-Jan	Monthly
FAIR ($)	0.874	0.8465	**-3.1%**	0.4%	31-Jan	Monthly
MPLF ($)	0.8172	0.8172	**0.0%**	-0.9%	31-Dec	Monthly
VTA (€)	7.71	7.95	**3.1%**	-13.8%	31-Jan	Monthly
VTAS (£)	N/a	6.903	**n/a**	-13.7%	31-Jan	Monthly
Peer-to-peer						
FCIF (p)	96.47	95.22	**-1.3%**	-10.3%	31-Jan	Monthly
HONY (p)	999.8	999.8	**0.0%**	13.0%	31-Dec	Monthly
P2P (p)	948.52	948.52	**0.0%**	-14.1%	31-Dec	Monthly
PBLT (p)	96.63	96.63	**0.0%**	7.1%	31-Aug	Quarterly
VSL (p)	85.1	85.1	**0.0%**	-8.9%	31-Dec	Monthly
Mixed asset						
TORO (€)	0.9813	0.9813	**0.0%**	-19.5%	31-Dec	Monthly
MGCI (p)	97.94	98.7	**0.8%**	4.6%	31-Jan	Monthly
TFIF (p)	113.09	111.49	**-1.4%**	2.9%	15-Feb	Weekly
Wind-down						
CIFU ($)	0.6105	0.6364	**4.2%**	-8.9%	31-Jan	Monthly
NBDD ($)	0.9824	1.0012	**1.9%**	-9.1%	19-Feb	Daily
NBDG (£)	0.9244	0.915	**-1.0%**	-13.1%	19-Feb	Daily
NBDX ($)	0.9658	0.976	**1.1%**	-13.9%	19-Feb	Daily
RDL (p)	8.59	8.59	**0.0%**	-39.1%	30-Nov	Six-monthly

Source: Latest company factsheets, Hardman & Co Research

About the author

Mark Thomas is an analyst in the Financial Stocks and Investment Companies team at Hardman & Co.

He has nearly 30 years' experience in Financial Services. He leveraged his 10 years' direct industry experience within NatWest Group to give investors a better understanding of the business models of the companies he followed. His general business analysis is supplemented with specific experience in balance sheet management, derivatives, tax, pension and accounting issues (invited member of FIAG), combined with considerable board-level liaison across all sizes of companies. He spent more than 10 years as a highly-rated sell-side analyst, primarily with the financial specialists Fox Pitt Kelton and Keefe Bruyette and Woods. His coverage extended beyond banks to a range of financial companies, after which he spent six years with the sponsored research house Edison.

Mark joined Hardman & Co in March 2016. He holds a BA (Hons) in Economics and Law from the University of Durham, and a BA (Hons) in History from the Open University.

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