

Credit Portfolios, Valuations and Liquidity

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Updating our “Credit Portfolios, Valuations and Liquidity Paper”

Fund structure plays an important part in the performance of credit funds. A well-structured fund supports pricing transparency, liquidity and fairness for unitholders.

More than a decade ago, as the GFC was unfolding, we published a short paper on this topic, titled: “Credit Portfolios, Valuations and Liquidity in 2008”, outlining the structural features we would expect to see incorporated in an open-ended credit investment fund.

That paper was written to help investors make informed choices when comparing credit funds, and to understand the risks and the protections that can exist within fund structures.

Nearly 15 years later, large moves in credit and rates markets globally have brought to topic of fund construction to the fore again. We find the key principles from our 2008 report are just as relevant now – particularly as investors consider how best to structure their exposures to liquid credit vs illiquid private credit markets. We expand upon and update our paper below.

Introduction

We have observed a number of structural differences between a range of credit funds available in Australia, leading to some interesting observations that investors need to be aware of. In our view, a well-constructed open-ended credit fund which is reflective of the fundamental principles of credit portfolio management theory should:

- have Mark to Market pricing to protect existing unit holders from inflow and outflows that could potentially otherwise arbitrage the fund.
- have a high level of diversity by issuer and industry (and, where applicable, vintage) to minimise portfolio volatility.
- limit non-rated debt that has less marketability or liquidity.
- have low issuer concentration to lower the loss given default. Many investors are unaware of the liquidity risk of investing in funds that take large “cornerstone” positions in unrated debt. In Australia, it tends to follow that these funds are also relatively undiversified by issuer or industry.
- have considerably more diversity than an equity

portfolio.

- invest in senior and secure investments that decrease the loss given default.
- invest in large markets where the broad mix of investor participants aid liquidity, visibility and marketability.
- pass all investment-related economic benefits to the fund’s investors (not the Manager), to avoid perverse incentives. This includes interest & principal payments, origination and other fees, and discounts.
- have a fair buy / sell spread to reflect investment / redemption costs in the fund, to protect against arbitrage.

When credit portfolios are constructed contrary to the principles of credit portfolio management theory we believe that investors are exposed to risks for which they are not generally compensated. There are many lessons to be learned from historical examples of funds that have failed investors through poor credit portfolio construction.

1. Mark to Market versus Accrual Based valuations

The valuation policy (or “marking policy”) of credit funds can vary. Many funds Mark to Market (“MTM”) their portfolio holdings, but some use the Accrual Based (AB) method (or “Historical Cost Accounting”). It can be misleading to compare funds that use different methods.

Not surprisingly, in a weaker market where credit investments sell off, those managers that have Accrual Based valuation method appear to produce the strongest returns. If these Accrual Based funds were to be re-valued to the then-current market prices there could be a significant correction to their performance.

Hence performance comparisons can provide poor information for selecting a manager if investors unknowingly select the manager with “good” performance that is not marked to market.

An example:

Assume there are two funds that invest in the same bond, one is valued using Marked to Market and the other using Accrual Based valuation methodology. At $t=0$ both have the same value and yield. At $t=1$ (one year from issue) assume credit spreads widen by 150 basis points: the market value falls and the yield increases in the MTM fund, while the Accrual Based

portfolio value and yield remains unchanged. From $T=1$, an investment into the MTM fund will outperform the Accrual Based fund by 1.50% a year (assuming no other changes) as the MTM fund has been revalued lower and now has a much higher prospective yield to maturity.

See Worked Example in Table 1 below.

Accrual accounting has its place, but we do not believe it is appropriate for open credit funds. For example, banks may use an Accrual Based valuation but simultaneously have provisions for credit losses. Private equity funds acknowledge the illiquidity of their underlying investments and do not offer the market open funds. Accrual Based valuation may better suit closed end funds

Key Takeaways:

- Marked to Market valuation is considered best practice for open-ended credit funds.
- Comparing returns of Accrual Based and Marked to Market funds makes it difficult for investors to compare like with like.
- Accrual Based valuation may be better suited to closed end funds.

Table 1. Worked Example – Mark to Market vs Accrual Based Valuation Method

		Marked to Market Example (A)			Accrual Example (B)		
Initial Spread		2.00%			2.00%		
LIBOR Rate		2.50%			2.50%		
Total Yield		4.50%			4.50%		
Issue Date		01/01/2022			01/01/2022		
Maturity		01/01/2029			01/01/2029		
Face Value		100			100		
Frequency		1			1		
Years Outstanding		7			7		

Date	t=	MTM Portfolio A	(LIBOR Constant Yld)	Market Spread	Accrual Portfolio B	Yield	Return Differential
01/01/2022	0	\$100.00	4.50%	2.00%	\$100.00	4.50%	0.00%
01/01/2023	1	\$92.62	6.00%	3.50%	\$100.00	4.50%	1.50%
01/01/2024	2	\$93.68	6.00%	3.50%	\$100.00	4.50%	1.50%
01/01/2025	3	\$94.80	6.00%	3.50%	\$100.00	4.50%	1.50%
01/01/2026	4	\$95.99	6.00%	3.50%	\$100.00	4.50%	1.50%
01/01/2027	5	\$97.25	6.00%	3.50%	\$100.00	4.50%	1.50%
01/01/2028	6	\$98.58	6.00%	3.50%	\$100.00	4.50%	1.50%
01/01/2029	7	\$100.00	6.00%	3.50%	\$100.00	4.50%	1.50%

Source: Bentham and Moody's Default and Recovery Rates of Corporate Bond Issuers, 1983-2018

2. MTM valuations support fair applications and redemptions

The frequency with which investors are able to make applications and redemptions from a fund (the fund's "liquidity terms") should reflect the frequency of the valuation of the fund's underlying assets and the liquidity & saleability of those assets.

Significant issues of fairness arise if investors are permitted to enter or exit a fund based on stale unit prices.

In a falling market, the unit price of a fund that does not accurately value its portfolio will be held artificially high - this could significantly disadvantage a new investor (who would over-pay to invest), and advantages existing or redeeming holders. A canny investor could arbitrage such a situation - selling their investment in a stalled-priced or accrual valued investment (potentially valued at par or \$100 plus accrued interest), and buying a Marked to Market investment (valued sub-par, at fair market value).

Conversely, in a rising market, the unit price of a fund that does not accurately value its portfolio will be held artificially low - meaning a new investor could take advantage of lagged pricing to the detriment of existing fund investors.

A similar risk of inequity can arise even if a portfolio of infrequently revalued assets is held in an appropriately structured, closed-end fund, if such a fund is then held within an open investment vehicle.

Key Takeaways:

- Fairness amongst investors in an open investment vehicle is best supported by frequent MTM pricing.
- An open-ended credit fund that uses Accrual Based or infrequent valuations is open to arbitrage exploitation.

3. Non-rated or shadow rated securities

Applying a public rating to a bond or loan broadens the marketability of that security as many types of investors require a rating from a recognised rating agency¹ to allow inclusion in a portfolio.

A public rating of corporate debt (compared to private debt) ensures a reasonable amount of information is available and has been reviewed by an independent third party.

Domestically, most (investment grade) bond issuance is rated, but few loans are rated. By contrast, 95% of the US Broadly Syndicated Loan market is rated.

When assessing what proportion of a fund's assets are 'rated', it is important to distinguish between an internal rating (determined by a fund manager, and of use only inside that institution) and an external rating from a recognised rating agency. When publishing a "% rated" statistic, we believe managers should be absolutely clear about the type of rating they are referring to.

Key Takeaways:

- A public rating improves marketability of debt, which improves liquidity.
- Unrated debt is less common overseas.
- Private debt offers less information transparency.
- Internal ratings may have a qualitative bias to be higher, particularly if based largely on financial ratios. External ratings are based on both qualitative and quantitative factors.

4. Liquidity = Marketability

The marketability of an investment supports liquidity in that instrument. The relative size of an investor's holding and the depth of a market (in terms of trading volumes, and number of participating investors) are key determinants of the liquidity of debt. Desirable investments usually have good market depth near the current price.

The characteristics of marketability include:

- Broad distribution (by investor type) which should lead to superior liquidity.
- Transparent pricing, including observable bid/ask spread.
- Rated entity (with preferably two ratings) providing a handle for relative value comparison.
- No locally-specific tax benefits (i.e. franked securities are marketable only within Australia)
- A genuine secondary market with sizeable flows. An ASX listing, for example, can give a false impression of liquidity by generating frequent pricing information, but with limited volume.

Investors in illiquid/private debt are married to debt with little possibility of divorce. It greatly restricts the ability for a Portfolio Manager to respond quickly to advantageous investment opportunities that may be presented in the market. It also restricts the ability of a portfolio to be managed and re-weighted to take advantage of these opportunities.

¹ The major US rating agencies are Moody's, Standard & Poor's and Fitch.

Key Takeaways:

- When assessing public and private debt investment opportunities, investors need to consider the relative marketability and liquidity of each.
- Private debt has less marketability and is therefore less liquid.
- A listed market for securities does not guarantee meaningful liquidity.
- Illiquid investment requires an illiquidity premium (fees, higher spread, etc).

5. Marketability of assets reduces fund lock-up risk

Lockup of a fund (the suspension of redemptions) may occur when a manager believes there is no liquidity to sell into, or that the price available in the market doesn't provide value to investors. When a Fund contains assets which are not marketable, a manager may be forced to resort to lock up.

It has been Bentham's experience that keeping to our list of principles has helped protect our funds from lockup. For example, throughout the GFC, each of Bentham's credit funds remained open (able to accept applications and redemptions daily). By contrast, in 2008, numerous Australian credit and fixed income funds locked up, preventing investors from accessing their money.

Key Takeaways:

- Marketability of underlying assets helps protect an open credit fund from lockup

6. A listing cannot ensure fund liquidity (only an active pool of investors can)

Just as a listed market does not guarantee liquidity for individual securities, listing an investment vehicle (e.g. a LIC) cannot create liquidity for fund investors.

In practice, a LIC may trade at a large discount to NAV if investor demand for the vehicle is low (i.e. liquidity is poor).

Key Takeaways:

- A listed market for an investment vehicle does not guarantee meaningful liquidity.

7. Diversification is important

A key concept in credit portfolio management is diversification. This is because defaults tend to be unexpected and occur in industry clusters. The more recent sell off in credit (over 2022) has been caused by systemic risk aversion and has not impacted funds that have concentrated portfolios. However, when defaults increase, the lack of diversity can become a significant issue for funds holding concentrated positions in less liquid markets (e.g. the Energy sell-off in 2015/16).

We observe that in a global context, Australia is unique in tolerating concentrated credit portfolios despite our economy facing the same default risks as elsewhere. For example, investment grade Australian corporate credit portfolios are often concentrated in bank issuers, while Australian private debt funds often focus on the domestic real estate sector.

The below matrix shows the loss given default (LGD) of different issuer concentration limits. Not surprisingly, the LGD increases in a linear fashion. E.g. a 10% concentration is 10 times riskier than a 1% concentration.

Moody's has a measure of portfolio diversity called a Diversity Score, which is their primary measurement for industry and issuer diversification in CLOs (Collateralised Loan Obligations). This Score recognises that diversification by number of issuers is not sufficient. In essence, increasing the number of industry exposures increases the diversity score, as can different country exposures.

Diversity is more important in credit portfolios than in equity portfolios but less recognised. This is due to the asymmetric returns of credit portfolio. A portfolio with 20-50 securities is not diversified enough to reap the full diversifiable benefit. Investing in a credit fund with only an equity fund level diversity requires exceptional confidence in the investment managers' expertise.

Key Takeaways:

- Strict industry and issuer concentration limits are important in decreasing the overall losses when defaults do occur.
- In a higher default environment, portfolios with higher concentrations will suffer more per individual default.
- Different industry and country exposures create diversity.
- A credit fund should be much more diversified than an equity fund.

Table 2: Loss Given Default at Different Levels of Concentration Risk

Position in the capital structure	Issuer-weighted recoveries	Loss in default	Single Company Maximum Exposure (%)									
			1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
Loans												
Loss Given Default at different levels of issuer concentration												
Senior Secured	\$ 67.20	33%	0.3%	0.7%	1.0%	1.3%	1.6%	2.0%	2.3%	2.6%	3.0%	3.3%
Senior Unsecured	\$ 45.80	54%	0.5%	1.1%	1.6%	2.2%	2.7%	3.3%	3.8%	4.3%	4.9%	5.4%
Bonds												
Senior Secured	\$ 54.00	46%	0.5%	0.9%	1.4%	1.8%	2.3%	2.8%	3.2%	3.7%	4.1%	4.6%
Senior Unsecured	\$ 38.20	62%	0.6%	1.2%	1.9%	2.5%	3.1%	3.7%	4.3%	4.9%	5.6%	6.2%
Senior Subordinated	\$ 31.10	69%	0.7%	1.4%	2.1%	2.8%	3.4%	4.1%	4.8%	5.5%	6.2%	6.9%
Junior Subordinated	\$ 23.70	76%	0.8%	1.5%	2.3%	3.1%	3.8%	4.6%	5.3%	6.1%	6.9%	7.6%

Source: Bentham and Moody's Default and Recovery Rates of Corporate Bond Issuers, 1983-2018

8. Holding a substantial proportion of a single issue (cornerstone investors / club deals)

While holding greater than 20% of a security may give an investor power to drive lending terms, so-called cornerstone investors generally (by definition) also reduce the breadth of investor distribution. This not only places great emphasis on the initial credit research but also implies that the cornerstone investor will have limited ability to efficiently exit their holding if the credit quality of the security deteriorates. A restructure is generally required.

The 2008 crisis proved that the type of investors who invest alongside you matters. Should other investors in a small club deal be forced to sell into difficult market conditions, the remaining holders could experience a sharp fall in price without there having been credit impairment. Having a closed end fund to reflect the underlying liquidity of the cornerstone/club investments may be important.

Key Takeaways:

- High concentration in one issue damages secondary market liquidity of a credit portfolio.

9. Measuring volatility

The volatile markets of March 2022 have generated debate about the “volatility” added to portfolios by actively traded and revalued assets, such as liquid credit markets, vs the “smoothing” impact of holding private assets, such as private debt, which are not regularly revalued.

In times of ample liquidity, illiquidity premiums tend to be small. When liquidity tightens, illiquidity premiums increase. The risk is that the true valuation of private assets will suffer from that additional discount.

In our view, choosing not to revalue an asset does not reduce the asset's volatility, it simply hides it. The asset's volatility is replaced with a different risk: that an extreme price movement eventually occurs when a revaluation is forced by an adverse credit event.

Key Takeaways:

- Private assets hide real asset volatility, they do not lower it.
- The volatility of illiquidity premiums can create a more volatile real asset price in times of illiquidity.

10. Accrual valued funds can turn into mark-to-market funds at the most unfortunate times

Funds using Accrual Based (AB) accounting can become a mark-to-market fund at the most unfortunate of times. Investors can receive a nasty surprise with a significant negative gap in their unit price. The fall should be roughly equal to the change in market price plus a present value of fees which the fund is obligated to pay (for a closed end fund). Initially in a market sell off, funds using AB accounting are outwardly unaffected. However, it is not uncommon after a period of market underperformance that some investors redeem their holdings, leading the manager initially to sell liquid holdings to meet the initial unit redemptions. The remaining investors are then left with the more illiquid, concentrated positions.

Key Takeaways:

- Valuation catch ups are uncertain and can be large and negative.
- Beware large gaps in Net Asset Valuation to trading prices

11. Transparency of economics and alignment of interests

All economics from the fund's investments should be for the benefit of the fund. We believe this should include the obvious principal and income payments on bonds and loans, but also any fees or discounts associated with originating or purchasing assets.

We have been surprised to hear that some credit funds have been taking loan upfront or arranging fees for the benefit of the manager, rather than the fund. These fees can be substantial, and not passing these on in full to the fund could give rise to a conflicted situation whereby the loan margin is reduced to increase the loan upfront fee (benefiting the manager, harming the fund investors). Usually the discounts/upfront fees are higher the riskier the deal (reflecting the difficulty in underwriting). This could result in a perverse incentive where a manager pockets the higher up-front fees, while the investor is left with a riskier loan and possibly lower coupon.

Key Takeaways:

- The full economics of an investment should flow to the fund.
- Transparency of economics is important to ensure alignment of interests

12. A fair buy-sell spread protects all investors (fair allocation of transaction costs)

A buy-sell spread is a cost paid by investors upon investment into or redemption from a fund. It represents the underlying transaction costs of buying/selling assets (bonds or loans) to fulfil a new investment or fund a redemption.

Buy-sell spreads are *not* management fees, and do not get paid the fund manager. Buy-sell spreads are paid to the *fund* – for the benefit of existing unitholders.

As the underlying costs of transacting assets can change over time, we believe the buy-sell spread on a fund should vary accordingly according to market conditions. All things being equal, trading costs increase during times of stress and lower liquidity (wider buy-sell spreads) and decrease during the good times and higher liquidity (tighter buy-sell spreads).

The purpose of buy sell spreads is to protect long-term unitholders from bearing the cost of trading from *other unitholders* entering or exiting the fund. As such, we believe that an active buy-sell spread should be seen as a beneficial structural feature for long-term investors in a fund.

The value of an active buy-sell spread is most obvious in times of market distress, where limited liquidity may make transaction costs sizable: an exiting investor who withdraws capital from a fund would otherwise be able to burden the *remaining* investors in fund with the costs of their exit.

Bentham monitors buy-sell costs on underlying assets on a daily basis, and adjusts the buy-sell spread on our funds monthly (or as required).

We are disappointed to still see open credit funds in Australia with a +0bps / -0bps buy-sell spread – failing to fairly allocate the costs of transacting to the investing / redeeming party. We note that funds which do not have an active buy-sell spread may instead apply 'swing pricing' when market liquidity becomes an issue. Swing pricing swings against an investor removing assets when liquidity is tight (e.g. application 0% / redemption 2%).

Key Takeaways:

- Buy-sell spreads are not a management fee.
- Buy-sell spreads aim to allocate the trading costs of investment / redemption to the investor making the investment or withdrawal, protecting long-term investors from bearing these costs which can fluctuate over time.
- Bentham believes the best practice is to match the buy-sell spread to current market conditions and has adopted this as a formal policy.
- A buy-sell spread helps prevent preferential treatment for investors able to game or arbitrage mis-priced funds.

13. A note on the Australian hybrid market

The Australian hybrid market has some unique features which warrant consideration before including such securities in an open credit vehicle.

While Australian hybrid securities are predominately listed on the ASX, this does not guarantee meaningful liquidity. Many of these securities have low turnover relative to other listed and unlisted credit and fixed income markets.

As franking credits can only be utilised by domestic investors, the buyer-base for hybrid securities is typically limited to Australian investors. The investor base may be further reduced if legislative changes are made limiting cash refunds of excess franking credits for individuals. A narrow investor base limits liquidity – particularly in difficult market conditions.

Key Takeaways:

- ASX listing does not guarantee liquidity.
- Larger funds relying on ASX liquidity may be disappointed.
- Australian hybrids with franking credit may be particularly challenged moving forward.

14. MTM valuations impact broader exposures

Lack of mark to market valuations can mask real exposures. Beyond unit pricing concerns, there are knock-on effects for investors who are measuring and hedging aggregate exposures such as currency and duration.

Key Takeaway:

- Mark to market valuations support accurate risk measurement.

How to Invest in Private or Illiquid Assets

As discussed throughout this paper, private or illiquid assets are not suited to open credit funds. This doesn't mean that private credit assets can't have a place in an investor's portfolio, but the investment format needs to align with the nature of the private assets.

Key considerations should include:

- Investment timeframe: does the investor/ vehicle's time horizon match the tenor of the private assets? Can the investment be held until realisation if required?
- Fair terms for pooled vehicles: are the gates, application and redemption terms firm and fair? Are the rules the same for all investors? Can anyone transact on stale prices?
- Illiquidity premium: is sufficient premium being paid for the portfolio's illiquidity? Note, the illiquidity premium is not constant, and requires monitoring. There is no free lunch: the price for the additional yield on private debt is illiquidity and the inability to maneuver.
- Commitments are equivalent to negative liquidity convexity, i.e. calls for liquidity usually occur when liquidity is at a premium.

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