CRED: An intelligent building block for Fixed Income portfolios

BetaShares
Exchange Traded Funds

May 2018

The Case for the BetaShares Australian Investment Grade Corporate Bond ETF (ASX CODE: CRED)

Fixed-rate bonds have long been acknowledged as a core element of a diversified portfolio. And for good reason: investment grade fixed-rate bonds can provide regular and generally higher income returns than cash or term deposits. Such bonds can also help dampen portfolio risk given that their returns are usually much less volatile – and have historically tended to rise in value when Australian shares have fallen.

That said, evidence suggests Australian investors are perhaps not availing themselves of the advantages of fixed-rate bonds as much as they might, and Australian investors have generally low relative allocations to bonds, compared to their global peers[i]. Low government bond yields and the difficulty, for retail investors, of directly accessing and investing in bonds - especially compared to equities - are possible causes.

With these challenges in mind, the **BetaShares Australian Investment Grade Corporate Bond ETF (ASX Code: CRED)** has been designed to offer investors easy access to a diversified portfolio of Australian fixed-rate bonds. CRED's underlying investment strategy is innovative, in that it aims to track an index that ranks eligible corporate bonds by their expected returns relative to government bonds of similar maturities[ii], thereby offering investors potential for both attractive income and good portfolio diversification properties. And being an Exchange Traded Fund (ETF), CRED can be bought and sold on the ASX just as easily as a company share.

As such, the CRED ETF continues the BetaShares tradition of offering Australian investors innovative and intelligent investment solutions to help them meet their financial objectives, which are highly relevant to the prevailing macro-environment.

Attractive Income

The first standout feature of the CRED ETF is its attractive income return potential. As at end-April 2018, the portfolio of bonds in the Index that CRED aims to track would have provided a yield-to-maturity of around 3.9% p.a.[iii].

CRED's investment strategy also allows for the potential for an additional income element each year, from what's known as "roll return" (see footnote for definition)[iv]. As at end-April 2018, for example, we estimate that the Index that CRED aims to track could potentially generate a further 0.9% in extra "roll return" income over the following 12-months assuming no change to the general structure of interest rates. All up, that would imply an income return potential of around 4.8% over the year. As is clear from the diagram below, the income return potential of CRED as at 30 April 2018 was very attractive compared to the RBA cash rate of 1.5% p.a. and bank term-deposits, depending on their maturity, of ~ 2% p.a.

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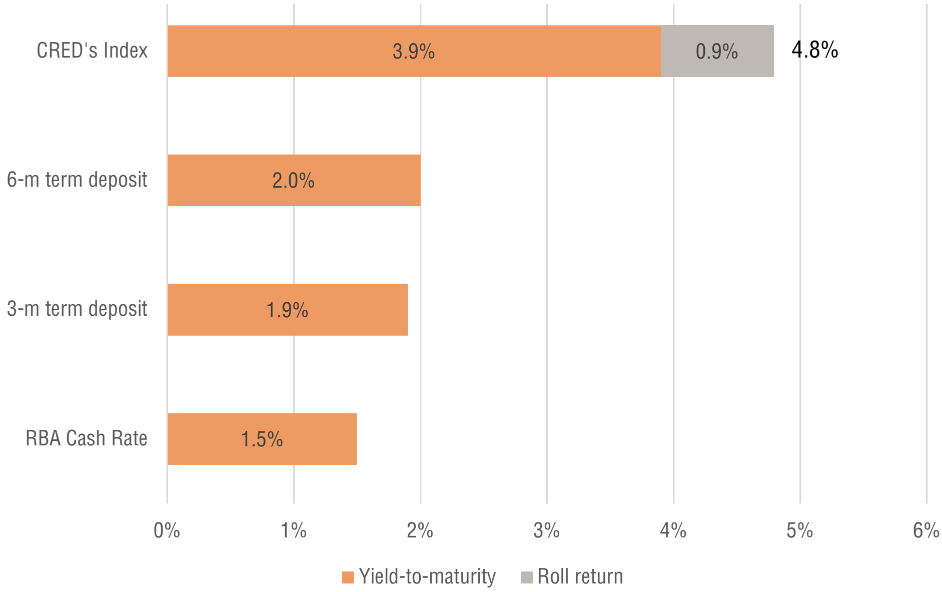
Estimated forecast 12 month income comparisons: As at 30 April 2018



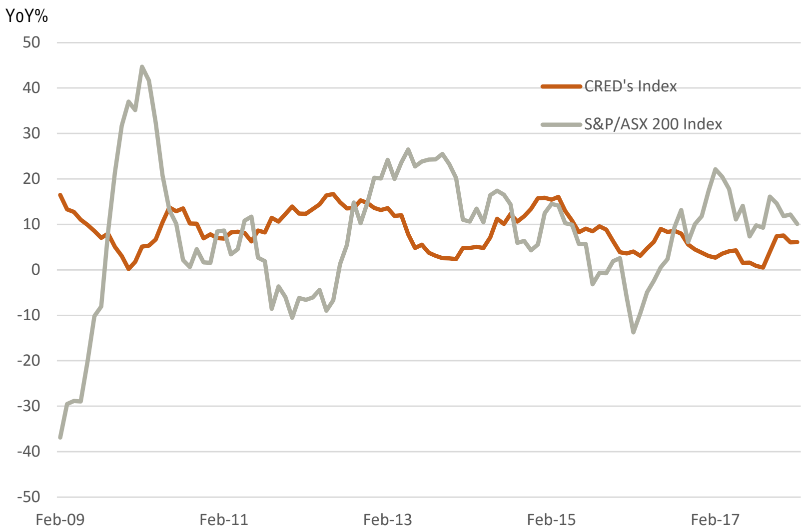
Source: Bloomberg, RBA. Term Deposit rates based on RBA figures – average of major 4 banks. CRED's Index is the Solactive Australian Investment Grade Corporate Bond Select TR Index. Forecast performance is not an indicator of actual performance. You cannot invest directly in an index.

Compelling diversification features & defensive characteristics

The other notable benefit of CRED is that the returns of its underlying Index have tended to be considerably less volatile than those of equities. As seen in the chart below, annual 12-month returns from the S&P/ASX 200 Index have swung wildly in recent years from +40% to -40% during and following the global financial crisis. Even more recently, equity returns have remained volatile.

By contrast, CRED's Index annual returns have been much less volatile, and there has not been a negative annual return over this period (although that is, of course, possible).

CRED's Index vs. Australian sharemarket (S&P/ASX 200 Index) returns: February 2008 to April 2018



Source: Bloomberg. CRED's Index is the Solactive Australian Investment Grade Corporate Bond Select TR Index. Past performance is not an indicator of future performance. You cannot invest directly in an index.

Also noteworthy is the fact that CRED's Index has historically tended to do best when equities were faring worst, and vice versa. In the 12 months to February 2009, for example, the return from equities was -37%, whereas CRED's Index produced a strong +16.5% return over that period.

This return behaviour reflects the fact that both interest rates and equity market performances tend to follow the economic cycle. When economic conditions are weak, equities returns tend to decline due to reduced prospects for corporate earnings. But these are also periods when interest rates tend to fall due to reduced demand for credit and expectations that the Reserve Bank will cuts its official policy interest rate. Lower market interest rates, in turn, tend to boost the value of fixed rate bonds, because the future stream of fixed nominal interest payments they offer are worth more in today's dollars.

By contrast, as economic conditions improve, equity markets and interest rates tend to rise, with the latter then denting the return available from fixed-rate bonds.

All up, the prospect of a negative correlation between the returns of CRED and equities provides an important added portfolio diversification benefit. The fact the two investments should tend to do best in differing economic conditions could help dampen the overall risk of portfolio returns when they are held together.

The table below provides further risk comparisons.

Comparative risk measures: As at 30 April 2018

	Outright risk measures		Correlation with Equity Returns [3]	Within a portfolio with 50% weight to the S&P/ASX 200 Index [4]	
	Volatility[1]	Downside Risk[2]		Volatility	Downside Risk
RBA Cash Rate	0.1%	-	-0.04	8.8%	-23.5%
Fixed Rate Corporate Bonds (CRED's Index)	**5.4%**	**-8.4%**	**-0.34**	**8.2%**	**-19.4%**
S&P/ASX 200 Equity Index	*17.5%*	*-44.6%*	-	*17.5%*	*-44.6%*

Source: Bloomberg. Actual or illustrative past performance is not an indicator of future returns. You cannot invest directly in an index. 1. Annualised standard deviation of daily returns from 28 February 2008 to 30 April 2018. 2. Maximum peak-to-trough decline in total return index over the period indicated in note 1 above. 3. Correlation in daily returns over the period indicated in note 1 above. 4. Figures are based on an illustrative portfolio with 50% weight to the relevant cash/bond exposure and 50% weight to the S&P/ASX 200 Index. Not a recommendation to adopt any particular investment strategy.

As evident over the period since early 2008, CRED's Index has experienced significantly less return volatility and less return drawdown than equities. Also noteworthy is that because of the negative return correlation between CRED's Index and equities, the return volatility of a portfolio with equal weight to CRED's Index and equities over this period would have been less than if cash had been used as the portfolio risk diversifier instead!

What's more, using CRED's Index instead of cash in an equity rich portfolio would have also produced smaller maximum return drawdown (-19.4% versus -23.5%).

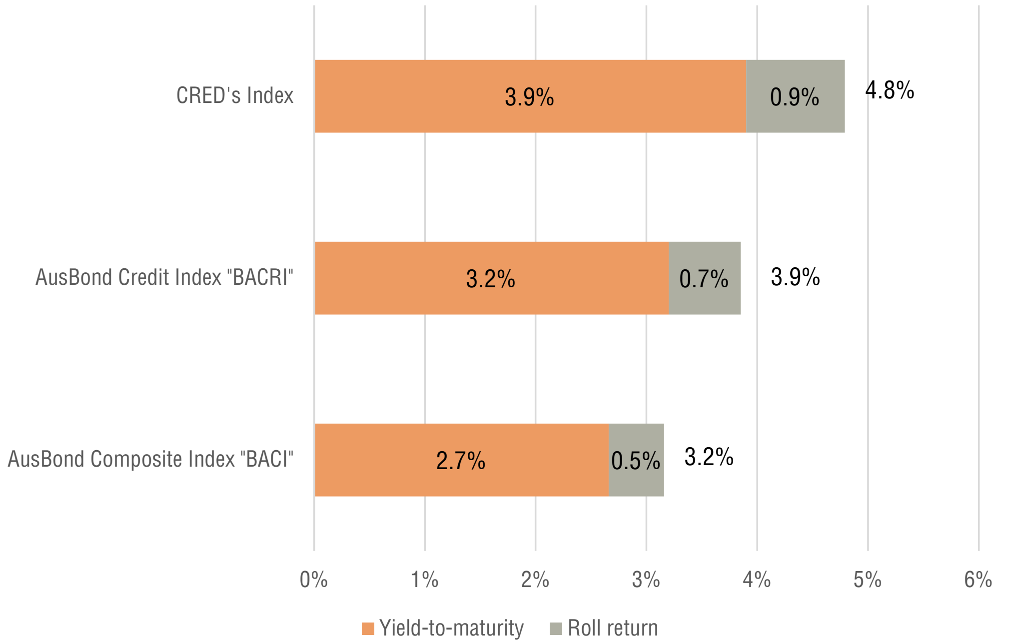
Attractive risk-return features compared to more traditional fixed-rate bond exposures

Compared to other more traditional fixed-rate bond exposures on the Australian market, CRED also offers the potential for relatively attractive returns for similar, if not better, portfolio diversification properties.

As seen in the table below, as at end-April 2018, CRED's Index offered a prospective 12-month income return[vi] of around 1.6% better than the Bloomberg AusBond Composite Index, one of the most commonly used bond benchmarks for fund managers and Australian Bond ETFs – the latter index provides exposure to both lower-yielding Federal and State Government bonds, as well as those issued by private sector companies.

CRED's prospective income return was also around 0.9% higher than that for the Bloomberg AusBond Credit Index, which, like CRED's Index, provides exposure to mainly corporate bonds.

Estimated fixed-rate bond index forecast 12 month income comparisons: As at 30 April 2018



Source: Bloomberg. CRED's Index is the Solactive Australian Investment Grade Corporate Bond Select TR Index. Forecast performance is not an indicator of actual performance. You cannot invest directly in an index.

CRED seeks to achieve higher income by specifically targeting bonds offering superior expected excess returns over comparable government bonds. These bonds typically have relatively longer term-to-maturity. As such, these tend to offer higher yields over time due to their greater return sensitivity to interest rate changes. Indeed, as at end-April 2018, CRED's Index had a modified duration of 6.4, compared to 5.2 and 3.8 for the BACI and BACRI respectively[vii].

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Comparative risk measures: As at 30 April 2018

	Outright risk measures			Correlation with Equity Returns [4]	Within a portfolio with 50% weight to the S&P/ASX 200 Index [5]	
	Modified Duration[1]	Volatility[2]	Downside Risk[3]		Volatility	Downside Risk
Bloomberg Composite Bond Index	5.2	3.5%	-3.6%	-0.36	8.3%	-20.1%
Bloomberg AusBond Credit Index	3.8	2.3%	-2.4%	-0.30	8.5%	-21.4%
Fixed Rate Corporate Bonds (CRED's Index)	**6.4**	**5.4%**	**-8.4%**	**-0.34**	**8.2%**	**-19.4%**
S&P/ASX 200 Equity Index	-	*17.5%*	*-44.6%*	-	*17.5%*	*-44.6%*

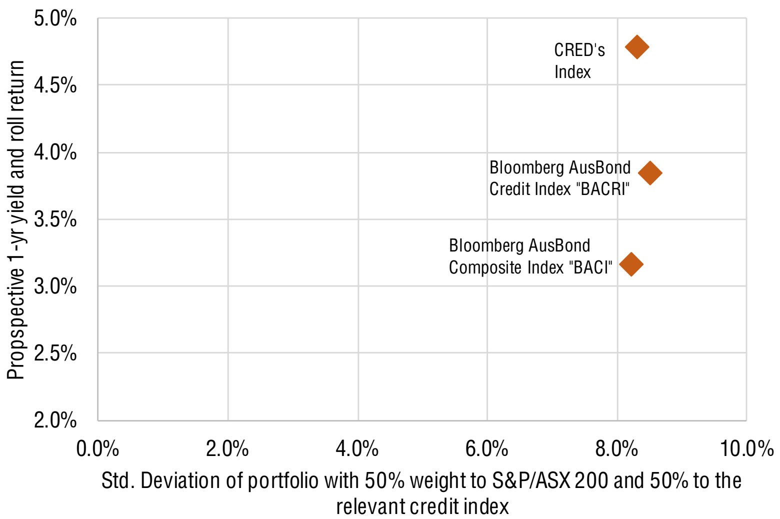
Source: Bloomberg. Actual or illustrative past performance is not an indicator of future returns. You cannot invest directly in an index. 1. Modified duration is a summary measure of the price sensitivity of a bond, or bond index, to changes in the general level of interest rates. See end-note vii for further information. 2. Annualised standard deviation of daily returns from 28 February 2008 to 30 April 2018. 3. Maximum peak-to-trough decline in total return index over the period indicated in note 2 above. 4. Correlation in daily returns over the period indicated note 2 above. 5. Figures based on an illustrative portfolio with 50% weight to the relevant cash/bond exposure and 50% weight to the S&P/ASX 200 Index. Not a recommendation to adopt any particular investment strategy.

Indeed, as seen in the table above, a portfolio with a 50% weight to CRED's Index and a 50% weight to the S&P/ASX 200 Index over the most recent ten years would have resulted in broadly similar overall portfolio return volatility (and slightly less return drawdown) than if the BACI or BACRI had been used as the fixed-rate bond exposure instead. That's despite the fact that CRED's Index standalone volatility would have been somewhat higher than for the BACI and BACRI.

All up, to the extent the past negative correlation between interest rates and equities might persist into the future, CRED seems likely to offer potential diversification benefits in an equity heavy portfolio at least as good as other commonly used bond benchmarks, whilst offering potential for a more attractive yield.

These appealing risk-returns features are depicted in the chart below.

Return vs Portfolio Diversification Features of CRED's Index, BACI and BACRI: February 2008 to April 2018



Source: Bloomberg. Illustrative only. Past performance is not an indicator of future performance. You cannot invest directly in an index.

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i. Tax office data suggests SMSFs have no more than 5% allocation, on average, to bonds. The OECD Pension Markets in Focus 2017 Report also suggests that Australian superannuation funds have only 10% exposure to bonds compared to an average of 40% among global peers.

ii. Specifically, CRED aims to track the Solactive Australian Investment Grade Corporate Bond Select TR Index, which comprises investment grade corporate bonds (i.e. with a credit rating of BBB- or better) issued in Australia with terms-to-maturity of between 5 and 10 years.

iii. Yield-to-maturity is the purest measure of long-run income returns from a fixed-rate bond, as it captures the effective yield an investor would earn if the bond were purchased today, held till its maturity, and the principal (or "par value") of the bond were returned at maturity. A similar concept is running yield, which measures income returns over the coming year divided by the bond's current market price. Running yield is an indicator of short-run income returns, but does not allow for potential long-run capital losses (gains) at maturity if the bond's market price is significantly higher (lower) than it's par value. With declining interest rates in recent years, for example, the market value of many bonds has increased relative to their par or maturity value – implying future capital losses if these bonds are held till maturity. This has led to the running yield on many bonds – and bond indices – being somewhat higher than their yield-to-maturity, thereby potentially overstating their long-run likely return.

iv. Roll returns stem from the fact that the value of a shorter maturity bond is less sensitive to interest rate changes (i.e. has less interest rate risk) than a longer maturity bond and so, all else constant, usually trades at a lower yield. By taking the risk of holding a bond over a given period, say one year, and allowing its maturity to shorten, investors are rewarded by a lift in its price, known as the "roll return". This figure is an estimate only and is subject to change should there be a change in the the bond yield curve.

vi. Defined as yield-to-maturity plus any prospective 12-month "roll return" assuming no change to the general structure of interest rates.

vii. Modified duration is a summary measure of the price sensitivity of a bond, or bond index, to changes in the general level of interest rates. A modified duration of 5, for example, would indicate that the price return of the bond or bond index would decline by around 5% for every 1 percentage point change in interest rates. Financial markets usually reward bonds with a higher price sensitivity to interest rates with a higher yield, due to their likely greater return volatility – as a standalone investment – over time.

Trading Information

BetaShares Funds can be bought or sold during the trading day on the ASX, and trade like shares.

EXCHANGE	ASX
ASX CODE	CRED
CURRENCY	AUD
TRADING HOURS	10:00-16:00 (AEST)
BLOOMBERG CODE	CRED AU
IRESS CODE	CRED.AXW

CRED Fund Information

DISTRIBUTIONS	MONTHLY
MANAGEMENT COSTS	0.25% P.A
FUND INCEPTION	31 MAY 2018
INDEX	SOLACTIVE AUSTRALIAN INVESTMENT GRADE CORPORATE BOND SELECT TR INDEX

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There are risks associated with an investment in the Fund, including interest rate risk, credit risk, market risk and index tracking risk. For more information on risks and other features of the Fund, please see the Product Disclosure Statement.