

Ardea Australian Inflation Linked Bond Fund

ARSN 141 165 362 APIR Code HOW0062AU

Quarterly Performance Report June 2019

Performance (% p.a.)¹	1 month	3 months	6 months	1 year	3 years	5 years	Since Inception ²
Portfolio (net)	-0.06	3.98	7.68	8.56	4.71	4.74	6.92
Bloomberg AusBond Inflation Government 0+ years Index	-0.16	3.76	7.32	8.76	4.26	4.74	6.40
Active return	0.10	0.22	0.35	-0.20	0.45	0.00	0.52

¹ Performance figures are calculated after fees have been deducted and assume distributions have been reinvested. No allowance is made for tax when calculating these figures. Past performance is not a reliable indicator of future performance.

Fund Commentary

The portfolio outperformed its benchmark over the quarter, with most strategies supporting performance over the period. The largest contributions came from the outperformance of semi government bonds, and from the flattening of the yield curve.

The portfolio held a flattening exposure to the yield curve over the quarter and with yields declining and the curve flattening as the economic outlook softened, this contributed to performance. The curve flattening was also supported by the Reserve Bank of Australia's (RBA) shift to an easing policy stance, with the cash rate reduced by 0.25% to 1.25% in June, and by another 0.25% to 1% in July. The latter move was already anticipated and priced by markets during June, and thus was captured in second quarter performance.

The portfolio has maintained an overweight to semi-government inflation linked bonds, and where possible has expressed this with a preference to holding longer dated semis compared to shorter ones, and also nominal semis over inflation linked semis. This position partly contributed to the flattening exposure of the portfolio, but semis also benefited from some outright spread narrowing over the quarter after the RBA and Australian Prudential Regulation Authority (APRA) expanded the scope of high quality liquid assets (HQLA) the banks could hold. This is expected to result in an increase in demand for semis over time and as a result their yields declined relative to those on Commonwealth government bonds. Continued sluggishness in inflation over the quarter also weighed on inflation linked semis; the underweight to these bonds also helped performance.

Inflation positioning was supportive of performance over the quarter. The portfolio retains a steepening exposure to inflation, on the expectation that near term inflation pressures are likely to remain subdued, whereas longer-term inflation pressures have considerable scope to right themselves over a much longer horizon. The softness in near term inflation is heavily influenced by soft underlying demand, but also by a slower pace of inflation in many regulated prices, with the energy sector specifically being affected by government policies aimed at slowing energy price inflation from its earlier rapid pace. This is being balanced against an expected uptick in inflation in the second quarter due to higher fuel prices, but this is expected to be temporary.

² The Fund's inception date is 18/03/2010.

The portfolio's underweight positions in some physical bonds are also hedged with interest rate swaps, in order to minimise duration positions relative to benchmark. While this strategy continues to enhance the liquidity of the portfolio due to the greater ease in transacting in interest rate swaps relative to scarcer physical bonds, the position also incurs some minor exposure to movements in swaps relative to bonds. During the quarter swap spreads widened marginally, and as a result this detracted marginally from performance over the quarter. We continue to place a high value on the additional liquidity that swaps offer in the portfolio, and expect that these instruments will continue to remain highly traded during periods of financial market turmoil, as was the case during the Global Financial Crisis.

Market Commentary

In this month's commentary;

- Stellar bond returns ... what's driving them?
- Mrs. Watanabe meets European insurance companies
- Hidden liquidity risk in fixed income portfolios
- Safe havens, risky assets ... everything is rallying

Government Bond Index Return (%)				10Y Govt. Bond Yield
	1M	3M	1Y	30-June
AU	+1.5	+3.0	+10.2	1.32%
US	+0.9	+3.0	+7.2	2.00%
EU	+2.2	+3.4	+6.4	-0.33%
JP	+0.6	+0.9	+2.8	-0.16%
СН	+0.6	-0.1	+5.4	3.24%

Source: Bloomberg Barclays Indices

Australia: Bonds posted strong positive returns due to the combination of rate cuts from the Reserve Bank of Australia, expectations of rate cuts from other central banks and ongoing worries about slowing global economic growth. Despite the latter, equities also performed very well. Government bond yields are now at record low levels, with the 10 year bond yield of 1.32% barely above current inflation rates.

USA: Bonds performed strongly as weakening economic momentum and ongoing trade war fears fueled ever stronger expectations for rate cuts from the US Federal Reserve. Short dated interest rate markets are now pricing in a full percent of rate cuts by the end of 2020, which is a startling turnaround from last year and is anticipating a far more dire economic scenario than reflected in current economic data.

EU: Europe was the star performer across global bond markets this month and over the quarter as European Central Bank (ECB) president Mario Draghi gave strong indications that they are readying another round of stimulus in response to weakening EU economic conditions. He communicated a growing sense of urgency for the ECB to act, emphasising the tools they still have available (more rate cuts, further quantitative easing). In response, stocks rallied strongly and EU bond yields collapsed, with German 10Y bonds hitting a new record negative yield of -0.33% and French 10Y yields going negative for the first time.

Japan: Bonds performed strongly as yields hit multi-year lows in sympathy with global markets. While the Bank of Japan noted further room for monetary stimulus if inflation momentum weakens, Governor Kuroda also noted the risk of undesirable side effects on Japan's banks, who are struggling to cope with skinnier net interest margins as rates keep going lower.

China: Trade war uncertainties appear to be taking a growing toll on the economy, which was reflected in lower bond yields for the month. After a brief bounce in economic activity early this year, the most recent economic data has resumed the weakening trend. For example, output growth from China's giant industrial sector slowed to the weakest level since 2002.

Stellar bond returns ... what's driving them?

2019 has so far been a stellar year for bond returns globally. Even a simple passive exposure to long dated bonds has delivered handsome profits that far exceed the average yield of those bonds.

For example, the most widely follow global bond index (Bloomberg Barclays Global Aggregate Bond Index) has delivered a 6 month return of USD 5.6% (almost 12% annualised!!!), despite the index yield starting the year at just 2% (i.e. the average yield of the bonds in the index).

Bond returns in Australia have been even more impressive. The most widely followed AU bond index (Bloomberg AusBond Composite Index) has returned 6.6% year-to-date (YTD) and almost 10% over the past year. This index was yielding just 2.4% at the start of the year.

How can bonds deliver returns that are so much higher than their yields? The answer is duration.

Bond prices are constantly fluctuating just like stock prices. In the case of bonds, the price changes are driven by movements in various market interest rates, which are reflected in bond yields.

Duration is a measure of a bond price's sensitivity to changes in bond yields (or interest rates more generally).

This sensitivity stems from the fact that a bond buyer makes a payment today (the bond price) in exchange for a series of future interest payments (the fixed rate of interest paid on that particular bond). At the time of purchase, the price of the bond will reflect the present value of that future stream of interest payments, which are fixed in advance.

However, the next day if the general level of interest rates (or bond yields) in the market rises, that fixed stream of interest payments is now below market value and therefore no longer as valuable. The bond would then need to be discounted to attract new buyers, and the bond price drops accordingly.

The longer dated the bond (i.e. longer duration), the more future interest payments need to be discounted and therefore the more pronounced this effect. Hence, longer duration bonds are more sensitive to interest rate movements.

Risk in this context is a two way street. If yields go up, bond prices go down and bonds incur capital losses. The opposite happens when yields go down.

This takes us back to the original question of bonds delivering returns higher than their yields.

The yield (or interest income) of a bond is only a part of its total return. The other part is the capital gain or loss stemming from the bond's duration exposure. As bond yields have collapsed this year, duration exposure has delivered large capital gains.

Stellar bond returns driven by duration ... can it last?

YTD as at 30-Jun-2019	Index Duration	Index 6mth Return	Index Current Yield
Global			
Barclays Global Aggregate Bond Index	7.2	+5.6%	1.5%
Australia			
AusBond Composite Bond Index	5.5	+6.6%	1.4%
Source: Ardea Investment Management, Bloomberg	h duration	as driven returns	as yields dropped to very low levels

An extreme example of this can be found in Japan. The Bloomberg Barclays Japan Govt. Bond Index has delivered a YTD return of 2.3%, even though the index yield started the year at just 0.09%.

This index has a duration of 9.9 years, which roughly means every 1% change in yields causes a 9.9% capital gain or loss. So, as the index yield declined by 0.17% this year (from 0.09% to the current level of -0.08%), the duration exposure created a capital gain of approx. 1.7% (i.e. 0.17% x 9.9), which accounts for the bulk of the YTD return. ¹

This same dynamic has played out across bond markets globally as duration exposure has been the dominant driver of this year's stellar fixed income returns. Even pure passive duration based bond portfolios have delivered great results this year.

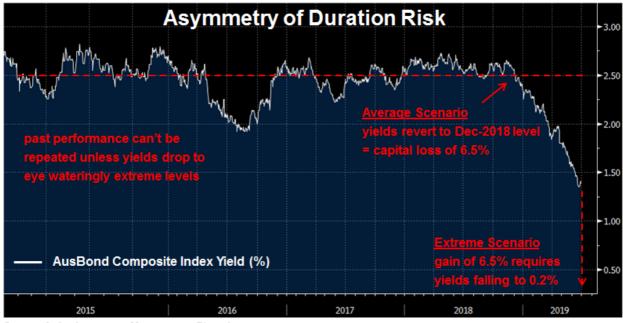
But what duration gives can also be taken away.

For example, last year the global bond index referenced earlier delivered a negative return of 1.2% for the year and experienced a 7 month drawdown of 5.3% as US interest rates and bond yields rose.

As we noted <u>last month</u>, what's particularly unusual about this year's strong bond performance is that it has been accompanied by a strong equity rally, leaving bond yields at record low levels just as equity markets reach new record highs.

However, the <u>asymmetry</u> of risk versus return that's inescapable when bond yields get very low is what makes chasing bonds at record low yields (i.e. record high prices) very different to chasing stocks at high valuations. Stocks can keep on going up indefinitely, while bonds can't.

The chart below puts this asymmetry in context for AU bonds and brings to mind the ubiquitous but frequently ignored disclaimer that past performance is not indicative of future returns.



Source: Ardea Investment Management, Bloomberg

With yields already so low, the outlook for conventional duration focused bond portfolio returns is now heavily dependent on whether yields can keep going lower.

As the chart above highlights, the lower yields go, the more unfavorably asymmetric duration risk becomes. This means you need ever higher conviction in your directional view that yields will keep going lower, in order to counterbalance the asymmetry.

The problem is that directional calls on interest rates and bond yields are very hard to consistently get right. (we covered this here)

Of course yields could keep falling ... one group of highly credentialed bond experts argues compellingly that yields will head lower as central banks cut interest rates in response to weakening economic growth.

But it's far from certain how far that goes ... another group of equally well qualified bond experts argues with high conviction that the economic outlook isn't so bad, central banks won't cut rates much and yields will rise.

Our view? Given all the variables, assumptions, feedback loops and subjective judgements involved we struggle to see how anyone can have high conviction about such a blunt directional market call. Remember it was only last year that the forecasting crowd was convinced rates would only go up, and now that same crowd is convinced of a dramatically opposing view.

These types of macro directional calls about the path of economic growth and how central banks will respond are inherently difficult (impossible?) to get right consistently. Even the **bond kings** and **macro gods** struggle.

Whichever camp you're in, what's clear is that the lower rates / buy duration view is a crowded one, as evidenced by <u>record inflows to bond funds</u> and the fact that interest rate markets are already heavily pricing in aggressive central bank rate cuts.

Just because a position is crowded, doesn't mean it's wrong. However, history does tells us that when strong consensus expectations and crowded positions build up, the room for disappointment grows and a potentially violent re-pricing can follow if things don't play out as expected.

We readily admit to having no competitive edge in predicting the future direction of interest rates, which is why we don't take blunt duration risk in our portfolios.

Instead, we adopt a pure <u>'relative value'</u> investment approach that is independent of the direction of rates and <u>benefits from bond market volatility</u>, irrespective of which way bond yields end up moving.

¹ Note these calculations are approximations based on the average duration and yield of the index. A more precise calculation would need to account for the varying yield changes and duration exposures of the individual bonds in the index.

Mrs. Watanabe meets European insurance companies

Since the early 2000's the name 'Mrs. Watanabe' has been used to describe yield seeking Japanese retail investors, who have been forced to increase their offshore investment risk taking in response to ultra-low interest rates back home.

The choice of name reflected that many of these investors were in fact <u>Japanese housewives</u>.

Their <u>risk taking behaviour</u> is often criticised as an undesirable consequence of the extreme monetary policy stimulus that central banks are undertaking. They are also well known because they are large enough as a group to <u>move global financial markets</u>.

A European institutional equivalent of Mrs. Watanabe is the European insurance companies. As more and more EU interest rates collapse into <u>negative territory</u>, European insurers are becoming <u>increasingly</u> <u>desperate</u> to generate higher yields on their investment portfolios.

This year Mrs. Watanabe found herself shopping for yield in the same market as the European insurers - the French government bond market – and the result was a fantastic <u>'relative value'</u> (RV) opportunity.

Due to a combination of relatively higher yields and favourable pricing in currency markets, long dated French government bonds were in a sweet spot for Japanese investors to buy them in Euros, hedge the currency risk and end up with a higher yielding JPY equivalent bond.

Mrs. Watanabe jumped at the opportunity, resulting in large capital flows flooding into French government bonds and pushing up their prices. For example, balance of payments data published by the Bank of Japan showed Japanese investors purchased a record EUR26bn worth of French government bonds in March.

One way for a fixed income fund to profit from this would be to simply buy the same French bonds and bet that Japanese demand will keep pushing their prices up. This would be a simple and conventional way to do it but also comes with a lot of market directional risk (e.g. duration risk).

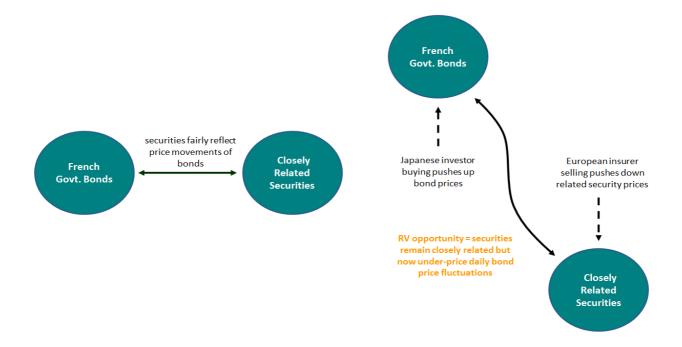
By contrast, a pure RV approach seeks to profit from the opportunity in a way that strips out unwanted directional market risk by precisely isolating pricing inconsistencies between closely related securities.

This is where the European insurers enter the picture.

At the same time that Mrs. Watanabe was on a French bond shopping spree, European insurers were selling options on those same bonds. They did this to earn option premiums (i.e. upfront payments to option sellers), to help boost the returns on their investment portfolios.

The RV opportunity arose because the French bonds, the bond options and a few other securities are all very closely related to each other and their prices ultimately reflect the same risk (i.e. price fluctuations of the bonds). However, they didn't all price the risk consistently because of market segmentation (i.e. different market participants buying and selling for different reasons).

In this case, the heavy selling of closely related securities (e.g. options) by the insurers caused them to underprice the daily price fluctuations of the bonds they're linked to. At the same time, the heavy buying of bonds by Japanese investors caused the actual daily price movements of those bonds to increase.



In option terminology, this is an unusual case where option 'implied volatility' is lower than 'realised volatility'. (we covered this **here**)

The RV investor buys the cheap options, takes an offsetting position in the more expensive bonds and profits from capturing the inconsistency in pricing between the two. Meanwhile, the net package has zero interest rate duration, no exposure to general market fluctuations and profits irrespective of whether the bond price goes up or down, as long as the bond price moves.

An added bonus is that this position is 'long volatility' and 'long convexity', which means the more volatile markets get, the more profitable the position becomes. (explained here)

The risk in this type of strategy is very low because the downside is limited and known with certainty.

These types of opportunities don't rely on correctly predicting the direction of rates, the path of economic growth or what central banks will do. They come from understanding the structural drivers of market inefficiency such as regulation and investor mandate constraints, and how they drive the interactions between buyers and sellers, who are responding to different incentives.

A useful analogy is that of large ships turning in the ocean. A conventional investing approach, based on trying to predict market direction, needs to correctly guess in advance which way the ships are going to turn. An RV approach waits for the ships to turn and profits from the inevitable mispricing resulting from all the ripples they create.

As interest rates around the world keep going lower, they're influencing investor behaviour in more extreme ways (i.e. the ships are swinging around more often and more violently). This in turn creates more RV opportunities for those who have the right tools and experience to exploit them in a risk controlled way.

These types of positions blend well with conventional investments because they do best in volatile markets, when conventional investments can incur losses.

Hidden liquidity risk in fixed income portfolios

Liquidity is one of those things that doesn't get much focus until it's too late.

News this month of <u>Morningstar</u> suspending ratings on a fixed income fund due to illiquid bond holdings, coming on the heels of other high profile fund liquidity issues (see <u>here</u> and <u>here</u>), has <u>heightened investor scrutiny</u> of the true liquidity of underlying investments in <u>funds that claim to be 'liquid'</u>.

This recent article from Bloomberg News sums up the situation;

"What's really inside bond funds these days? The answer, for many of them, is more risk than there used to be.

With little fanfare, many traditionally safe investment-grade bond funds have been edging into more complex corners of fixed income. The goal: to eke out returns in today's low-interest-rate world.

At issue is just how big some of those risks might turn out to be. Of particular concern is whether managers are moving into investments that could prove difficult to sell in the event investors rush for the exits. High-profile problems at several European funds have set nerves on edge and in the U.S. investors will probably need to be more vigilant."

- Bloomberg News, 'Bond funds drift into risky debt', July 2019

In our view, this scrutiny is very much needed and welcome. It's also something that regulators are paying more attention to;

"Now, with warnings growing louder about the risks money managers have taken with hard-to-trade investments, Wall Street is starting to wonder: Just where will this end?

That question is reverberating across the financial world after the head of the Bank of England warned that funds pushing into a host of risky investments -- in some cases, without investors fully understanding the dangers -- have been "built on a lie."

Then the central banker, Mark Carney, spoke a word few policymakers use lightly: "systemic" -- central bank-speak for the kind of risks that can cascade through markets, institutions and economies. Some \$30 trillion is tied up in difficult-to- trade investments, he noted earlier this year."

- Bloomberg News, 'Liquidity and a lie', June 2019

Liquid investments are those that can be easily sold in sufficient volumes, whenever needed, without incurring punitive transaction costs. Illiquid investments are those that fail to meet these criteria to varying degrees. (Liquidity is a spectrum rather than a binary concept).

The additional return an illiquid asset offers above a comparable investment that's very similar in all aspects other than liquidity is referred to as the illiquidity risk premium. This is what investors earn explicitly for taking liquidity risk.

Even long-term investors value liquidity in order to maintain flexibility of asset allocation or access to cash and that desire is often highest at times of market stress, when liquidity is most tested. For these reasons, liquidity risk always needs to be accounted for when comparing investments.

While there is always a price for bearing liquidity risk, material liquidity risk may not be appropriate for certain portfolios at any price. For example, defensive portfolios where investors expect to be able to redeem their investment at any time and particularly in adverse market conditions.

With interest rates so low, there is growing pressure on investment managers to 'reach for yield' by investing in securities that offer higher returns but that can also become illiquid in adverse market environments (e.g. corporate bonds, loans, Residential Mortgage Backed Securities, emerging markets, structured products).

The same Bloomberg article referenced earlier notes;

"The big worry is that the now-troubled European funds that embraced such investments, only to stumble when investors asked for their money back, are just the tip of the iceberg.

Exposure to illiquid assets and poor-quality bonds has crept into funds as managers hunt for whatever returns they can find in today's low-interest-rate world."

That's not to say these investments are bad per se, but rather that their liquidity characteristics need to be well understood by investors in funds that have exposure to them.

On this point, it's important to appreciate structural changes in fixed income markets since 2008 and the way in which liquidity in some parts of the market has been compromised as a result. Unfortunately, it's not always clear during the good times as to how badly liquidity can deteriorate when markets turn.

For example, within the defensive fixed income segment, the common assumption is that investment grade bonds are liquid. While this assumption does still hold for a specific subset of very high quality government bonds, it is no longer true for a growing portion of the corporate bond sector (i.e. bonds issued by companies).

In fact, it's widely underappreciated just how much corporate bond trading liquidity has deteriorated in the past ten years.

A <u>research paper</u> from the Bank for International Settlements (BIS) notes the growing liquidity gap between government bonds (referred to as 'sovereign' bonds in the paper) and corporate bonds;

"Market liquidity in most sovereign bond markets has returned to levels comparable to those before the global financial crisis, as suggested by a variety of metrics and feedback from market participants.

There are, however, signs of increased liquidity bifurcation and fragility, with market activity concentrating in the most liquid instruments and deteriorating in the less liquid ones, such as corporate bonds."

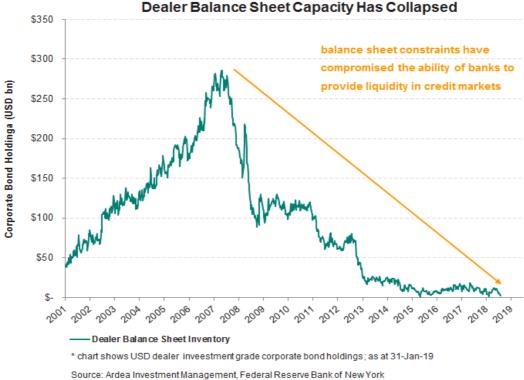
- BIS Committee on the Global Financial System

Unlike exchange traded equities, corporate bonds are traded 'over the counter' (OTC), which means liquidity is entirely reliant on banks using their balance sheets to facilitate buying and selling.

For example, when a credit fund needs to sell bonds, perhaps due to outflows, the fund needs to find a bank willing to buy those bonds. The bank then has to warehouse those bonds on its own balance sheet and run the risk that they decline in value before it's able to recycle them to a different buyer. This type of business, known as 'market making', consumes a lot of bank balance sheet capacity when corporate bonds are involved.

An unfortunate side effect of post 2008 bank regulations, balance sheet constraints and rising cost of capital has been a structural deterioration in corporate bond market liquidity, as banks are now less willing and able to use their remaining scarce balance sheet capacity to support corporate bond trading.

As the chart below shows, the amount of corporate bond inventory that banks are willing to hold has collapsed, which directly compromises liquidity in these markets.



The effect on market liquidity can be seen in the chart below, which shows daily USD investment grade corporate bond trading volumes as a proportion of total market size. The US corporate bond market is the largest and most liquid credit market in the world. Even here, liquidity has consistently declined since 2009.



* chart shows daily US investment grade corporate bond trading volumes as % of total bonds outstanding Source: Ardea Investment Management, Bank of America Merrill Lynch

Regulation has simultaneously decreased the ability of bank balance sheets to hold bond inventories and also increased their cost of capital, leading to structural impairment of market makers' ability to supply liquidity. These changes are not temporary.

A recent research paper on credit market liquidity from Goldman Sachs concluded the following;

"We provide evidence that liquidity conditions have deteriorated since the crisis – a trend that is captured by four metrics: 1. Lower market turnover; 2. Lower share of block trades; 3. Lower average institutional trade size; 4. Higher price impact estimates of the order flow.

In our view, the deterioration in market liquidity conditions is a major source of vulnerability that investors will need to anticipate and appropriately price ... Going forward, we think the value proposition of owning illiquidity is weak, reflecting the more fragile post-crisis market microstructure and the thin level of the corporate bond liquidity premium, in addition to tight valuations."

- Goldman Sachs, The Credit Line: The Great Liquidity Debate, June 2019

Simply looking at the history of average bid-offer spreads for trades that have taken place, as some liquidity studies do, fails to differentiate between situations where an investor needs to trade and therefore needs a bank to use its balance sheet to provide liquidity (known as a principal trading model) versus where an investor's interest happens to suit the bank and therefore the bank is simply acting as middleman without taking any risk (known as an agency trading model).

It's the former that's needed for true liquidity because investors in a liquid market should be able to trade whenever they want and not only when it suits intermediaries.

On this point, the same research paper from Goldman Sachs notes;

"In our view, the declining sensitivity of bid-ask spreads to market volatility is more indicative of the dealers' shift away from a principal to an agency trading model, as opposed to improving liquidity. This shift reflects the dealers' diminished capacity to commit principal capital for sizeable positions."

A side effect of this liquidity deterioration is increased volatility in corporate bond prices, a small taste of which we got in the fourth quarter 2018 credit market sell off.

A research paper done for US market regulators explained it this way;

"In the past, banks held vast inventories of corporate bonds and traded them regularly, making a profit for themselves and making a market for other investors. This kept price fluctuations in check and was especially valuable in times of stress, as investors could count on banks to play the part of willing buyer when everyone else wanted to sell.

When the global financial crisis erupted in 2008, banks ... needed government support to survive. These bailouts came with a price – new rules designed to discourage risk taking and make banks more secure.

The data suggests that these new regulations have challenged banks' effectiveness when it comes to making markets. While the corporate bond market has roughly doubled in size since late 2007, banks have beaten a hasty retreat from the bond trading business, cutting their inventories by some 75%. As a result, bonds are vulnerable to wider and more violent price swings because the banks aren't around to keep those fluctuations in check.

The effect has been most pronounced on corporate bonds."

- US Securities & Exchange Commission (SEC), Playing with Fire: The bond liquidity crunch and what to do about it, March 2016

While it might be tempting to conclude that the rapid first quarter 2019 rebound in credit markets suggests all is well, closer scrutiny says otherwise.

A recent research paper by UBS notes the following;

"The price action of Q4'18 and Q1'19 has been dizzying for credit investors ...

These spread changes are major in historical context. Q4 spread widening was in the 90th percentile of historical quarterly spread changes for each market. Q1 has seen a similarly sharp move in the reverse direction.

The worrying aspect of these spread moves is that they are somewhat divorced from the underlying fundamentals that the market is trying to price. Q4's spread widening did not occur in a recessionary environment, nor even in a period of significant default risk.

Bottom line, we believe the selloffs and rallies of 2015/2016 and 2018/2019 are being exacerbated by a rapidly rising and shrinking liquidity premium. And more importantly, we are concerned that price movements such as these may become the norm going forward.

While investors are concerned primarily about fundamentals, namely high leverage, fallen angel downgrades, and leveraged loan market froth, we believe fundamental and liquidity concerns are inextricably linked and illiquidity risk may be the true amplifier to credit risk in a downturn."

- UBS, Global Macro Strategy: Market Liquidity, April 2019

The post 2008 regulatory changes have not reduced the risks around corporate bond price volatility and liquidity, they have simply shifted them from bank balance sheets to investors in bond funds.

The only reason this liquidity deterioration hasn't been more visible is that we've been in such a bull market for credit. All the yield chasing inflows have masked this secular deterioration in liquidity. It's only when those credit inflows turn to outflows that the liquidity problems become visible.

Regulation isn't the only casual factor here. These dynamics are also driven by structural changes to the ownership of corporate bonds.

The enormous 'reach for yield' that has gripped fixed income markets since 2009 has increased the ownership of corporate bonds in open ended retail investor targeted vehicles like mutual funds and exchange traded funds (ETF's).

That's important because these funds (i.e. the 'buy-side') are more vulnerable to herding behaviour and rapid investor redemptions in periods of stress ... and shrunken bank balance sheets (i.e. the 'sell-side') can no longer provide liquidity when the 'buy-side' becomes a seller.

A recent research report from Deutsche Bank notes;

"Recent events have been a timely reminder of the potential risks of illiquid securities within openended mutual funds offering daily liquidity.

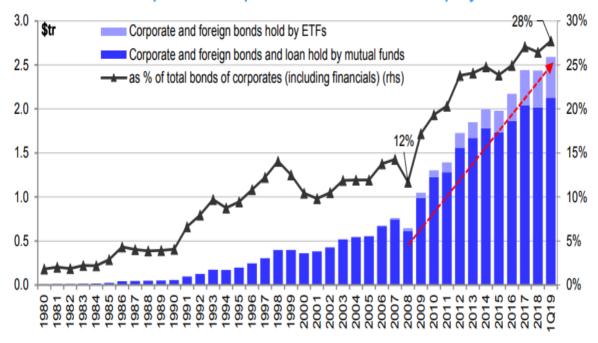
US corporate bonds outstanding have doubled since 2005 with recent issuance running at \$1.5trn pa. Over the same period, mutual funds' ownership of corporate bonds has increased from 12% to almost 30%, or c\$2.6trn (refer chart below).

Thus, the ratio of corporate bonds held by mutual funds vs dealer inventory has increased from 2x in 2007 to 43x currently.

In short, the buy-side significantly outweighs the sell-side and the gap has never been bigger."

- Deutsche Bank, Global Financials: The next liquidity crisis, June 2019

Mutual funds' ownership share of corporate bonds has increased rapidly



Source: Deutsche Bank

On the same point, the SEC research paper referenced earlier notes the following;

"While banks have been retreating from the bond market, investors have been charging into it. This is a direct result of central banks' easy money policies: by driving interest rates to record lows, these policies pushed investors – even income starved mom and pop investors – into riskier assets ...

The result: large numbers of investors are crowded into the same trades. That causes prices to trend strongly in one direction, but may leave the market vulnerable to a sudden correction if everyone wants to sell at once.

In theory, investors can exit an open ended mutual fund or an ETF at will. But the growing popularity of these funds forces them to invest in an even larger share of less liquid bonds. If everyone wants to exit at once, prices could fall very far, very fast.

A lucky few may get out in time. Others will probably get trampled."

Corporate bond ETF's are a particular point of vulnerability because their exchange traded nature attracts investors who expect constant uninterrupted liquidity, which is inconsistent with the growing illiquidity of their underlying investments.

One market commentator described the ETF liquidity mismatch in a recent interview with Barron's;

"In 2007, the lie was that you could take a cornucopia of crap, package it together, and somehow make it AAA," she says.

"This time, the lie is that you can take a bunch of bonds that trade by appointment, lump them together in an ETF, and magically make them liquid."

Sacrificing liquidity in return for additional yield can be a legitimate source of returns if the compensation for illiquidity risk is attractive and investors have the right time horizon of capital.

The problem is that corporate bond markets are no longer offering attractive compensation for growing

illiquidity risk and on top of this, large segments of the market (e.g. open ended funds, ETF's) do not have the right time horizon of capital because investors expect to be able to redeem at any time.

Now, a prudent corporate bond portfolio manager will hold a cash buffer in order to facilitate redemptions, without being forced to sell bond holdings. This works in normal environments but in periods of stress it's insufficient as they will simply burn through their cash buffer quickly, leaving the remaining investors with an even more illiquid portfolio, which raises complications around the equitable treatment of all investors.

This liquidity mismatch between corporate bond funds' underlying assets and the liquidity expectations of their investors has consistently grown over the past ten years and investors who had been reaching for yield in credit markets, thinking all is fine because default rates are low, may be unpleasantly surprised by how illiquid things become when they seek the exit.

In our view, growing illiquidity can become a major pain point for credit markets in coming years, so if you are going to take illiquidity risk, make sure it's explicitly acknowledged and adequately compensated.

Other Points of Interest

Safe havens, risky assets ... everything is rallying – Gold bugs were celebrating in June as the price of gold finally broke above the \$1400 price ceiling that has held since 2013. Headlines like this one from Bloomberg referenced the gold rally in the context of its traditional 'safe haven' role;

"Gold rebounded from its biggest decline in more than two years on signs of fresh strains on the global economy"

Wouldn't this suggest traditional 'risky assets' such as equities are falling? Wrong ... equities globally have just posted one of the best six month periods on record.

How is it that traditional safe haven assets like gold, government bonds and the Japanese yen are all performing strongly this year, just as risky assets like equities, credit and emerging markets are also doing very well?

One answer ... central banks have decided to keep the bar tab open, the asset price party is back in full swing and everyone is welcome. (we covered this here)

Which begs the question, when traditional safe haven assets are rallying strongly with equities, can they still provide downside protection if equities turn?

Safe havens and risky assets ... they're all rallying

as at 30-Jun-2019	YTD Return	
Risky Assets		
MSCI World Equity Index	+17%	
iShares Emerging Markets Equity ETF	+12%	
iShares High Yield Bond ETF	+10%	
Safe Havens		
Gold	+10%	
Japanese Yen (vs. USD)	+2%	
iShares US Treasury Bond ETF	+6%	

Source: Ardea Investment Management, Bloomberg

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