Down the Rabbit Hole: (Il)liquidity

This paper examines the "illiquidity premium" and how it is defined and quantified. As well as looking at how institutional investors have taken advantage of the additional yield, and how some are still not investing within the illiquid asset classes.

1. *Introduction*
2. *What is (Il)liquidity?*
3. *The illiquidity premium in private markets*
4. *Case Study: The insurance market*
5. *Investors and liquidity*
6. *Conclusion*

INTRODUCTION

The "illiquidity premium" has been a much-debated topic in economic theory for some time now, the premise being that if an asset cannot be readily sold without meaningfully impacting its value, then it should reward the holder with an enhanced return. A vast array of research has been conducted to try and quantify this figure, and yet (to our knowledge) a consensus does not yet exist. This paper aims to explore what it means for an asset to have (il)liquidity and the qualitative insights we have when assessing how this should be measured. This then warrants the question, how liquid are "liquid assets" really?

Furthermore, a case study on the insurance industry is explored to demonstrate how a niche regulatory regime has taken aim at quantifying the illiquidity premium. This looks at the matching adjustment regime and how under certain strict rules insurers can take advantage of this. Is it possible to then map this framework onto assets that don't fit a strict set of rules to demonstrate the existence of an illiquidity premium for other institutional investors? The final part of this paper explores why some investors may have the ability to take on significant liquidity risk (due to the long-term nature of their liabilities) but may lack the appetite.

As we have seen in recent years, the race for yield is intense, and fundraising in private markets is booming. Perhaps now is the time to take advantage of the illiquidity premium?

WHAT IS (IL)LIQUIDITY

Liquidity is ultimately difficult (or impossible) to accurately measure and changes throughout time (generally lower in times of stress). A common definition involves defining a liquid asset as one that can be easily liquidated without having a material impact on the price that it can be sold for. For example, tighter bid-ask spread on bonds, typically implies higher liquidity. In benign economic periods it is relatively easy to intuitively distinguish between liquid and illiquid assets.

However, during times of economic stress even the most liquid assets can become illiquid. This was seen during the Great Financial Crisis 2007 – 2008 ("GFC") when interbank lending dried up and banks refused to trade. It is often during periods such as the GFC where investors want to get out the most that they cannot.

"When the music stops, in terms of liquidity, things will be complicated." – Chuck Prince, Chairman and CEO Citigroup, June 24, 2007

Since the GFC and tighter regulations, banks cannot house proprietary trading desks, and therefore can only hold limited inventory of bonds which, reduces the level of liquidity in the financial system. It is arguable that liquidity has decreased since the GFC in 2008. Recently we have seen other funds offering "liquidity" be shone a light on, Woodford Patient Capital being a good example. Ultimately, we can define liquidity in a number of ways, but it is in times of stress that this matters the most.

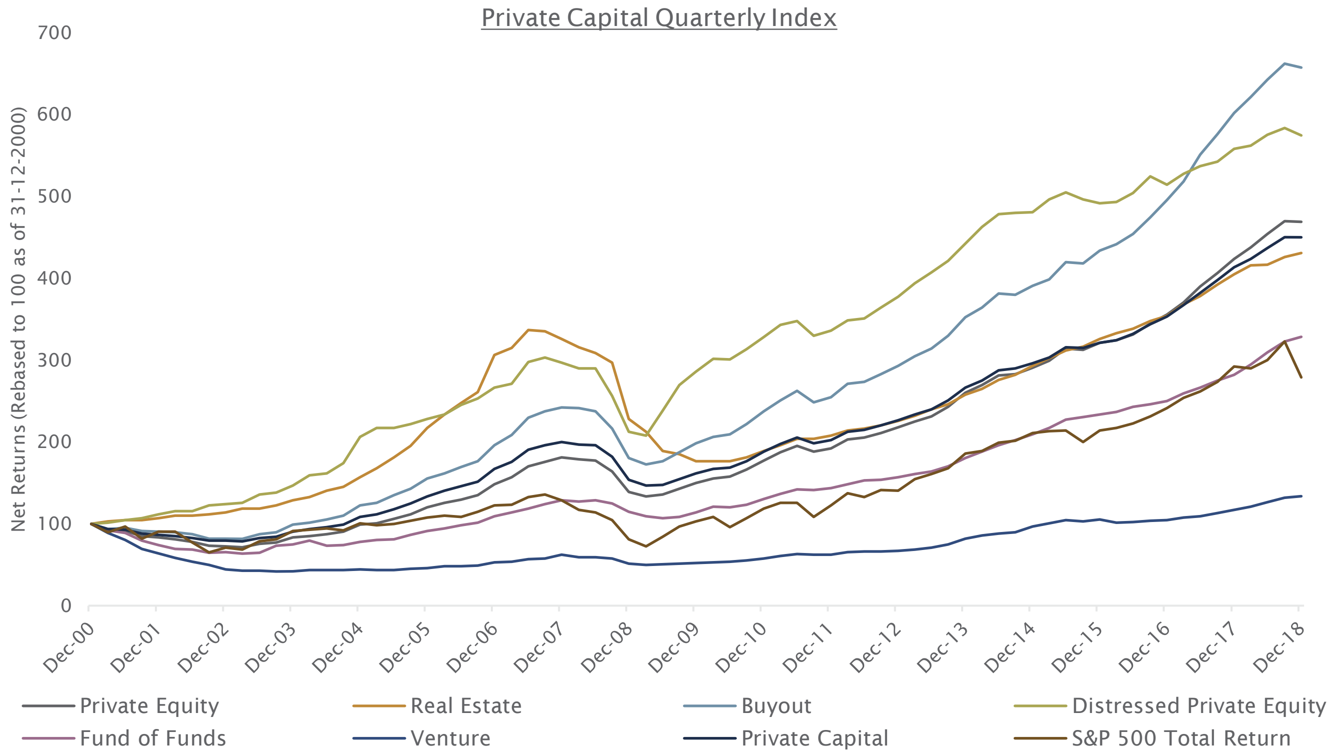
"Only when the tide goes out do you discover who's been swimming naked." – Warren Buffett

THE ILLIQUIDITY PREMIUM IN PRIVATE MARKETS

Private markets have been outperforming public markets consistently since inception (see below for Preqin data on private vs. public market performance). These investments are typically structured as a GP-LP structure where the investor is locked in for the duration of the investment term, thus they are illiquid by definition. The above market returns are typically attributed to several factors:

- Most private transactions are often more complex and require a lot more structuring than their public market equivalents, resulting in potentially higher returns;
- Regulations restricting the ability of certain institutions to "fill up" on non-public investments;
- Private markets are inherently inefficient resulting in the opportunity to take advantage of this arbitrage;
- The illiquidity premium combined with the perceived additional risk of locking in your money for longer.

See below for the outperformance of private capital vs. their public market equivalent.



Source: Preqin (12/2000 – 12/2018)

It is hard to distinguish between the various components of private market returns. However, Willis Towers Watson's paper titled "Understanding and measuring the illiquidity risk premium" (March 2016) examined a framework for quantifying the illiquidity risk premium. It concluded that premium for private credit funds has declined from 373bps to 196bps in recent years. This is in line with the illiquidity premium tightening in benign periods. Furthermore, if we look at the current Bund yields vs. AAA CLO yields (AAA CLO tranches have never defaulted), we see a pickup from the current yield of -54bps on bunds (5-7yr) vs. 117bps on the AAA CLO tranches[i]. We therefore expect the illiquidity premium in private market investments to be in the 100-300bps range[ii] depending on the prevailing market conditions.

CASE STUDY: THE INSURANCE MARKET

European Insurers have been formally taking advantage of the illiquidity premium since the Solvency II directive was introduced in 2016. Whilst the bulk of the directive has focused on capital charges and how insurers risk weight their assets, a part of the directive relates to the illiquidity premium.

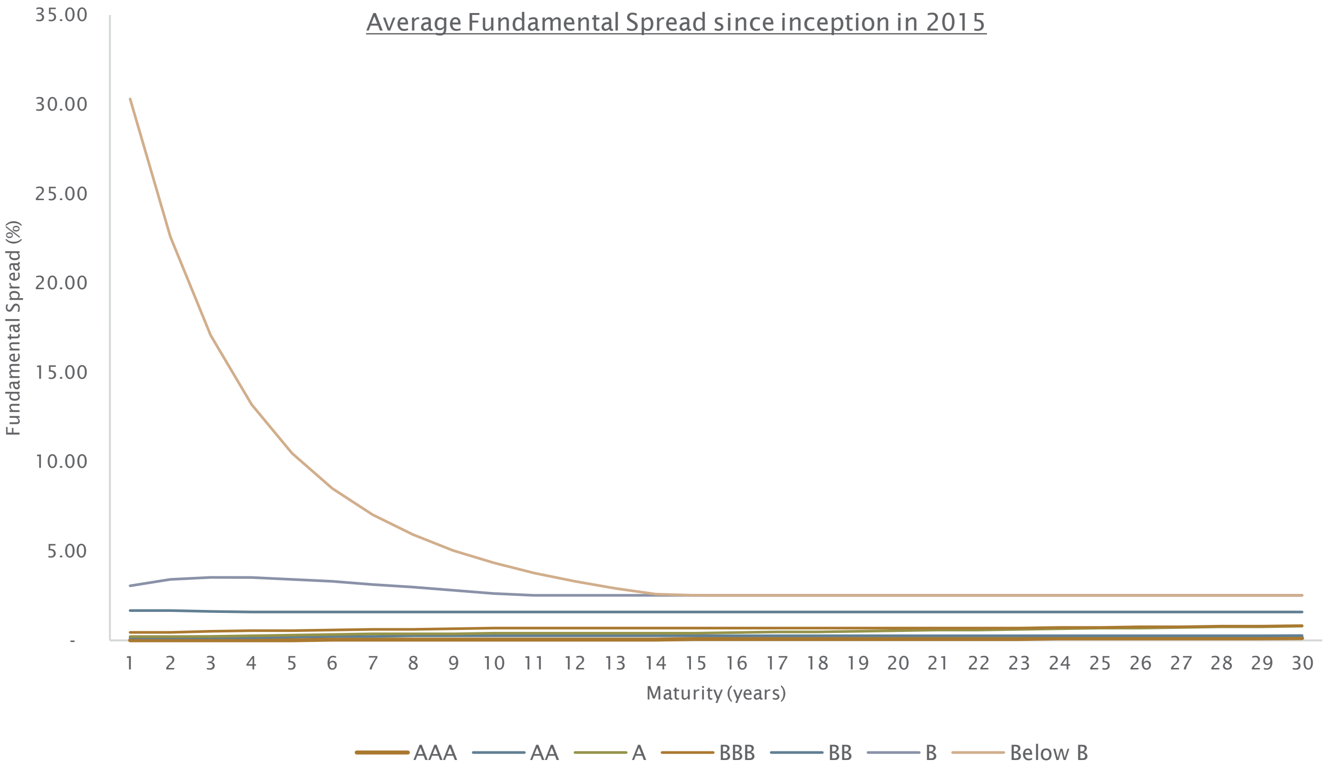
The specific area of Solvency II from which we derive our analysis is the matching adjustment regime. The basic premise behind the regulation is that insurers have relatively certain and predictable long-term liabilities (life insurance policies far out into the future, for example) and therefore do not need to release value at short term notice, reducing their need for liquidity. If an asset exists that has the same duration as the liabilities, with no prepayment risk and a fixed coupon, then insurers can discount their liabilities using some matching adjustment. This matching adjustment rewards insurers for holding illiquid assets and is analogous with the illiquidity premium. This was developed by the European Insurance and Occupational Pensions Authority ("EIOPA") after extensive consultation with an illiquidity project group to evidence and recognise aspects of liquidity.

EIOPA publishes the methodology for calculating this matching adjustment. If an asset can be held to maturity one can remove any mark-to-market risk, leaving only the risk of default, and the cost of downgrade. Therefore, the matching adjustment of any asset with the pre-defined asset characteristics looks like this[iii]:

$$Matching\ adjustment = Asset\ yield - Risk\ free\ rate - Fundamental\ spread$$

$$Where\ the\ fundamental\ spread\ is\ a\ combination\ of\ the\ probability\ of\ default\ and\ the\ cost\ of\ downgrade$$

The fundamental spread is a function of the rating of an asset where, a lower rating results in a higher probability of default. If an asset yields greater than the risk-free rate and the associated fundamental spread of that asset, then it has an illiquidity premium. We have collected the data since inception (45 months from 12/2015 – 08/2019) and taken the monthly averages to produce the graph below.



Maturity in years

	1	5	10	15	20	25	30
AAA	0.01%	0.02%	0.05%	0.06%	0.09%	0.11%	0.13%
AA	0.15%	0.19%	0.26%	0.27%	0.27%	0.27%	0.27%
A	0.22%	0.31%	0.40%	0.41%	0.54%	0.67%	0.80%
BBB	0.45%	0.56%	0.69%	0.70%	0.70%	0.72%	0.83%
BB	1.67%	1.59%	1.59%	1.59%	1.59%	1.59%	1.59%
B	3.04%	3.42%	2.64%	2.52%	2.52%	2.52%	2.52%
Below B	30.31%	10.47%	4.34%	2.52%	2.52%	2.52%	2.52%

Source: EIOPA 12/2015 – 08/2019 mapping each Fundamental Spread.

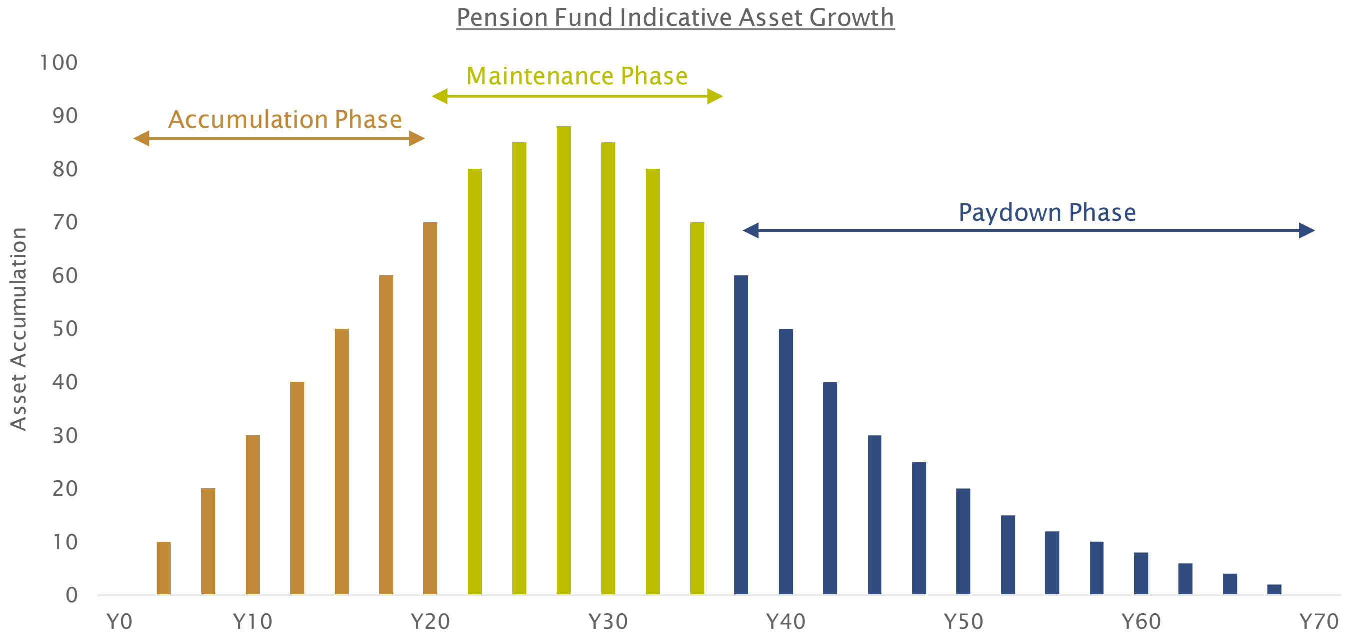
As can be seen, the assets with lower credit quality see a drastic reduction in fundamental spread at longer maturities and the higher credit quality assets rise marginally at longer maturities. The yields on the higher rated assets rise more quickly than the associated fundamental spread, resulting in a higher MA on longer dated assets.

Insurers can discount their liabilities, taking advantage of what essentially reflects the illiquidity premium. Regulation such as this enables asset managers to play a more strategic role in insurance asset management, and insurers who can find the right illiquid assets can potentially profit from this regulation in the long term.

INVESTORS AND LIQUIDITY

Another group of investors who have benefited from the illiquidity premium due to their defined liabilities are defined benefit ("DB") pension schemes. DB schemes have predictable future cashflows, so being able to match their assets to their liabilities is highly valuable, leading to the growth of liability driven investing.

These DB schemes require very little free cash flow in their infancy, as it is only when they reach their later stages and people start to retire that they need to release capital. A lot of these schemes are in the later stages of their life but could still utilise the cash generation of a private debt fund. Please see below for the indicative life of a pension fund.



Source: MV Credit

As DB schemes start to tail off and are replaced by defined contribution ("DC") schemes, the need for long term investments becomes more relevant. These schemes are in their "accumulation" phase and have little need for liquidity. It is evident from the above that should an investor have a long-time horizon whereby they do not immediately need to release cash then the illiquidity premium can be taken advantage of. We expect DC schemes to rapidly adopt illiquid asset classes[iv]. Many investors shy away from illiquidity, when in fact, it can be one of their most useful tools.

"Of the maxims of orthodox finance, none, surely, is more anti-social than the fetish of liquidity, the doctrine that it is a positive virtue on the part of the investment institutions to concentrate their resources upon the holding of 'liquid' securities. It forgets that there is no such thing as liquidity of investment for the community as a whole" – John Maynard Keynes

CONCLUSION

Ultimately, the illiquidity premium is hard to quantify and even harder to isolate. This does not mean that it cannot be observed (as demonstrated by the insurance market and Solvency II as well as several academic papers) and we estimate it to be anywhere from 100-300bps. In addition, liquidity can be an illusion for those looking to exit an investment regardless of the underlying economic environment, whilst it potentially understates the risks an investor could be taking in an investment. Some investors already benefit from the illiquidity premium and others should follow. Investors with the ability and time horizon to allocate towards illiquid asset classes could earn significant upside.

"Invest for the long haul. Don't get too greedy and don't get too scared" Shelby M.C. Davis

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[i] City Velocity 06/11/2019.
[ii] “Seeking Returns in Private Markets” 02/2017, Mercer
[iii] https://eiopa.europa.eu/regulation-supervision/insurance/solvency-ii-technical-information/risk-free-interest-rate-term-structures
[iv] “Investment Innovation and Future Consolidation: A Consultation on the Consideration of Illiquid Assets and the Development of Scale in Occupational Defined Contribution Schemes” Department for Work & Pensions. 02/2019.

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