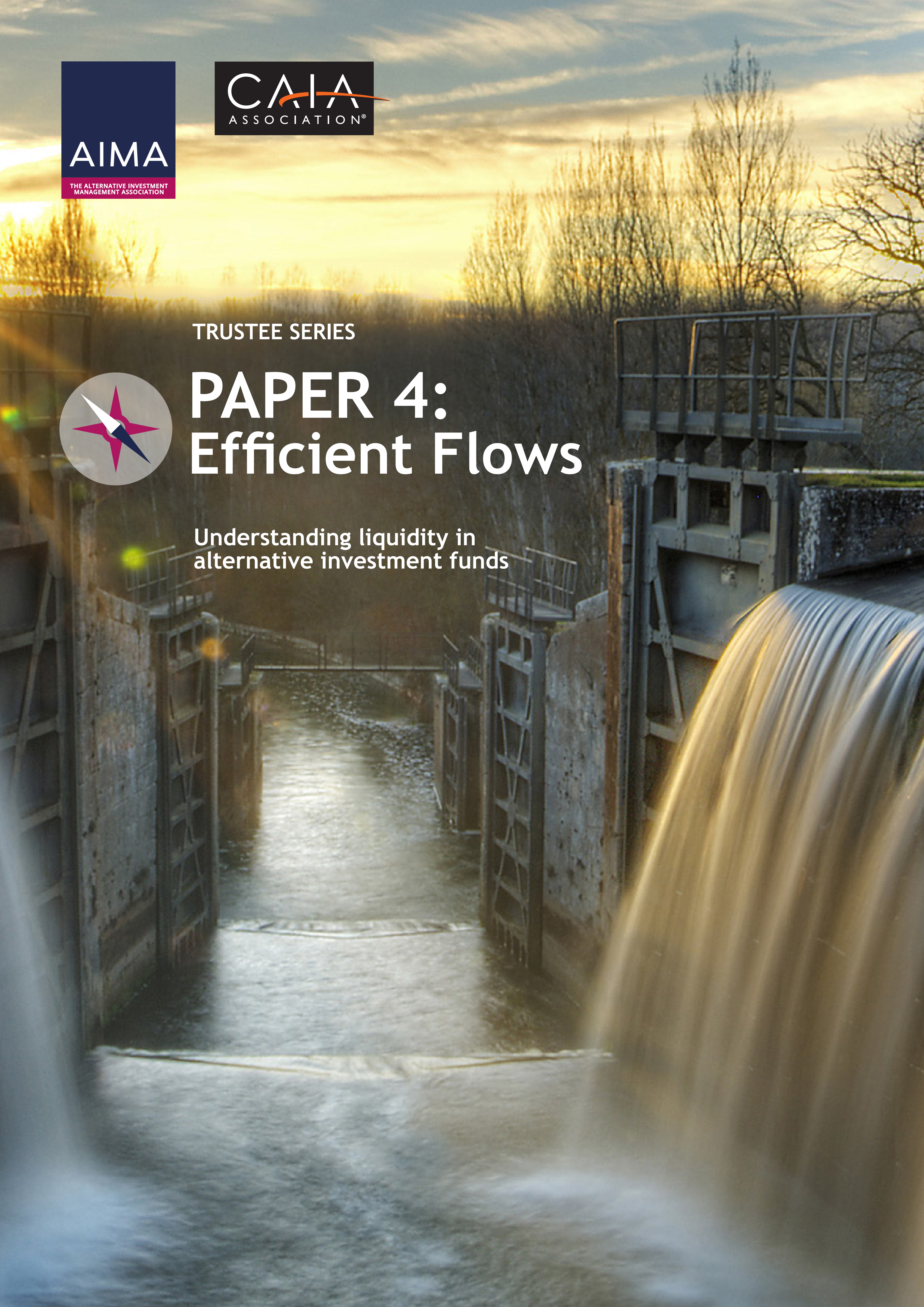

TRUSTEE SERIES

PAPER 4: Efficient Flows

Understanding liquidity in alternative investment funds

Contents

Foreword

Jack Inglis,
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Welcome to *Efficient Flows*, the fourth instalment in a series of papers written by the Alternative Investment Management Association (AIMA) and the Charted Alternative Investment Analyst (CAIA) Association for trustees and other fiduciaries.

The first paper in the series, *The Way Ahead*, explained the core value proposition of the hedge fund industry. The second paper, *Portfolio Transformers*, examined the return characteristics of different types of hedge funds. The third paper, *Made to Measure*, discussed how hedge funds use leverage.

This paper deals with another crucial concept in the hedge fund industry: liquidity. Liquidity is crucial for every investor to understand. In a time of ever-increasing disruption, investors need to know when they can access their capital, and under what conditions.

This paper explains the key concepts surrounding liquidity in the hedge fund space, from the different types of liquidity to the different liquidity levels offered by different types of hedge funds. Since hedge funds tailor their liquidity arrangements to their investment strategies in order to protect and grow the capital of their investors, these liquidity arrangements can vary quite drastically across the industry.

There is no one-size fits all approach to liquidity. Some investors prefer to have rapid access to their capital in order to meet their various obligations. Others (due to their liability structures) can lock up their capital for the longer term, which can represent an important source of competitive advantage for them, as they are able to harvest the potentially higher returns on offer from taking this approach. Accordingly, hedge fund liquidity arrangements are like the locks of a canal, ensuring that liquidity is present where it is needed or locked up when it is not.

We would like to thank our partners, the CAIA Association, for their continued help in developing this series of papers. We would also like to extend our special thanks to the members of AIMA's Investor Steering Committee[1] for their valuable insight and dedication. We trust you will find this paper useful.

[1] Representatives of this committee include some of the world's leading pension fund managers, sovereign wealth fund managers, endowments, foundations, insurance companies, and single family offices.

Introduction from the CAIA Association

William Kelly,
CEO, CAIA Association

The CAIA Association is pleased to have participated in the research and findings in this latest installment of educational papers designed to equip trustees and other fiduciaries with the proper tools to assist them in their risk oversight responsibilities.

In this paper, appropriately titled Efficient Flows, we take a closer look at liquidity. We are at a very interesting inflection point in our capital markets and this subject matter is both timely and topical. We are now a full decade beyond the liquidity crisis that was the fuel to ignite the 2008 financial crisis and a lot has happened in those ten years. Of note, our friendly and very accommodating central bankers turned on the liquidity hose and pointed it directly at the capital markets to the tune of $20 trillion. Asset prices across the board have reaped the benefits and the deployment of leverage via access to very cheap financing has certainly been an incremental source of octane, but how will this end?

Regulators in some markets have looked for prescriptive ways to measure and disclose liquidity, and in periods of tranquility, that mostly works. Times of stress are quite a different story and it is here that liquidity measurement is more art than it is science. Anticipation and preparation are essential for all fiduciaries because there are seasons to our capital markets and perhaps the halcyon days that we have enjoyed for so long are beginning to wane.

This paper examines four facets of liquidity and how to think about them across various hedge fund strategies. It is important to approach liquidity in the context of your goals and those of the other LPs investing beside you. Hedge fund managers quite often provide for the use of gates, side-pockets or other restrictions to prevent the wholesale flight of capital at what might be the most inopportune times to seek liquidity.

Anyone who has tried to hail a taxi cab in London, Hong Kong or New York City in the height of an August downpour knows full well what an imbalance of supply and demand might look like. In this case, urgency will yield a soaking wet suit and a very uncomfortable remainder of the day. The more patient participants will find the less traveled side street or perhaps simply wait for the sun to come back out again.

Education is a powerful elixir for periods of market stress and our own well-intentioned but sometimes poorly-timed instincts. This paper is the latest dose and we are proud to be in the dispensing business with our partners at AIMA.

Executive Summary

- Liquidity is an important, complex concept vital for every investor to understand. It plays an important role in asset allocation and the return characteristics of a portfolio.
- Hedge fund strategies span the entirety of the liquidity spectrum in all its dimensions. That is why investors need to understand (a) the liquidity of assets in which managers invest on their behalf, (b) the liquidity requirements for strategies pursued by managers, (c) the funding liquidity of such strategies as well as (d) the liquidity provided to investors by the fund vehicles themselves.
- The liquidity characteristics of the underlying assets and strategy within an investment portfolio (i.e. understanding the position size at least on an aggregated position level) should always be considered by investors before investing in any fund.
- Amidst an increasing set of demands from allocators and industry rule-makers, hedge funds have, on average, shortened the length of time it takes for investors to redeem from their investments.
- It is critical for investors to clarify and understand any arrangements relating to fund liquidity. The AIMA Due Diligence Questionnaire (DDQ) for Investment Managers contains questions relating to the liquidity of the underlying assets in the fund portfolio and how quickly the fund could be liquidated.
- Investors increasingly acknowledge that hedge fund managers should be compensated for offering greater levels of liquidity.
- The potential impact of fund liquidity risk should be regularly evaluated when estimating the market impact (or cost) of divesting the investor portfolio within a specific time and within specific market conditions.
- Depending on the investment plan's liability structure and appetite for risk, long-term investors are best positioned to take advantage of the liquidity premium, if they manage their portfolio liquidity correctly. Typically, the more illiquid the asset, the greater the expected return on the investment.

1 Facets of liquidity

In broad financial terms, **liquidity describes the degree to which an asset or security can be bought or sold in the market in a timely manner without having the price of the asset significantly change and without incurring costs related to the transaction**. Money or cash is considered the standard for liquidity because it can be most quickly and easily converted into other assets.

Example:

If a person wants to buy a widescreen television for $500, cash is an asset that can be easily used to buy it (as it is the most liquid asset). If that person has no cash, but has a rare butterfly collection valued at $500, they are unlikely to find someone immediately willing to trade them the widescreen television for the butterfly collection. Instead, they would most likely have to sell the collection for cash and purchase the widescreen television upon receiving the proceeds. This may be fine, if the person can wait months or years to find a buyer for the collection (given its illiquid nature), but could be more problematic if the person needs to buy the television immediately.

On this basis, financial securities are more liquid than real estate and collectibles. Liquidity attracts investors to the market because it assures them that they have flexibility in exchanging their securities for cash and vice versa, enabling them to take swift advantage of any changes in market conditions that may result in a security becoming either more or less attractive.

Market liquidity has two important dimensions: breadth—the range of securities that are liquid, and depth—the amount of securities that can be bought or sold (including the transaction costs incurred) before the transaction itself influences the security's value. These affect the ability of investors to achieve their objectives and crucially, all of which can at times be subject to drastic change.

A US Treasury bond (or its equivalent fixed income government security) is highly liquid as it can be easily sold within hours, transaction costs in selling it are nominal and there are many potential buyers who are willing to pay its market value. On the other hand, a house is a relatively illiquid asset since it can take months or even years to sell. Further, any sale will incorporate significant transaction costs and, depending on conditions in the market, the seller may have to take a reduced price to sell in a reasonable time.

There are three other liquidity factors to bear in mind when considering an investment in hedge funds or other similar strategies. For the purposes of this paper, liquidity has four facets:

- **Market (or asset) liquidity;**
- **Strategy liquidity;**
- **Funding liquidity; and**
- **Investor (fund) liquidity**

Market (asset) liquidity:

Market liquidity is integral to the smooth and effective running of capital markets. It facilitates the allocation of economic resources through the efficient allocation of capital and risk, the effective generation and dissemination of issuer-specific information and the effectiveness of monetary policy and financial stability.

Traditional measures of market liquidity include trade volume (the number of trades for a security), market turnover, bid-ask spreads, and the velocity of trading. Determinants of market liquidity are derived from market technical factors as well as macro-economic fundamentals. Supply and demand, which reflect the degree of investor confidence and market sentiment, are primary drivers of liquidity. The broader macro-economic environment also plays an integral part in developing and cultivating market liquidity. This would include a country's fiscal policy, monetary policy, exchange rate regimes and regulatory environment.

When trading within different asset classes, there can also be significant differences in liquidity conditions. These differences tend to be driven by factors such as the characteristics of the security being traded (the issue size, maturity, coupon rate, etc.), the security's issuer (the issuance frequency, volume of outstanding traded instruments, financial performance, etc.) and the market structure that it is trading within (for instance, the proportion of exchange traded versus bilateral trade, and whether there is any market-making activity).

Due to the multi-dimensional nature of market liquidity, it is not easy to assess it quantitatively. The level of market liquidity can fluctuate based on the technical conditions in (a) the broader economy, (b) the market or asset characteristics, (c) the market structure and (d) the settlement cycle for the security.

Strategy liquidity:

Despite some hedge funds being invested in relatively liquid underlying assets, some hedge fund strategies may not be liquid. Different strategies will result in different fund risk profiles, all of which must be evaluated by investors in the context of the investment strategy. Further, some strategies will have lower liquidity than the average liquidity of the securities traded. This is especially true for leveraged trades and highly concentrated positions.

For example, event driven and mean reversion relative value strategies often invest in liquid securities, utilising leverage to magnify the payoff profile of the trade. The manager is waiting for the event or reversion to occur and must hold the trade until that happens. Further, activist investment strategies require the manager at times to hold the assets for a very long period to realise returns, even if the underlying assets in the market that the strategy trades in are liquid. Other investment strategies trade a wide variety of instruments that are paired together throughout the lifetime of an investment, such as a liquid government bond being held in a portfolio with an illiquid over-the-counter (OTC) derivative.

Funding liquidity:

Funding liquidity is the availability of credit to finance the purchase of financial assets. A hedge fund's main source of finance is through collateralised borrowing financed by the repo market or the hedge fund's prime broker(s), and implicit leverage using derivatives (either exchange-traded or over-the-counter). We discuss how a hedge fund finances itself in the third paper of the trustee series, which discusses sources of finance and how a hedge fund uses leverage.[2]

In many strategies, when a hedge fund or another trader (for example, an investment bank) purchases an asset, they obtain a loan for the purchase and the purchased asset is often used as collateral for any additional financing obtained. However, they cannot borrow the full value of the asset. The difference between the security's price and its value as collateral (the 'haircut') must be paid for by the investors own equity capital. In addition, when the price of the collateral declines below a pre-specified minimum, the investor must provide additional capital to maintain the loan associated with the asset (a 'margin call').

[2] See for reference, AIMA/CAIA Trustee paper series 3, *Made to Measure*

For investment strategies which rely heavily on this kind of financing (either for leveraging long positions or using securities to borrow to establish short positions), the ease with which such financing is obtained and the terms of the financing will be an important contributor to the successful implementation of the strategy. For example, if a fund cannot meet a margin call, the prime broker of a central counterparty may liquidate that position immediately, possibly resulting in losses being incurred for the fund.

If the borrowing is not secured for the long term, but is rather an overnight facility, and a party cannot meet a margin call, the exchange or its agent may liquidate that position immediately. Consequently, an investor's position is illiquid if it is unable to settle its obligations in time. Research has shown that funding liquidity risks can often lead to market liquidity risk and vice versa. When funding liquidity becomes tight and dries up, traders become reluctant to take on positions especially in securities that trade with high margins. This lowers market liquidity leading to higher volatility. Further, under certain conditions, low future market liquidity increases the risk of financing a trade, thus increasing margins.[3]

Investor (fund terms) liquidity:

A hedge fund's capital consists of primarily the equity capital supplied by its investors. Since most hedge funds are open-end collective investment vehicles, the equity is not locked in the fund indefinitely. Investors can redeem their share in the fund's capital depending on the structural and legal features of the fund vehicle. The ability and the conditions under which investors may redeem their interests in funds can be thought of as investor liquidity.

As we mentioned previously, hedge funds often trade in non-traditional assets, use sophisticated investment strategies and may have longer investment time horizons associated with their strategies. To enable them to execute these strategies, they will require their investors to agree to limit their ability to withdraw their funds at will.

Redemption of fund units are therefore often subject to initial lock-up periods and general redemption notice periods before specific redemption dates. Hedge funds also have a variety of other contractual arrangements to manage their fund liquidity.[4] Liquidity is a particularly important attribute of a fund (including a hedge fund), as it measures the fund's ability to meet any redemptions and/or any cash liabilities in the short term when an investor may want to exit from their investment.

For example, an investor may agree to a lock-up period of one year, which is the minimum holding period for their investment. After that one year lock-up period is satisfied, the investor is subject to redemption and notice policies. Many hedge funds allow for redemptions at month end with 15 days' notice required before withdrawal.

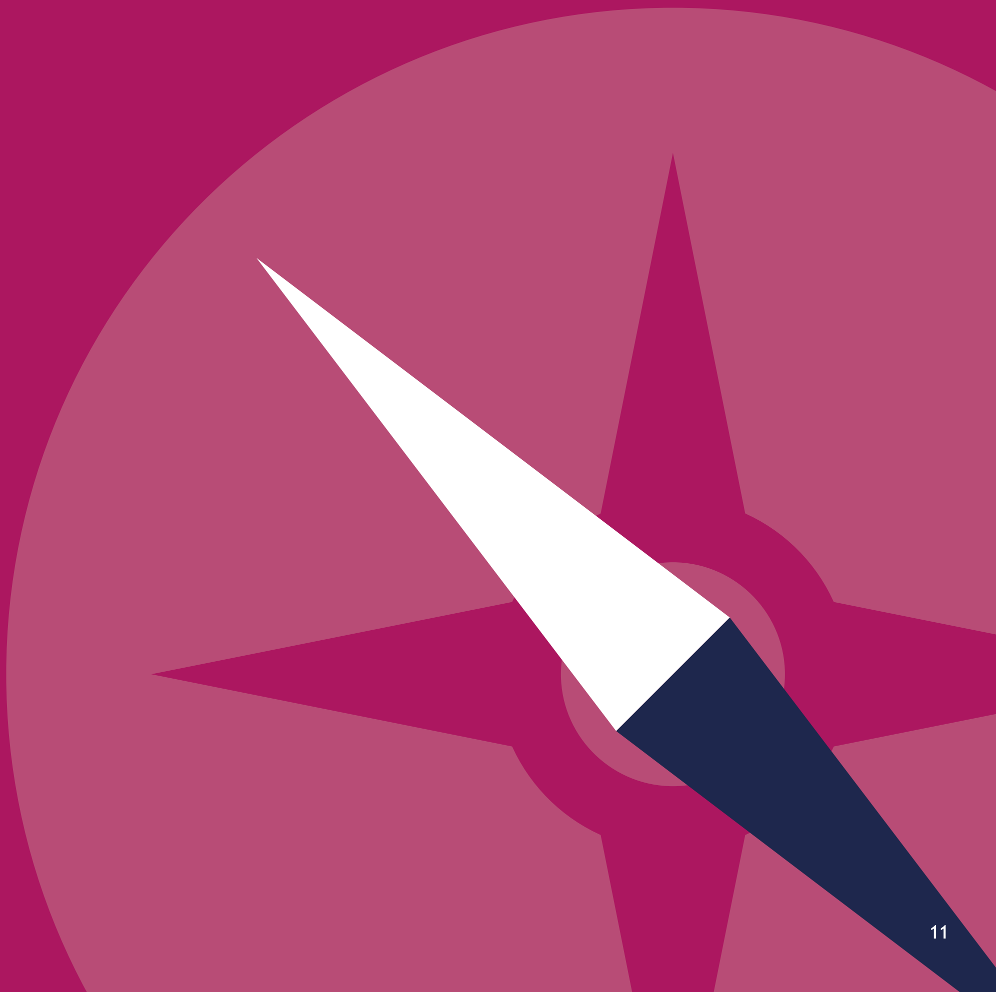
Importantly, in addition to the pre-set or ex-ante redemption restrictions to which investors may be subject to, funds often have redemption restrictions that can also be applied in times of market stress or when other liquidity events may occur. Such restrictions can take the form of 'gating' (allowing only a portion of an investor redemption to be met), creation of 'side-pockets' (creating a separate holding structure for illiquid investments within a fund) or outright suspensions of all redemptions. It is important that investors fully understand all types of restrictions which may be imposed by the funds as these may affect their ability to manage their own liquidity.

The remainder of this paper focuses primarily on the issue most unique to the hedge fund industry—the investor liquidity provided by managers in relation to the different types of strategies.

[3] Market Liquidity and Funding Liquidity, Markus K Brunnermeir, Lasse Heje Pedersen, 2008

[4] "Side pocket" determines that a proportion of each investor's capital, for example, 10% can only be redeemed when the designated assets (e.g., a privately held firm) are sold. Side pocket investments will be segregated from the portfolio and may be valued less frequently than the rest of the fund. New investors in a fund may not have the side pocketed asset included in their holdings in the hedge fund. A "gate" limits the fraction of the total capital that can leave the fund during any redemption period. Individual investors' redemptions are typically prorated in case of excess demand for outflows. "Withdrawal suspensions" (or *force majeure* terms) temporarily suspend withdrawals completely.

2 Investor liquidity for hedge funds



For investors, understanding the liquidity of hedge funds is a vital consideration in the structuring of any investment portfolio. This ensures that the necessary cash flow requirements of the investor can be fulfilled with minimal impact on its expected performance. Fund liquidity terms written into investor contracts by hedge fund managers can vary for several reasons, although the leading driver is the asset/market liquidity on offer when investing in the fund's underlying strategy.

Hedge fund liquidity terms can be wide-ranging depending on the underlying positions in the fund. Some highly liquid strategies offer daily liquidity, while some of the more niche illiquid strategies require investor capital to be locked-up over a multi-year period. Most equity-focused strategies tend to offer shorter liquidity terms, as these assets can be more readily exited in broadly traded markets. By comparison, the terms being offered by the hedge fund manager extend out with investment strategies that invest in less liquid assets. For example, strategies that are heavily focused in less liquid private credit or distressed securities may be only offered in closed-end vehicles to ensure an orderly exit from the investments.

Hedge fund managers strive to match their liquidity terms to the investments in their portfolio. In some jurisdictions, this approach is also mandated by regulation. These terms dictate the minimum amount of time the money allocated to the fund must be left with the manager (the 'lock-up period'), how frequently investors can redeem money out of the fund (the 'redemption period'), and how far in advance of a redemption their investors must notify them of their intention to withdraw money (the 'notice period').

Hedge fund managers and investors have a set of tools at their disposal to efficiently manage withdrawals. These are often designed to ensure that investment strategies are capable of being carried out as intended. Certain restrictions are designed to avoid any occurrence of an asset-liability mismatch.[5] Others exist to allow managers to withstand periods of significant market stress.

Gates and side pockets grew in prominence and controversy during the 2008 financial crisis. The liquidity that some hedge funds had been able to offer investors under normal market conditions was not available in times of market stress. Unable to meet a wave of redemption orders, many hedge funds imposed gates or separated illiquid or hard-to-value assets into side pockets. These contractual arrangements are not harmful to investors but investors need to understand them before committing capital. **Having such redemption flexibility allows hedge fund managers to manage assets without being forced to prematurely close out their positions in less opportune times, to the detriment of their funds and their investors (for example, if a fund is forced into a fire-sale of its assets or if a run for the exit is permitted).**

[5] Gate information has been supplied by the Preqin hedge fund database. The 2008 data is based on a population of 776 hedge funds while the 2017 data analysed 1600 hedge funds.

Inside the fund tool box:

Lock-ups

A lock-up period is a window of time when investors in a hedge fund or another closely held investment vehicle are not allowed to redeem or sell their investment in the fund. As a rule of thumb, the lock-up should be as long as is necessary for the investment manager to implement its strategy. For example, if a manager expects that it will take a year or more to see any results from the investment strategy then the lock-up should be at least a year, while investments that take less than a year to realise any results should be shorter. Managers should be flexible with the lock-up period in certain circumstances. Some investors negotiate with hedge fund managers for reduced lock-up periods, or for no lock-up period at all. In the wake of the 2008 financial crisis lock-up provisions received considerable negative publicity as investors attempted to withdraw funds to meet liquidity needs and were sometimes unable to do so. As such, many hedge funds that have since launched have decided not to include lock-up provisions, but instead restrict fund liquidity in other ways. For instance, by decreasing the frequency of periodic withdrawals and increasing the notice period to affect a withdrawal. For more illiquid assets, lock-ups are still very common and are endorsed by investors as integral to liquidity risk management for managers and investors alike.

Gates

In order to protect themselves and other investors from large scale capital withdrawals, many hedge funds use gating provisions. While gates put a limit on investor withdrawals, they do not prohibit them altogether. The nature of the restriction imposed by a gate can vary, including restrictions on the amount that can be withdrawn as a proportion of the investor's capital in the fund; the fund's total net asset value; or the funds held under a particular class of shares.

When structured appropriately, gates allow managers to offer redeeming investors reasonable levels of liquidity without taking on inappropriate asset-liability mismatches that could lead to instability for the fund and its investors. They remain crucial tools for balancing the competing needs of all the relevant parties invested in a fund.

Fund and investor gates are often combined.

Types of gates:

(i) Fund gate:

A fund gate limits the amount that all investors in a fund are permitted to withdraw from a fund at a given point in time (a redemption period). For a fund gate, the amounts that all investors request to redeem are combined and measured against an overall threshold. To the extent the threshold is exceeded, the requested redemption amounts are reduced as provided for in the fund's offering documents.

For instance, if redemptions totalled more than 25% of a fund's assets, the manager could put up a gate limiting total withdrawals to 25%. This means that redeeming investors will only have a portion of their redemption requests fulfilled.

(ii) Investor gate:

An investor gate is an investor-by-investor limitation that restricts the amount which an individual investor may redeem, regardless of the amount that other investors are redeeming. Having an investor gate in place effectively staggers each investor's partial or complete redemption from a fund.

Side-Pockets

Side pocket arrangements segregate illiquid or hard-to-value positions from the main pool of assets in a fund until such time as they are realised or are no longer difficult to price. They can also be intentionally created as part of an investment strategy, for example if a hedge fund manager and investor wish to pursue investment opportunities in illiquid assets. Side-pockets can be a solution to treating both redeeming and on-going investors equitably.

The use of side-pockets increased in 2008 due to the financial crisis. Subsequently, some investment managers continued to use side-pockets as a means to manage certain illiquid securities. The creation of new side-pockets in the current environment is much less common, although many hedge funds' governing documents provide for the flexibility to create side-pockets should the need arise.

The set of liquidity constraints presented above allow redemptions from a fund on only a few specific dates per year. The process of fully exiting your investment from a fund takes time. The investors remain invested in the fund until the next liquidity date as set out in the fund documents. If the fund gate is activated, the proportion of assets gated (that is, not paid back at the first liquidity date) will be paid later, and in this case the investor remains invested.

Analysing investor liquidity by hedge fund strategy:

The following section provides analysis of investor liquidity terms across a universe of over 6,000 hedge funds that report to the Eurekahedge hedge fund database. From it, we provide a comparison of investor liquidity terms for all hedge funds that reported to this database in 2008 versus those that reported to the same database at the end of 2017.

(a) Taking the redemption information first (from table 1 below), any strategy which has a redemption frequency or notice period of:

(i) between 0 and 30 days has a high level of investor liquidity

(ii) greater than 30 days but less than 60 days has a medium level of investor liquidity

(iii) greater than 60 days has a low level of investor liquidity

Upon closer examination of the hedge fund universe of strategies in table 1 below, most of them (seven out of ten of the listed investment strategies below) have improved the fund liquidity terms that they offer to their investors. As per the information provided, the average number of days for a fund redemption has decreased (as measured by the redemption frequency below), while notice periods have shortened for nine out of the ten listed hedge fund strategies when comparing both time periods.

(a) Hedge fund redemption frequency:

Table 1

Average Number of Days	Redemption Notice Period			Redemption Frequency		
	Pre-2008	2017	% Change	Pre-2008	2017	% Change
Arbitrage	46	27	-42%	57	12	-79%
CTA/Managed Futures	14	12	-16%	22	16	-26%
Distressed Debt	67	81	21%	110	56	-49%
Event Driven	62	48	-22%	84	94	13%
Fixed Income	37	35	-4%	46	89	93%
Long/short equities	38	28	-27%	55	41	-26%
Macro	28	18	-36%	35	31	-10%
Multi-strategy	39	30	-21%	50	24	-52%
Relative value	41	26	-37%	66	30	-54%
Private credit strategies	71	66	-7%	88	70	-21%

Eurekahedge, AIMA Research

(b) Hedge funds' use of gates

Second, related to the information provided on the use of gates between 2008 and 2017, tables 2-9 below provide a more detailed analysis of the use of gates deployed by the main hedge fund strategies. From this analysis, we consider hedge fund strategies to have a:

(i) high level of investor liquidity when 20% or less of the overall total number of funds in the respective hedge fund classification include a provision for the use of gates in their fund(s)

(ii) medium level of investor liquidity when greater than 20% but fewer than 40% of the overall total number of funds in the respective hedge fund classification include a provision for the use of gates in their fund(s)

(iii) low level of investor liquidity when greater than 40% of the overall total number of funds in the respective hedge fund classification include a provision for the use of gates in their fund(s)

It should follow then that where this analysis identifies an investment strategy that has a high level of investor liquidity, it should also have a low percentage of funds using gates (at either the fund or investor level).

Table 2

Proportion of Equity Strategy Hedge Funds with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	68%	70%	Medium
Fund-level	22%	14%	High
Investor-level	10%	16%	High

Source: Preqin, AIMA research

Table 3

Proportion of Macro Strategy Hedge Funds with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	81%	80%	High
Fund-level	15%	15%	Medium
Investor-level	4%	5%	High

Source: Preqin, AIMA research

Table 4

Proportion of CTAs with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	88%	90%	High
Fund-level	12%	9%	High
Investor-level	0%	1%	High

Source: Preqin, AIMA research

Table 5

Proportion of Event Driven Hedge Funds with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	40%	48%	Low
Fund-level	37%	19%	High
Investor-level	23%	34%	Low

Source: Preqin, AIMA research

[6] Gate information has been supplied by the Preqin hedge fund database.
The 2008 data is based on a population of 776 hedge funds while the 2017 data analysed 1600 hedge funds.

Table 6

Proportion of Credit Strategy Hedge Funds with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	49%	38%	Medium
Fund-level	45%	30%	Medium
Investor-level	6%	32%	Low

Source: Preqin, AIMA research

Table 7

Proportion of Relative Value Hedge Funds with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	57%	68%	Medium
Fund-level	26%	20%	High
Investor-level	17%	13%	High

Source: Preqin, AIMA research

Table 8

Proportion of Multi-Strategy Hedge Funds with a Gate Provision			
Gate Provision	2008	2017	2017 Investor-level liquidity
None	43%	69%	Medium
Fund-level	35%	17%	High
Investor-level	22%	14%	High

Source: Preqin, AIMA research

Table 9

Proportion of Niche Strategy Hedge Funds with a Gate Provision			
Niche	2008	2017	2017 Investor-level liquidity
None	67%	33%	Low
Fund-level	0%	50%	Low
Investor-level	33%	17%	High

Source: Preqin, AIMA research

In the period after the 2008 financial crisis, many hedge fund managers reacted positively to investors' demands for more control over fund liquidity and custody arrangements, and for more detailed information regarding their investments. This manifested itself in numerous ways, including managers and investors working together to create bespoke liquidity conditions for specific hedge funds and/or groups of investors, which then match the liquidity profiles of the invested instruments.

Accordingly, **funds have restructured their investment vehicles to match the liquidity of their strategies and established investor-level gates to ensure fund managers are not forced to liquidate their portfolio to meet redemptions and that any fund closure is handled equitably for all investors concerned.** There has been a noticeable shift away from the use of priority fund level gates versus[7] pro-rata fund level[8] gates. Granting priority to redemption requests is generally considered more harmful than helpful. Although giving priority to an earlier request that was not fully redeemed may seem equitable, it is disadvantageous to the operation of the gate. By offering priority to an investor in this way, it increases the incentive on their part to exit the fund sooner and faster than they may otherwise need to, creating a 'run on the bank' scenario wherein investors submit their redemption requests early to best position themselves to be granted priority to exit their investment from the fund at the next available opportunity. The use of priority fund level gates was never very popular to begin with, and it is virtually non-existent now.

Comparing the information from tables 2-9, the use of gates is more popular within illiquid or niche investment strategies. By contrast, CTA and macro-related hedge funds deploy few gates, if any.

The most liquid hedge funds are now adapting fund liquidity profiles that narrow the gap between themselves and traditional long-only investment fund offerings, which generally offer greater fund liquidity terms. Many hedge funds—particularly liquid equity-focused strategies—are now offering monthly liquidity options. UCITS funds, a form of regulated hedge fund structure offered in European markets, must offer bi-weekly liquidity as a minimum. Funds compliant with the Investment Company Act of 1940 ('40 Act funds') regulations must also offer regular liquidity, with redemptions being paid within seven days.

Some hedge fund strategies are long-term by nature. As an example, investments in distressed securities are most often long-term and illiquid. Infrequent redemption periods, therefore, are the norm. It is essential that managers that pursue these strategies have a large pool of committed capital so that liquidity is not a problem. Frequent liquidity windows (for instance, on a quarterly or semi-annual basis) therefore work against the nature of this strategy and the fund's investors.

Across certain illiquid strategies, the illiquid segment of the fund matches the profile of a private equity fund vehicle, where investors are offered incentives to lock-up capital for extended periods of time (some of these being multi-year fund vehicles). Many illiquid funds are also launching new share classes with more favourable investor liquidity terms (i.e. soft lock-ups versus hard lock-ups, albeit with a higher fee).

From an investor's perspective, theoretically, portfolio and fund liquidity should go hand-in hand. The more liquid the underlying assets of the fund, the shorter the redemption notice period and lock-up period (if any) should be. A fund which has more liquidity provides less latitude to its fund manager to gate or suspend redemptions, resulting in a smaller price impact and negative effect on remaining fund liquidity in the event of a redemption.

(c) Using managed accounts can offer the investor improved liquidity terms.

Many hedge funds are now open to the idea of managed accounts and the concept of providing associated levels of transparency. Traditionally an investor would invest in the commingled fund established by the hedge fund manager. The allocation would be either via a direct investment in the commingled fund or an indirect investment via a fund-of-funds, with the investor first investing in a fund of hedge funds and then investing a proportion of assets in the underlying commingled funds.

A separate managed account is individually customised to meet an investors specific goals for the security, return and liquidity of its investment(s). Having such an arrangement gives the investor the scope to set the hedge fund manager a specific investment mandate offering improved liquidity, transparency and investor control. Most arrangements allow for the fund's underlying positions to be viewed on a live basis with daily reporting. They also allow clients to segregate their investments in vehicles separate from the manager's main hedge fund, meaning investors retain control over their assets usually with the ability to redeem much more frequently than the main fund. With this structure, the investor is much better positioned to assess the actual liquidity of the fund with fewer levels of liquidity to consider.

A fund-of-one structure lies between a commingled fund and a managed account. A fund-of-one arrangement is set up for or by the investor with the underlying assets owned by the fund. The terms of the fund-of-one are typically like that of the traditional pooled fund run by the manager, although they can differ by consent of both parties. The investor is an indirect investor in the underlying assets, as formally these are owned by the fund. As the investor is the only client, they can then have the fund tailor a customised mandate to meet their specific requirements.

According to Credit Suisse,[9] demand among institutional investors for managed accounts reached a seven-year high in 2018, with 58% of investors in a recent survey indicating that they currently invest in managed accounts, and a further 29% saying that they plan to increase their allocations.

It is important for investors to clarify and understand any arrangements relating to fund liquidity. The AIMA Due Diligence Questionnaire (DDQ) for Investment Managers contains questions relating to the liquidity of the underlying assets in the fund portfolio and how quickly the fund could be liquidated. The DDQ also includes questions as to whether gates and side-pockets have been utilised in the past and, if so, under what circumstances.

[7] **Priority clauses allow investors who were gated previously the priority to exit their investment from the fund during subsequent redemption cycles before investors who were not previously gated.**

[8] Interpreted in one or two ways: (i) based on the size of each redemption request, or (ii) based on the size of each redeeming investors investment immediately prior to the redemption.

[9] Mass Appeal, Bespoke Approach: *A Tailored View of Managed Accounts*, Credit Suisse (2018)

(d) Paying for liquidity:

There are many dynamics to consider between the hedge fund and investor when setting what is an acceptable compensation that investors should pay for allocating to a fund. As investors become more experienced regarding the types of portfolio solutions that they want, the investor liquidity on offer from their investments is a key consideration when setting the appropriate fee structure to pay their investment manager.

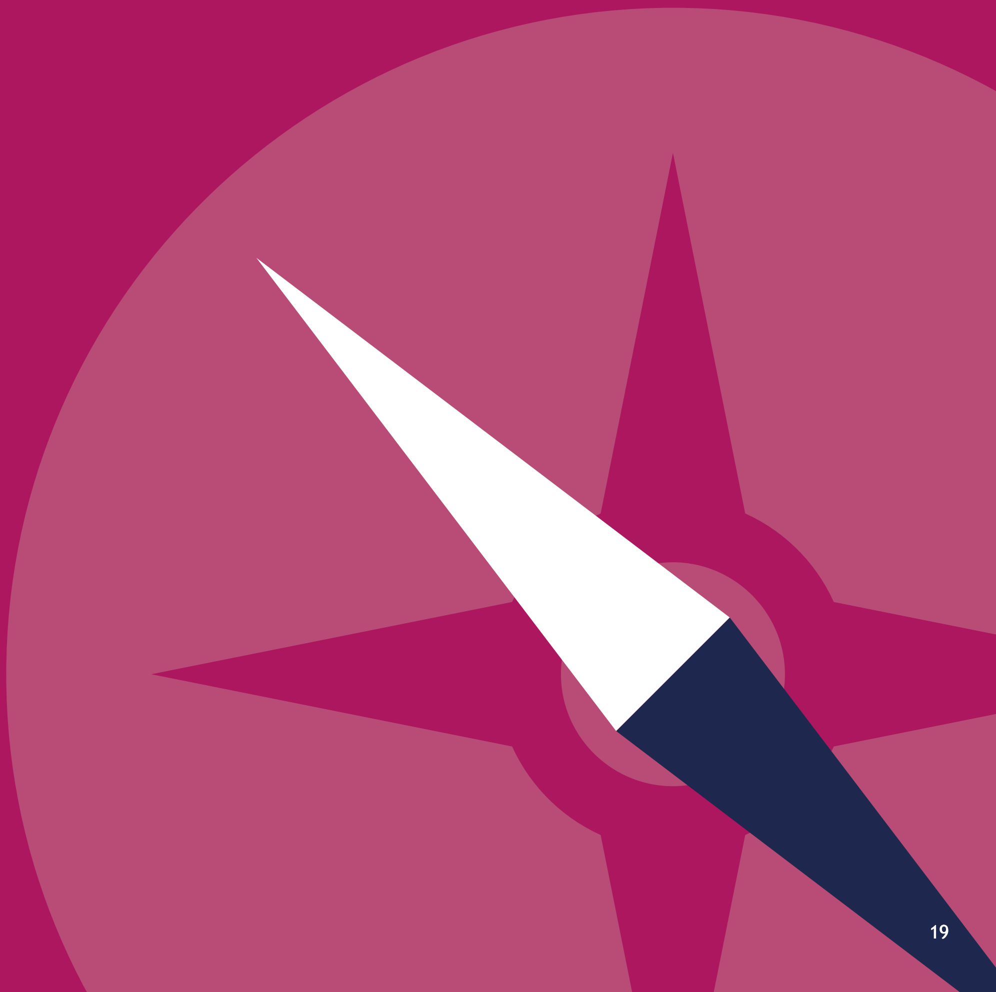
In a further sign of investors and hedge fund managers aligning their interests, some of the industry's largest investors in hedge funds acknowledge that when hedge funds offer greater levels of liquidity they should be compensated accordingly. It stands to reason that when investors are afforded frequent opportunities to redeem their investment, managers should be compensated for providing enhanced liquidity.

For example, suppose there are two funds which pursue the same investment strategy, and one fund offers monthly liquidity and the other offers liquidity on a quarterly basis: investors believe it is only right to compensate the fund that offers the greater level of liquidity. Ceteris paribus, where a fund's underlying investments are highly liquid, investors consider where in the lifecycle the fund is when determining whether the fund should be compensated via an increase in management or performance fees. Another way to consider the trade-off is that many hedge funds offer reduced fees to investors who agree to longer lock-up periods. Related to this approach, there is an ongoing debate as to what is the right fee structure that investors should pay managers when they are asked to tie up their capital for a lengthy period.

> The suggestion is that when investors commit to investing their capital in a fund over the long term, they should not be paying the same level of fees as investors who demand more frequent opportunities to liquidate their investment

Albeit this is an emerging trend, it's highly unlikely that any compensation being agreed between the hedge fund manager and investor will be ultimately settled by what level of liquidity is on offer to the client.

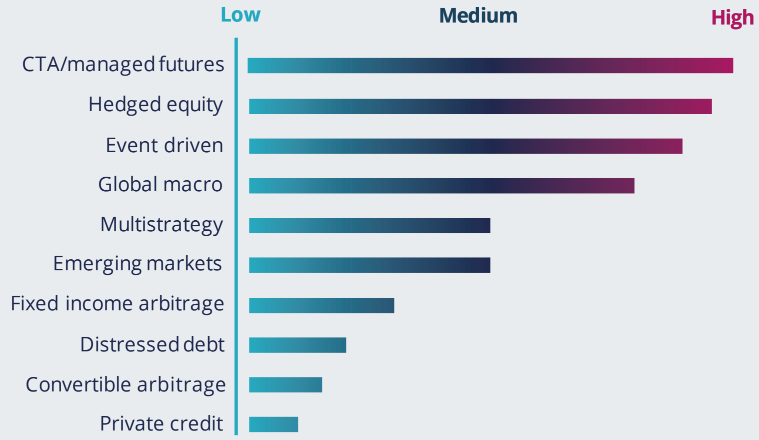
3 Liquidity characteristics of hedge funds



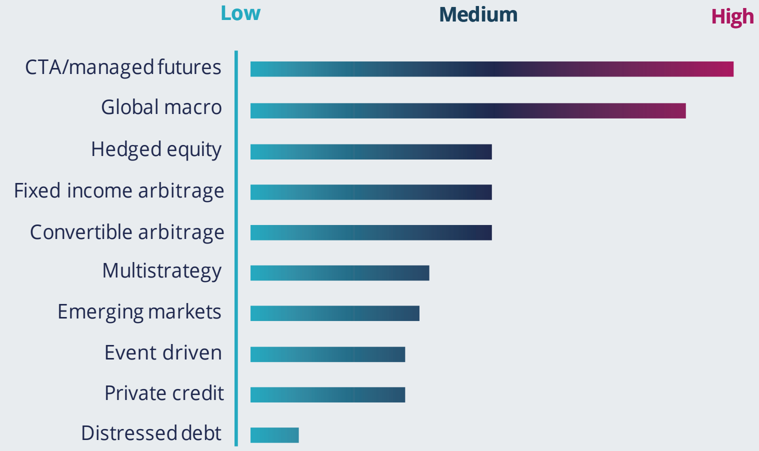
Using the investor liquidity analysis from (a) and (b) in section 2 can provide us with a useful proxy measure for assessing the fund level liquidity available to investors.

Extending this analysis further, we present the four types of liquidity that impact hedge funds. Each hedge fund strategy is ranked based on the four types of liquidity that we have addressed in this paper. In each case, we show where on the scale of liquidity the strategy best resides from the highest level of liquidity to the lowest level of liquidity.

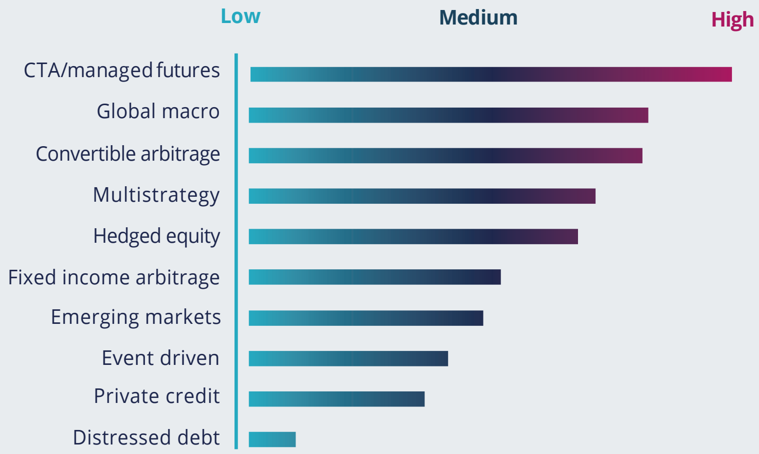
Market liquidity



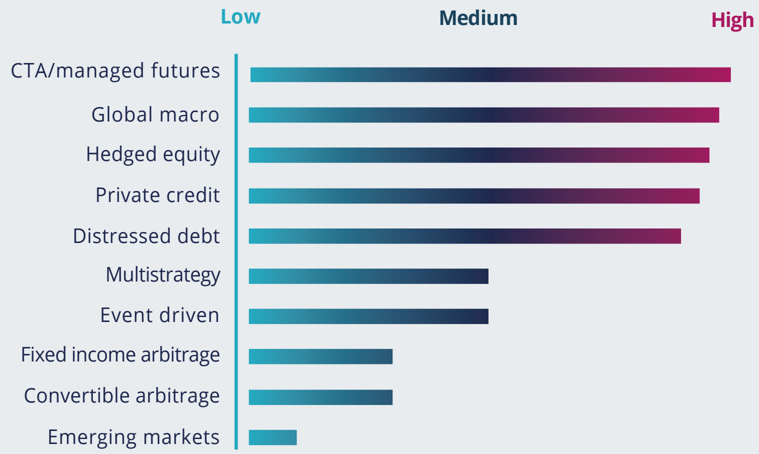
Strategy liquidity



Investor liquidity



Funding liquidity



Hedged equity:

1. **Asset (market) liquidity** – Hedged equity strategies typically trade in listed equities and securities that are highly liquid. **(High)**
2. **Strategy liquidity** – Consideration needs to be given to activist strategies which require the investment manager at times to hold the assets for a very long period to realise returns. As such, some aspects of the strategy can be illiquid in nature. **(Medium)**
3. **Investor (fund terms) liquidity** – Typically the fund terms that underpin a long/short equity strategy (on average) allow the investor to redeem from an investment on a regular basis. In addition, notice periods for long/short strategies are also among the shortest, in comparison to notice periods for other hedge fund strategies. Event driven strategies (which include activist investing), are associated with having longer lock-up periods, with investors being able to redeem less frequently. **(Medium)**
4. **Funding liquidity** – Given that these strategies tend to use modest levels of leverage, if there was to be a liquidity shock to the market resulting in margins on leverage facilities increasing, it is highly unlikely for a fund that deploys this strategy to see its funding impacted significantly. **(High)**

Event Driven:

1. **Asset (market) liquidity** – Event driven strategies typically trade in listed equities and securities that are highly liquid. **(High)**
2. **Strategy liquidity** – Consideration needs to be given to value, activist or quasi-private strategies which require the investment manager at times to hold the assets for a very long period to realise returns. As such, some aspects of the strategy can be illiquid in nature **(Medium/Low)**
3. **Investor (fund terms) liquidity** – Event driven strategies are associated with having longer lock-up periods with investors being able to redeem less frequently. **(Medium/Low)**
4. **Funding liquidity** – Given that these strategies tend to use modest levels of leverage, if there was to be a liquidity shock to the market resulting in margins on leverage facilities increasing, it is highly unlikely for a fund that deploys this strategy to see its funding impacted significantly. **(Medium)**

CTA/managed futures:

1. **Asset (market) liquidity** – The global futures and foreign exchange markets that most CTA and managed futures managers trade in are among the largest and most liquid markets in the world. The higher the volume of a futures contract traded, the easier it is to buy and sell markets with narrow bid/offer spreads, creating less slippage (losses due to illiquidity and problems that arise during the execution of trades). **(High)**
2. **Strategy liquidity** – CTA and managed futures probably represent the most liquid type of investments among the available categories. The strategy contains a wide array of trading strategies that exploit market inefficiencies in a systematic way via a set of quantitative models over different time frames. The strategies rebalance daily or even more frequently and do not benefit from an illiquidity premium. CTA and managed futures funds can easily exit positions, with minimal slippage, usually in a matter of minutes. **(High)**
3. **Investor (fund terms) liquidity** – CTA and managed futures, along with macro strategies, offer the most frequent redemptions, owing to the inherent liquidity of their trading strategies. Most hedge funds deploying this strategy offer monthly or more frequent redemptions to investors. These funds also have the shortest lock-up periods. CTAs have an average lock-up period of just under two months. **(High)**
4. **Funding liquidity** – For a fund investment in CTA or managed futures, the non-margin cash is invested in highly liquid cash instruments (T-bills or similar) which even in a stress event would be enough to meet margin calls. Using managed accounts allows for the investor to work with different levels of leverage. This efficiency of cash is made possible by the low margin requirements of futures and foreign exchange. The amount of leverage applied depends on the manager's capital utilisation, the liquidity of the securities traded in the portfolio, expected performance volatility and expected maximum drawdowns. Managers actively monitor the ex-ante and ex-post volatility of each managed account and adjust the funding level when gearing deviates from the target. Further, the underlying managers are generally restricted in terms of margin/capital usage to effectively eliminate the probability that there could be a margin call which could not be met without liquidating positions. CTA accounts are levered and in most cases, unencumbered cash levels are at least 60%. **(High)**

Global macro strategy:

1. **Asset (market) liquidity** – Typically, managers that trade in global macro do so with futures and foreign exchange markets, which are among the largest and most liquid markets in the world. In contrast to CTA managers, diversified global macro managers will also trade comparatively less liquid markets such as equities and credit, both in developed markets as well as in emerging markets, which marginally affects overall liquidity. **(High/Medium)**
2. **Strategy liquidity** – Global macro managers trade liquid markets with an intermediate time horizon and as such they tend to have a high level of liquidity. **(High)**
3. **Investor (fund terms) liquidity** – We have been seeing a shift in investor terms for macro funds. For many years, macro funds had a high level of investor liquidity (this is supported by the gate and redemption information listed in section 2 of this paper). However, amidst challenging performance for this strategy class, and in response to investors seeking more trading ideas in private markets (to allow managers to avail of a greater variety of trading ideas both within liquid and illiquid markets), hedge funds have reduced the investor liquidity terms across some global macro funds. Terms have moved from more liquid monthly and quarterly to quarterly with fund/investor level gates. Consequently, a more certain asset base enables managers to accept longer-term trade ideas that may be associated with higher volatility. Further, a more stable asset base is appealing to potential portfolio managers when they are trying to decide which firm to join. **(High/Medium)**
4. **Funding liquidity** - For a fund invested in global macro strategies, any non-margin cash is invested in highly liquid cash instruments (T-bills or similar) which even in a stress event would be enough to meet margin calls. Using managed accounts allows the investor to work with different levels of leverage. This efficiency of cash is made possible by the low margin requirements of future and foreign exchanges. The amount of leverage applied depends on the manager’s capital utilisation, liquidity of the securities traded in the portfolio, expected performance volatility and expected maximum drawdowns. Investors who actively monitor the ex-ante and ex-post volatility of each managed account can adjust the funding level when gearing deviates from their target. Further, the underlying managers in the investment portfolio are generally restricted in terms of their margin/capital usage to effectively eliminate the probability that there could be a margin call which could not be met without liquidating positions. **(High)**

Relative value arbitrage:

(a) Convertible Arbitrage:

1. **Asset (market) liquidity** - Liquidity is a frequent concern in the convertible bond market—the financial instrument frequently used in this strategy. Many smaller bond issues tend to become less liquid once the initial flurry of post-issue trading has receded. As a result, traders should have limits on the ownership of positions related to one issuer or even a given sector. Also, funds should have limits on the size of their positions relative to the total size of the issue. **(Low)**
2. **Strategy liquidity** - Convertible bond arbitrageurs are exposed to liquidity risks, such as equity short squeezes, widening bid-ask of convertible bonds, and increases in the short stock borrowing rate and the prime broker borrowing rate. **(Medium)**
3. **Investor (fund terms) liquidity** - Given that convertible arbitrage revolves around investing in public markets, funds deploying this strategy offer frequent redemption terms, predominantly monthly notice redemption periods and regular redemption frequency (on average 45 days), with among the shortest investment lock-ups. **(Medium)**
4. **Funding liquidity** – The key issues in arbitrage strategies are managing liquidity and adjusting the size of positions, as perceived price discrepancies diverge further and further in volatile markets. If positions are reduced, the fund may lose profit potential. However, if positions are maintained or increased as losses mount, the firm runs the risks of being forced to liquidate when price discrepancies and losses are at their highest levels. **(Medium/Low)**

(b) Fixed Income Arbitrage:

1. **Asset (market) liquidity** - Generally, managers operate in some of the most liquid rate and currency markets. Trades placed on exchange-traded markets have much lower liquidity risks. However, fixed income positions can also be exposed to other risks, such as changes in credit spreads, changes in yield curve shapes, changes in volatility, and changes in liquidity. These as well as other shock events may result in one-sided flows or margin calls by funding providers. **(Medium/Low)**
2. **Strategy liquidity -** These strategies generally require higher leverage to generate an appealing return capturing small inefficiencies in the relationships of related securities. **(Medium)**
3. **Fund liquidity** - It is important for managers in these strategies to be able to “stay in the trade” during periods of market stress, and therefore while the underlying securities may be liquid, the strategy may have longer lockups or redemption periods to align better with the time horizon of the trade. **(Medium)**
4. **Funding liquidity** - Fixed income arbitrage is characterised by large leverage or gross exposures, and often through OTC markets hence reducing liquidity. The strategy is very dependent on being able to maintain its leverage levels during periods of market stress. **(Medium/Low)**

Distressed strategy:

1. **Asset (market) liquidity** - Distressed positions tend to be more illiquid and therefore may require longer investment holding periods. **(Medium/Low)**
2. **Strategy liquidity** - Strategy liquidity is generally low. Distressed situations require large amounts of fundamental work, and may require a lengthy legal process to extract value. **(Low)**
3. **Investor (fund terms) liquidity** – Distressed strategies are among the least liquid. Most hedge funds that deploy these strategies provide quarterly or even less frequent redemptions. Funds employing these strategies also have, on average, longer lock-up periods of 11 months. **(Low)**
4. **Funding liquidity** – Typically, distressed strategies require low or no leverage to generate their target return, so funding liquidity is high. **(High)**

Private credit:

1. **Asset (market) liquidity** – Loans tend to be illiquid in nature and therefore may require longer investment holding periods that align with the length of the loans. **(Low)**
2. **Strategy liquidity** – Strategy liquidity is generally low with credit strategies typically targeting specific positions within the capital structure, geographies or business sectors. Credit strategies may however be agnostic towards business sectors or geographies. **(Medium/low)**
3. **Investor (fund terms) liquidity** – Credit strategies are among the least liquid with majority of funds being closed ended and/or restricting redemptions. **(Low)**
4. **Funding liquidity** – Credit strategies have typically required little or no leverage to generate the target returns so funding liquidity is high. **(High)**

Emerging markets (EM):

1. **Asset (market) liquidity** - EM hedge funds typically comprise of long/short equity managers, macro and quant strategies, and credit-type funds. Emerging markets may be thinly traded and tend to exhibit significant bid-ask spreads. Liquidating a portfolio can be costly and take a significant amount of time. **(Variable)**
2. **Strategy liquidity** - The liquidity of an EM manager is highly dependent on the strategy they employ, and in which markets they transact. Macro-oriented strategies that focus primarily on interest rate and currency trading are typically the most liquid, with long-short equity strategies being less liquid; credit strategies are generally the least liquid. It is very important to have a firm understanding of what asset classes and markets a manager is trading, and who the other natural buyers and sellers of those securities may be. **(Variable)**
3. **Investor (fund terms) liquidity** - The liquidity terms of EM funds are generally moderate. Managers generally require longer notice periods (90+ days) and quarterly liquidity so they can have time to sell securities without impacting markets. **(Medium/Low)**
4. **Funding liquidity** - Funding again is determined by the underlying trading strategy. As emerging markets tend to be more volatile and less liquid than developed markets, counterparties tend to extend less financing to managers. In many strategies, shorting and access to borrowing is limited, so access to leverage is also limited. **(Low)**

Multi-strategy:

1. **Asset (market) liquidity** - The liquidity in the markets that multi-strategy managers generally transact is moderate. Typically, managers operate in developed market equities, corporate credit and liquid derivative markets. Some managers may hold assets in distressed debt, structured credit, real estate or Level III assets that are difficult to price, and there may not be a readily available secondary market. **(Medium)**
2. **Strategy liquidity** - The premise of a multi-strategy fund is that the manager can allocate capital dynamically to the most appealing source of returns and risk faster than a typical investor may. Most multi-strategy managers look to capitalise on event-driven or relative value arbitrage strategies as a core focus, with less liquid and more directional strategies comprising a smaller portion of their total risk and capital budget. Therefore, these funds tend to have moderate liquidity at the sub-strategy level, typically with a longer 'tail' of less liquid securities. **(Medium/Low)**
3. **Investor (fund terms) liquidity** - The liquidity in multi-strategy funds tends to be moderate. They tend to be capital intensive, and certainty over the balance sheet is important to access financing, as well as to acquire talent and build infrastructure. Therefore, funds typically require an initial lockup period of one to two years and have quarterly liquidity with longer notice periods. It is not uncommon for multi-strategy mangers to impose investor or fund-level gates to ensure orderly management of their assets and liabilities. **(High)**
4. **Funding liquidity** - Because funding for multi-strategy managers is typically dependent upon risk-based margin, where the aggregated portfolio is evaluated and leveraged, a fund's financing can be affected by sharp changes in the volatilities and correlations of different assets. It is important to monitor unencumbered cash, the term of the financing, and the 'haircutting' methodology used by banks to evaluate how margin is extended for multi-strategy managers. **(Medium)**

Conclusion

Understanding liquidity is crucial for making sense of the financial industry as a whole, but in many ways it is even more important when looking at the hedge fund industry. The ways hedge funds manage liquidity capture the essence of the industry. Hedge funds are active managers, designed to have the flexibility to make the most of new, and sometimes even unforeseen, market phenomena.

Liquidity is crucial to this flexibility. Redemption periods and notices can be tailored by a manager to suit the investments they make, ensuring that investors get the best possible returns, while also having as much liquidity as possible. Gates allow managers and their investors to weather financial storms, and to seize the opportunities that inevitably follow. The sheer diversity of liquidity arrangements available to investors in the hedge fund sector is indicative of the wide variety of strategies hedge fund managers employ to protect and grow the capital of their investors.

As the hedge fund sector has matured, and as more and more institutional investors have allocated to hedge funds, liquidity has changed. Investors now have more say than ever before, and in some cases can even negotiate their own unique arrangements with their managers. Investors, meanwhile, are increasingly realising that managers offering higher levels of liquidity should, all else being equal, be rewarded in the fees they gather.

At the end of the day, liquidity is about the efficient management of capital: releasing it when it can be released, and holding it when doing so will lead to greater returns. It is also, however, about the alignment of interests between investors and managers. Investors should be confident that their managers are offering them the most liquidity possible without jeopardising their ability to protect and grow that capital. Managers, meanwhile, must account for the liquidity needs of their investors, while at the same time ensuring that their funds' liquidity arrangements are tailored to their strategies.

As in every investment arrangement, communication between investors and managers is key when it comes to liquidity. Managers should clearly explain their liquidity arrangements to investors. Investors, meanwhile, need to know which questions to ask. We hope this guide will help them do so.

About AIMA

The Alternative Investment Management Association (AIMA) is the global representative of the alternative investment industry, with more than 1,900 corporate members in over 60 countries. AIMA's fund manager members collectively manage more than $2 trillion in assets. AIMA draws upon the expertise and diversity of its membership to provide leadership in industry initiatives such as advocacy, policy and regulatory engagement, educational programmes and sound practice guides. AIMA works to raise media and public awareness of the value of the industry. AIMA set up the Alternative Credit Council (ACC) to help firms focused in the private credit and direct lending space. The ACC currently represents over 100 members that manage $350 billion of private credit assets globally. AIMA is committed to developing skills and education standards and is a co-founder of the Chartered Alternative Investment Analyst designation (CAIA)—the first and only specialised educational standard for alternative investment specialists. AIMA is governed by its Council (Board of Directors).

For further information, please visit AIMA's website, **www.aima.org**.

About CAIA

The Chartered Alternative Investment Analyst (CAIA) Association, founded in 2002, is the world leader in alternative investment education. The CAIA Association is best known for the CAIA Charter. Earning the CAIA Charter is the gateway to becoming a member of the CAIA Association, a network of almost 10,000 investment leaders located in 90+ countries. CAIA also offers the Fundamentals of Alternative Investments Certificate Program®, an online course that provides an introduction to alternative investing. CAIA is considered a leading authority on industry trends and developments worldwide.

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