XAI KNOWLEDGE BANK

ACCESSING INSTITUTIONAL ALTERNATIVES:

Using Liquidity Premiums to Drive Better Portfolio Outcomes

Invest Like the Pros

XA INVESTMENTS

Limited Access: Few choices are available to the individual investor who is interested in alternative investments

Today individual investing is largely limited to liquid, public asset classes, namely equities and fixed income. Although individuals may choose whether to invest directly in stocks or bonds, or access them via a mutual fund or ETF, the overall investment opportunity is limited to these asset classes alone.

At the same time, an individual's source of wealth may come from very different assets, such as land, fine art or owning a business. These sources of wealth tend to be highly illiquid and are often viewed as personal assets, not investments.

Institutional investors—sovereign wealth funds, foundations, endowments and large pension plans—have a different and broader view when it comes to investing. They also have access to a larger opportunity set beyond publicly listed liquid assets and often invest in private equity, private credit, real assets, real estate, timberland, illiquid hedge funds and infrastructure, among others.

What many of these alternative investments have in common is the ability to offer compelling risk-adjusted returns and minimal, if any, correlation to stocks or bonds, thereby improving portfolio diversification. Alternative investments are on a spectrum of liquidity; some are highly liquid (e.g., futures), but most are not (e.g., private equity), and are therefore in sharp contrast to traditional stocks and bonds.

Historically, individuals have had limited access to the full range of alternative investment strategies, especially through vehicles like mutual funds and ETFs. These types of fund structures are legally required to offer liquidity — generally, all portfolio assets must be salable within three days. Given this sort of restriction, mutual funds and ETFs can only offer a small number of institutional alternatives.

At a time of low expected returns, low current yields and economic uncertainty, individual investors are demanding new options. The good news is that recent advances in product design have finally enabled individuals to access true alternatives alongside large institutions.

This new "packaging" is designed to preserve the integrity of the underlying strategy in contrast to the watered-down liquid versions available in mutual funds. By deploying these institutional-caliber investments, individuals have the potential for achieving better diversification, higher yields, reduced volatility, new sources of income and higher expected returns in their portfolios. Overall, not being limited to investments that fit inside a mutual fund or ETF results in an improved risk/return profile.

This paper discusses liquidity, returns and portfolio design and how these investment topics are both viewed and implemented by sovereign wealth funds, pensions, endowments and foundations. At the core is new thinking about liquidity and how investors can use illiquid alternative investments to their advantage.

Not All Alternatives Are Accessible

Degree of Illiquidity

Category	Investment Type	Access Point	Liquidity
Traditional	Cash		More Liquid
Traditional	U.S. Treasuries	Mutual Fund	
Traditional	Fixed Income	Mutual Fund	
Traditional	Equities	Mutual Fund	
Traditional	REITs	Mutual Fund	
Traditional	High Yield	Mutual Fund	
Alternative	Managed Futures	Mutual Fund	
Alternative	Hedge Funds	Varies	
Alternative	Private Debt	BDC	
Alternative	Direct Real Estate	REIT	
Alternative	Structured Credit	CEF	
Alternative	Stressed Credit	Private Fund	
Alternative	Distressed Credit	Private Fund	
Alternative	Impact Investments	Private Fund	
Alternative	Venture Debt	Private Fund	
Alternative	Private Equity	Private Fund	
Alternative	Infrastructure	Private Fund	
Alternative	Timberland	Private Fund	
Alternative	Venture Equity	Private Fund	Less Liquid

Source: A. Ilmanen, "Expected Returns. An Investors' Guide to Harvesting Market Rewards," Wiley and Sons, 2011, and XA Investments.

Liquidity Defined

"There are two main sources of repeatable trading profits: compensation for liquidity risks and information advantages."[1]

Lasse Pedersen, finance professor at Copenhagen Business School and NYU Stern School of Business.

WHAT IS LIQUIDITY?

Investments run along a continuum when it comes to their liquidity. Cash and U.S. Treasuries are at one end and are often synonymous with liquidity in investors' minds; timberland and venture capital, each of which requires years of patient capital, are at the other end. Somewhere in the middle fall investment grade bonds and high yield bonds. In general, publicly traded investments with exchange-traded intra-day liquidity, such as equities, are extremely liquid compared with their private counterparts, such as private equity. And, not only are there liquidity differences across these broad asset classes, but there are differences within them: some stocks are more liquid than others.

Liquidity is a multidimensional concept. In a market context, it can be thought of as the ease of trading a security, but it actually has three dimensions: the cost of a trade (bid-ask spread), the quantity (price impact of a trade) and speed (how quickly you can make a trade.) Moreover, liquidity varies over time. What is liquid today is not necessarily liquid tomorrow. This "liquidity risk" is seen most clearly during a crisis, such as the 2008 credit crisis when seemingly liquid asset classes froze overnight.

This time-varying nature of liquidity is significant, particularly when it comes to understanding the true risks posed by liquid investments such as alternative mutual funds. Liquid alternative mutual funds may actually pose enormous liquidity risk by becoming illiquid in a crisis. Even though they are liquid today, their liquidity may not be there when you need it.

These different aspects of liquidity may seem academic, but they have real consequences when it comes to both risks and returns. Individual investors have been conditioned to stay fully liquid and avoid illiquidity in their portfolio. They have fewer choices because mutual funds and ETFs, typical investment vehicles of the individual, are required to maintain liquid portfolios, severely limiting investors' ability to access less liquid or illiquid investments.

LIQUIDITY AND RETURNS

Less liquid assets offer higher expected returns. Numerous empirical studies and deeper theoretical models have supported this relationship. See the charts on the following page for examples. Despite the theoretical complexity, the intuition is very simple: investors need to be compensated for locking up their money in a relatively illiquid investment. This "trade-off," excess return in exchange for less liquidity, is one which alternative investment managers capitalize upon in their drive to earn higher expected returns.

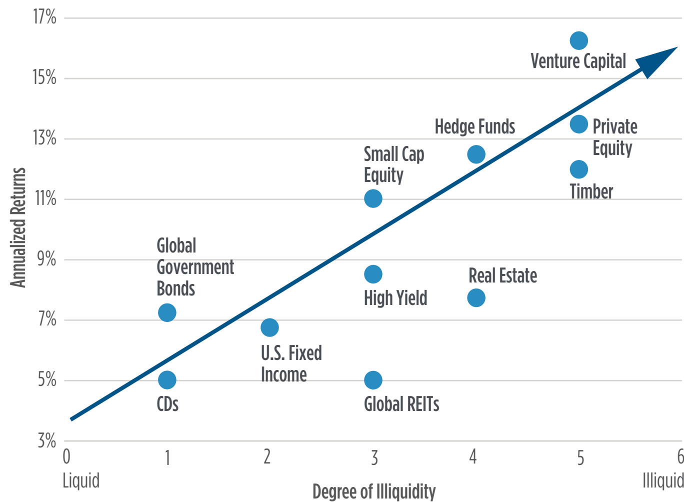
Less liquid assets are costlier to trade and often take longer to trade. Therefore, these securities tend to be comparatively less expensive and tend to earn higher average gross returns. These returns are known as "illiquidity premiums," or, somewhat confusingly, "liquidity premiums." A liquidity premium is the premium demanded by investors because the security is not easily converted into cash.

It is difficult to put a number on the liquidity premium because it varies over time, and for some asset classes it is dependent upon manager skill. Harvard Management Company, which oversees Harvard's endowment, has attempted to quantify it. Jane Mendillo, then-current CEO, said in 2014: "We should be getting an incremental return for that illiquidity—and we call that our illiquidity premium—of at least 300 basis points annually on average over what we are expecting in publicly traded stocks."[2]

Capture Liquidity Premiums by Expanding the Toolkit

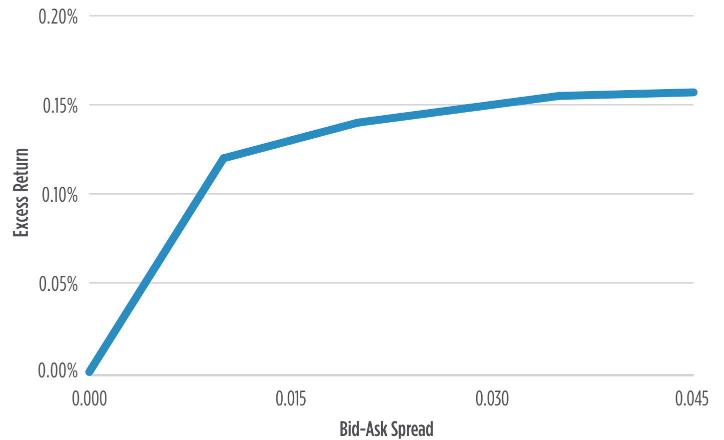
Liquidity premiums are characteristic of a number of asset classes along the liquidity spectrum. Essentially, less liquid asset classes offer higher expected returns. A landmark study from researcher Antti Ilmanen, a former Finnish Central Banker and advisor to sovereign wealth funds, found a relationship between the overall degree of illiquidity of an asset class and investment returns.[3] According to Ilmanen's study, the less liquid an asset class, such as private equity or timber, the higher the returns. The graph below illustrates this relationship:

Across asset classes: Investment returns typically increase with the degree of illiquidity



Source: A. Ilmanen, "Expected Returns," 2011. Average asset returns 1990–2009 on subjective illiquidity estimates. Bloomberg, MSCI, Barra, Ken French's website, Citigroup, Barclays Capital, JP Morgan, Bank of America Merrill Lynch, S&P GSCI, MIT-CRE, FTSE, Global Property Research, UBS, NCREIF, Hedge Fund Research, Cambridge Associates.

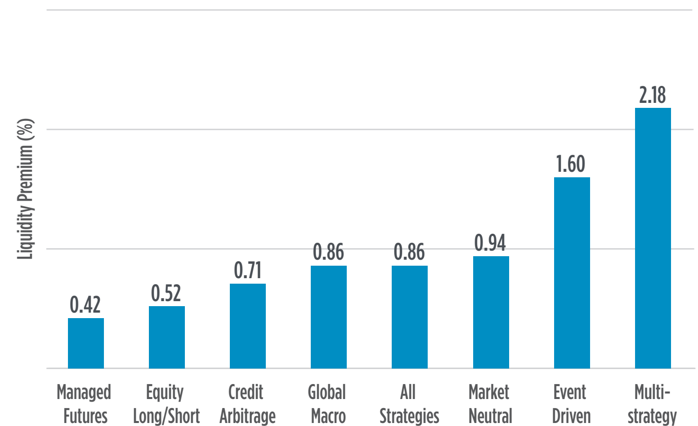
Inside an asset class: Liquidity premiums vary within equities



Source: Y. Amihud and H. Mendelson, "Asset Pricing and the Bid-Ask Spread," 1986, *Journal of Financial Economics*, Vol. 17, No. 2 (December): 223–249.

Monthly returns provided by the Center for Research in Security Prices and relative bid-ask spreads collected for NYSE stocks from *Fitch's Stock Quotations on the NYSE*. The relationship between stocks returns and spread was tested over the period of 1961–1980.

Across hedge funds: Less liquid hedge fund strategies offer a return advantage over liquid hedge fund strategies



Source: A. Ilmanen, "Expected Returns on Major Asset Classes," CFA Institute Research Foundation, 2012.

ILLIQUIDITY AND THE INSTITUTIONAL APPROACH TO INVESTING

"Viewed in a time frame more appropriate for a long-term investor, well-chosen investments in illiquid assets perform better than otherwise comparable liquid assets."

Yale Endowment Annual Report, 2010.

Institutional investors such as sovereign wealth funds, foundations, endowments and large pension plans recognize the opportunity for higher expected returns offered by illiquid investments and therefore have deployed capital aggressively. Illiquidity lies at the heart of institutional investing. As long as an institution has sufficient liquidity to fund short-term cash needs, harvesting the liquidity premium to meet long-term goals makes sense.

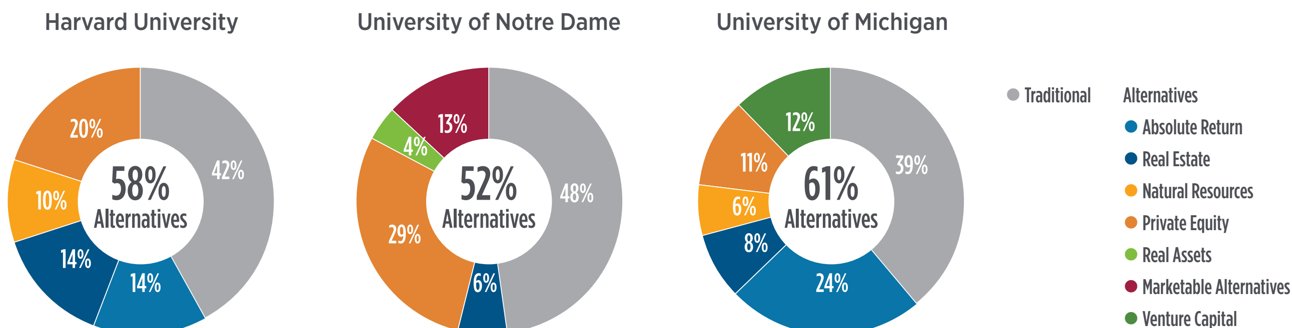
For instance, the New Zealand Super Fund, one of the best performing sovereign wealth funds in the world (with an annualized performance of 15% over a five-year period ending November 2016[4])—and also one of the most transparent—has an investment philosophy that stipulates the Super Fund add value by investing in illiquid assets. In New Zealand's case, these illiquid investments, which comprised approximately one fifth of the portfolio, included infrastructure, private equity and direct investments in dairy farms and timber.

Yale University's endowment portfolio invests heavily in illiquid investments. As of 2010, the Yale portfolio was 57.8% in illiquid assets, 21.0% in quasi-liquid assets and 21.3% in liquid investments. The largest U.S. endowments, including Yale, Harvard University, University of Notre Dame and the University of Michigan, have a majority of their investments in less liquid and illiquid alternatives, as shown in the figure below.[5]

The Yale endowment's 2010 annual report explains why, arguing that "substantial allocations to alternative assets offers a level of diversification unavailable to investors in traditional assets, allowing the creation of portfolios with superior risk and return characteristics."

The financial crisis of 2008 exposed one risk of heavily illiquid portfolios: some endowments underestimated their cash flow requirements and were forced to sell assets. Today, with more careful asset-liability management and an acknowledgment of liquidity needs, institutional investors remain committed to the use of illiquid alternatives. For example, Harvard Management Company keeps only 5% of the university's endowment portfolio in assets that can be liquidated within 30 days.

Alternative investments dominate portfolio allocations of top U.S. university endowments



Source: University filings for FY2016. Allocations reflect available data and in some cases include non-endowment assets.

Liquidity and the Individual Approach to Investing

This institutional approach to investing, which consists of illiquid portfolios heavily tilted toward alternatives, is a remote concept for most individual investors and their advisors. After all, individuals do not have the multi-generational or infinite time horizons of large institutions, nor do they have access to the same investment toolkit.

But, there may be more overlap than believed. Individuals have long time horizons when it comes to saving for retirement, leaving a bequest to the next generation or charity or saving for college. Illiquid investing is really not new to them. They may already own real estate, artwork or a business—but none of these are considered part of their investment portfolio. Instead, their investment portfolios are dominated by publicly listed equity securities that fit inside an ETF or a mutual fund.

If individuals and their advisors could access the tools currently used by institutional investors, they could build more diversified portfolios with higher expected return and lower volatility. These alternative solutions, however, are not easily accessible to individual investors.

By not using institutional-type tools to harvest the liquidity risk premium found in less liquid assets, individuals and advisors may be leaving money on the table.

THE LIQUIDITY MISMATCH IN CLIENT PORTFOLIOS: INVESTING FOR RETIREMENT

Daily liquidity is important if individuals are day traders or need to quickly cash in their entire investment portfolio. Most individuals, however, do not need 100% liquidity in many areas of their portfolio. Currently, there is a liquidity mismatch between conventional portfolio construction for individuals and their goals for the future. Individuals who are saving for retirement or college should have investment portfolios that reflect these long-term interests. Unfortunately, these investors often sacrifice additional returns in exchange for full and immediate liquidity.

The liquidity mismatch is found anywhere in a portfolio that is 100% liquid but earmarked for long-term objectives; this is most stark when it comes to retirement savings. Take 401(k)s. These retirement accounts are comparatively illiquid because individuals face a penalty for early withdrawal, yet the actual investments housed inside them can be 100% liquid ETFs and mutual funds.

A more sensible approach involves aligning long-term retirement goals with a thoughtful allocation to illiquid investments and their corresponding return opportunities.

The Truth about Liquid Alts

"It's a mongrel category; just about anything goes, which means they could perform counter-intuitively. The name is also very misleading because not all liquid alternatives are liquid."

– MIT Professor Andrew Lo[6]

When it comes to liquid alternatives, you can't have your cake and eat it too. Liquid alternatives promise the performance of true alternatives, coupled with the liquidity of traditional investments. Investors may find that some liquid alternatives deliver neither.

True alternative investments, just like traditional investments, run the spectrum when it comes to liquidity. Only a small percentage, such as a subset of hedge fund strategies like long/short equity, are inherently liquid. The rest, such as private equity or direct investment in real assets or infrastructure, are illiquid. Liquid alternatives try to get around this constraint by delivering a version of these products in the liquid form of an ETF or mutual fund. But there are risks to this approach, and investors are placed at a disadvantage.

At a most basic level, liquid alternatives demonstrate decreased diversification benefits and increased volatility compared to their true alternative counterpart.

For instance, direct private investments in real estate have only a 20% correlation with the market beta, compared to 60% for publicly listed real estate investments. Private infrastructure investments have 0% correlation with market beta compared to 80% for publicly listed infrastructure investments. The performance pattern of true alternatives is less volatile than liquid alternatives, which are buffeted by market movements.

This discussion of missed opportunities is largely theoretical because, in terms of harvesting the liquidity premium through alternative investments, individuals are not armed with the proper investment tools.

Instead, individuals have settled for a less pure version of the original, namely "liquid alternatives." These liquid alternatives tend to exhibit higher volatility and higher correlation to equities than their undiluted and institutional-caliber counterparts. Historically, these funds have been deceptively appealing, even though they exhibit substantial risks of which investors should be aware.

Additionally, liquid alternatives are not inherently safer than institutional alternatives. Seemingly very liquid strategies offered little protection from such liquidity crises as the 1998 Russian financial crisis, the quant meltdown of early 2007 or the larger financial crisis of 2007–2009. Liquid alternatives suffered huge price declines because, when "everyone makes a run for the exit," liquid assets are sold first.

It is even more disconcerting that some of these liquid alternatives became illiquid during the crisis. Managers were forced to "gate" and bar redemptions.

The risks inherent in liquid alternatives stem from the incongruent nature of a liquid structure and potentially illiquid underlying holdings. Under normal market conditions, the promise of liquidity is not a problem. In a crisis, however, the underlying assets may seize up, causing a liquid alternative to become highly illiquid.

Again, not all liquid alternatives are alike, and some remain true to their promise by maintaining liquidity even in a crisis. Investors should carefully weigh the diversification benefits, expected returns and volatility of a liquid alternative relative to its illiquid counterpart. More importantly, investors should know that they may not have access to these assets during a liquidity crisis, and it is entirely possible that a fund's price will fluctuate as well.

The Opportunity:

Implications for individual investors and their advisors

For the first time, advances in product design have made the complete universe of true alternative investments available to individual investors. Individuals can align themselves with institutions by accessing these strategies and managers and harvesting the liquidity premium. Such an approach is not without risks, however, and may require new portfolio modeling techniques. Advisors need to carefully consider the cash flow needs and overall liquidity requirements of their clients, but they also need to consider the advantages of these strategies, including the potential for higher yields, improved diversification, reduced volatility and higher expected returns.

There are several next steps investors and advisors can take:

- Rethink traditional allocations for long-term investment portfolios. Consider adding less liquid investments to enhance returns and reduce risk.
- Instead of settling for liquid alternative mutual funds, financial advisors should seek better alternatives to drive stronger portfolio outcomes.
- Identify pioneering firms that are devising better ways to bring sophisticated institutional alternatives to advisors and their clients. Innovations in product design are fostering an improved investor experience.

For more information about institutional-caliber alternatives and new ways to access them, please visit xainvestments.com or call 1.888.903.3358.

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