Money is gushing through the global financial system thanks to years of central bank largesse. Yet trading liquidity has been on a downward slope. It is getting harder and more expensive to transact in size.

What does this mean for investing and portfolio construction, and how should investors weigh the risks and opportunities? A group of 80 BlackRock investment professionals debated the topic at a recent gathering in London. Our conclusions:

- Market liquidity has declined since the 2008 financial crisis. The situation is challenging in U.S. corporate bonds—and more so in euro and sterling equivalents. Volumes are concentrated in new issues and trading sizes are declining—even as these markets have doubled in size in the past seven years.

- Traditional liquidity providers such as dealers and banks have pulled in their horns due to risk aversion and a post-crisis gusher of regulations that make this business less attractive. And rising rates (a likely scenario) could cool investors’ infatuation with corporate bonds and hit the market’s lifeblood: new issuance.

- There are signs of improvement or at least stabilization. A permanent liquidity fix, however, has to include a mix of bond standardization, new venues such as electronic and matching platforms, and trading practices that go beyond the dealer-to-dealer and dealer-to-client models.

- Many bond prices currently are at- or near record highs. What happens when central banks change gears and hike rates? Poor corporate bond market liquidity could (at least temporarily) worsen any market downturn, especially given stretched valuations. Prices could gap down in case of a wave of reallocations out of corporate bonds—although the (super-sized) appetite for quality yield from insurance companies and other institutions is a stabilizer.

- Investors prefer liquidity—and are prepared to pay a premium for liquid assets. The flip side: Less liquid assets tend to deliver superior returns in the long run, according to academic and our own research. The more illiquid the asset, the greater the expected rate of return must be.

- There are many subtleties to this. In equity markets, other return factors such as value (versus growth) and momentum can overshadow liquidity or mitigate its effect. And illiquidity strategies require patience: Liquid investment grade bonds have been kings since the financial crisis.

- A long horizon and risk management are key in any strategy aimed at capturing the return premium from holding less liquid assets. We propose a framework for scoring illiquid assets to guide a decision on whether to include them in a portfolio.

What Is Inside

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WANTED: BOND LIQUIDITY

Global liquidity (the overall looseness of financial conditions) has been plentiful thanks to years of monetary easing by central banks. Yet operational, or market liquidity, has gone in the opposite direction. This type of liquidity is all about the ease and cost of trading: How readily can you buy or sell an asset without moving the price—and how much will it cost (in bid–offer spread)?

The broad perception of market liquidity used to be much like that of insurance: You don’t need it—until you do. It has become clear you actually need a level of liquidity all the time. The reason: It is becoming a scarce commodity.

Liquidity has declined since the financial crisis. Fixed income markets, in particular, have been hit hard—even as they have grown in size due to ballooning debt issuance. This is playing out in U.S. debt markets—which are a good indicator for global liquidity.

Outstanding U.S. corporate debt jumped 77% to $9.8 trillion in the seven years ending in 2013. See the table below. Companies have been refinancing and issuing new debt to buy back shares or pay for takeovers.

Issuers are taking advantage of record-low interest rates (get them while you can!) and ravenous investor appetite for yield. Trading volumes have not kept up. Just half of corporate bonds (by value) were traded in 2013. See the chart on the bottom left.

The decline has been across the board, with areas such as agency mortgages hit harder than others. U.S. Treasuries are still very liquid, annually turning over 12 times the volume of outstanding debt—although pre-crisis volumes were almost 32 times.

The main reason for falling liquidity? Traditional liquidity providers such as broker-dealers and banks have become more risk averse since the financial crisis. New rules on capital requirements, proprietary trading and risk assessment are hastening this retreat, as detailed in Setting New Standards of May 2013. The number of U.S. primary dealers has declined to 22 from 46 in 1988.

The result: Trading has become fragmented. The average daily number of trades in the U.S. corporate bond market has surged, but the size of these trades has declined to an average of $536,000 per transaction, down from a high of $948,000 in 2007. See the chart above. Those wanting to transact in size often need to slice and dice orders.

Market participants are starting to adjust to the new reality. Investors are exploring new avenues for liquidity and different ways to trade. Smaller trades increasingly go electronic. Electronic trading in U.S. investment grade bonds has more than doubled since 2009, according to trading platform MarketAxess. Even so, this amounted to less than 14% of total turnover by value at the end of 2013.

MORE BONDS, LESS LIQUIDITY
U.S. Fixed Income Liquidity and Market Size, 2006 vs. 2013

<table>
<thead>
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<th></th>
<th>Outstanding ($ Trillion)</th>
<th>Trading Ratio</th>
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<td></td>
<td>2006</td>
<td>2013</td>
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<td>U.S. Treasuries</td>
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Sources: BlackRock Investment Institute and SIFMA, April 2014.
Notes: The trading ratio is the annual $ trading volume divided by the total debt outstanding. Bubble sizes reflect the amount of total debt outstanding.

BIGGER YET SMALLER
U.S. Corporate Bond Trades, 2005–2013

Sources: TRACE and BlackRock Investment Institute, April 2014.
Note: Transactions shown are for U.S. investment grade and high yield corporate bonds.
THERE IS ALWAYS HOPE

It is not all bad news on the liquidity front. Whereas stocks may appear more liquid than they are, corporate bonds are not as illiquid as you might think. Market depth appears to be increasing—a tad. We submit three pieces of evidence:

Exhibit 1: The share of the top quintile of most actively traded high yield bonds has fallen to 89% of total turnover by value, down from 98% just before the financial crisis. See the chart below. Concentration in investment grade bonds has crept up amid a rash of monster offerings (think Apple and Verizon): The top quintile now accounts for 92% of turnover.

A MATTER OF CONCENTRATION
Share of Top 20% Most Traded U.S. Corporate Bonds

The situation is similar for U.S. investment grade bonds. Bid-ask spreads have tightened to 2007 levels of less than three basis points (although they are still higher as a percentage of price), according to MarketAxess. A notable exception: emerging market debt. Here we are back at 2009 best-to-cover levels of almost $1, as the chart shows. Liquidity started to dry up in May 2013, when Federal Reserve Chairman Ben Bernanke signaled a “tapering” in the Fed’s bond buying program.

Exhibit 2: Concentration in U.S. corporate bond trading is less pronounced than in equities, according to JPMorgan. The 500 top-traded stocks made up 79% of total turnover by value in 2013, compared with 60% for the 500 top-traded corporate bonds. See the chart on the top right. This means liquidity is spread more evenly in corporate bonds—relatively speaking. Keep in mind daily turnover in the top 3,000 U.S. corporate bonds amounted to just 0.37% of their total debt outstanding, about half of the equivalent for equities.

Exhibit 3: U.S. and European high yield bonds these days are easier to trade than during the boom years before the crisis. Best-to-cover levels, which measure the gap between the traded bond price and the next best offer, were below $0.25 for both this April, according to MarketAxess. See the chart on the bottom right. This compares with a high of 10 times that amount in European high yield during the crisis.
PHANTOM EQUITY LIQUIDITY

More electronic trading on exchange-like venues with multiple trading protocols would be a step forward. Take-up has been slow compared with the equity market partly due to a lack of standardization.

Electronic trading alone will not reliquify markets. Consider the electronic equity experience: The average trade size (in number of shares) is down around 75% from the early 2000s. Turnover has been in a steady decline since the financial crisis (punctuated by a couple of spikes including the U.S. debt ceiling crisis of 2011). Just 0.7% of the total outstanding stock of S&P 500 companies traded on an average day so far this year. See the right chart above.

These numbers mask a bigger problem: It has become much tougher to transact in size. Block trades (trades of 10,000 shares or more) of New York Stock Exchange (NYSE) listed shares make up less than 8% of total volume today, compared with more than half in the mid-1990s. The long slide started with decimalization in 2001. See the left chart above. The share has stabilized—but has been stuck below 10% since 2006.

Narrow bid-offer spreads of less than a penny often are available only for very small lots. We detailed this phantom liquidity in Got Liquidity? of September 2012.

Drivers of these changes include fragmentation and the advent of high-frequency trading. Our solutions: Guarantee equal access to information, simplify order types and upgrade electronic trading safeguards, as proposed in U.S. Equity Market Structure: An Investor Perspective of April 2014.

LIVING WITH LOW LIQUIDITY

Low liquidity poses challenges to asset managers. It has become important to find new sources of liquidity to complement (not replace) traditional providers. How is BlackRock adapting?

- We expanded our list of trading partners to include smaller, emerging brokers.
- We are working with bond platforms MarketAxess and Tradeweb to increase liquidity for Aladdin® clients.
- We are crossing trades internally where possible.
- We have pioneered the “originate to manage” model to source assets in partnership with dealers and issuers.
- We have proposed standardization for corporate bonds, as detailed in Setting New Standards.

“We’re seeing liquidity shrink. Any credit investment that you buy, you should like it well enough to hold it until maturity. That has to be the first criterion. Don’t expect to have the liquidity to trade in and out of it.”

— Dan Chamby
Portfolio Manager, BlackRock’s Global Allocation Team
SOMETHING NEW IN BONDS

New issuance is the lifeblood of corporate bond markets—especially for U.S. investment grade bonds. The hunt for yield has pushed down new issue concessions (the yield “sweetener” issuers add to entice investors to buy their new paper) for U.S. investment grade bonds to a mere six basis points, JPMorgan data show.

Trading volumes were 3.3 times annual issuance in 2013, versus seven times in 2002, Securities Industry and Financial Markets Association (SIFMA) data show. And new issues account for a disproportionate share of trading. Trading volume peaks in the first week after issuance at an average annualized volume of more than twice the bond’s total dollar amount, MarketAxess 2013 data show. Within 200 days, annualized volume slumps to around half the bond’s total dollar amount. This is better than it was a year ago (when it took about 100 days for the trading to drop to an annualized 50%)—but it only goes down from there.

The sellers’ market is unlikely to last once interest rates start heading higher. Reduced appetite for debt and declining issuance would likely mean an end to “easy alpha”—loading up on new issues for an immediate price gain in the secondary market.

LIQUIDITY CRUNCH?

Years of monetary easing by central banks have transformed fixed income markets. The prolonged period of low real rates has sparked a hunt for yield, encouraged risk taking and depressed volatility, as discussed in A Disappearing Act of May 2014. Many credit instruments currently trade at or near record-low spread levels versus U.S. Treasuries.

What happens when loose financial conditions around the globe tighten, and policy rates move up? Poor corporate bond liquidity could at least temporarily worsen any market downturn caused by rising rates. Whenever valuations appear stretched, the risks of a pullback rise.

Yet the possibility of a real liquidity crunch in such a scenario is perhaps not as high as it appears. The reason? A steady bid for yield from institutional investors who are ready to swoop in and buy on any yield spikes.

This has proved to be a market stabilizer. Witness the global bond market comeback after initial declines triggered by Bernanke’s tapering speech in May 2013—even as the Fed actually started to reduce its monthly bond buying.

It never hurts, however, to contemplate less rosy scenarios and prepare accordingly. In our view, two areas in the credit space could potentially test market liquidity:

- **Hedge funds**: When they have run into trouble before, these funds often have been at the forefront of market crises (think Long-Term Capital Management in 1998 and two obscure Bear Stearns funds in 2007). Funds dedicated to corporate credit have about $135 billion under management, compared with $74 billion in 2007, according to Hedge Fund Research. Not big numbers, yet leverage can be the sting.

- **Mutual funds**: These liquid vehicles are holding an increasing amount of credit instruments. The value of corporate bonds held by U.S. mutual funds has more than doubled since 2007, reaching roughly $1.7 trillion, Investment Company Institute (ICI) data show. See the chart above. This amounts to 17.6% of outstanding U.S. corporate debt, compared with 12.8% in 2007.

Liquidity has not kept pace. Total outstanding corporate debt more than doubled in the decade ending 2013, whereas trading volumes are unchanged. Is this a problem? Corporate bonds are spread over many funds, and redemptions typically are a slow burn. That said, a sudden wave of reallocations has the potential to cause hiccups—although long-term institutional buyers may use it as a buying opportunity.

“It Investors are accessing the new issue market as a result of a desire for large blocks that they can’t get in the secondary market. It’s easy to enter, but much harder to exit. The drop in liquidity usually happens within a month or so.”

— Amer Bisat

Portfolio Manager, BlackRock’s Americas Fixed Income Team
RANKING LIQUIDITY

U.S. corporate bond markets can absorb around $250 million a day of selling (1.4% of daily volume) without pushing prices lower, the New York Federal Reserve estimated in a 2013 study. (By the way, there is nothing wrong with orderly price declines: higher supply = lower prices.)

Annual redemptions of U.S. corporate bond mutual funds have swung between 28% and 44% of total assets since 2000. In other words, these funds are accustomed to high flows and have been able to deal with them. Yet the funds’ increasing share of corporate debt and challenged liquidity in the underlying markets are a bit worrying.

What to do? The industry would benefit from detailed (and harmonized) rules that minimize “run risk,” thereby protecting all fund holders and mitigating systemic risk, as proposed in Who Owns the Assets? of May 2014. Our ideas include classifying funds according to the liquidity of their underlying assets, and tailoring fund rules (including pricing methodology and redemption features) to this liquidity ranking.

Aside from structural industry solutions, there is the stabilizing force of pension funds and insurers eager to buy and hold quality corporate debt to match their liabilities. These two groups held some $58 trillion of assets globally in 2012, PwC estimates. Aging populations mean this demand is not going away any time soon.

LIQUIDITY SOLUTIONS

If U.S. bond trading liquidity is problematic, consider European and UK investment grade bond markets:

- Large trades are even rarer as investors split up orders. Trades over $5 million make up 31% (sterling bonds) and 39% of the volume (euro bonds), down from 43% and 56%, respectively, in 2008 and well below the U.S. market’s 53% level, according to MarketAxess.

- Trading is more concentrated due to a smaller number of dealers. The top five dealers make up 50% (sterling) and 43% (euro) of the volume, compared with 33% in the U.S. market, MarketAxess data show.

- This translates into higher transaction costs, with the average bid-ask spread more than six times (sterling) or twice (euro) the U.S. average. See the chart on the top right.

A thicket of new financial regulations means the withdrawal of many banks from market making is likely to be permanent. Lower (and more fragmented) liquidity is here to stay.

The dealer withdrawal has transferred much of the liquidity risk to asset owners such as pension plans, insurers, sovereign wealth funds and mutual fund holders.

Equity, U.S. agency mortgage and credit default swap markets have already undergone transformations. There are no silver bullets to crack the liquidity challenge in corporate bond markets. It will likely be a slow grind—which could be sped up if market participants work to:

1. Standardize: A standardization of issuance practices (such as issuing similar amounts and maturities at set times as well as re-opening benchmark issues) could help create a deeper corporate bond market and bring about cheaper transaction costs. A lack of issuer incentives has so far stymied such a move, but higher rates could change this.

2. Connect: The traditional trading models of dealer-to-dealer and dealer-to-client are no longer sufficient. We advocate an "all-to-all" paradigm that includes alternative liquidity sources, such as crossing networks that electronically match large orders.

3. Modernize: We are traveling from the traditional request-for-quotation practice (buyers call a dealer for a quote on a bond) toward a centralized order book (full transparency of all bids and offers in the entire marketplace). We favor more options, which is to say our preferred destination is the world of possibilities in between these two extremes.

4. Change: Do not stick your head into the sand like an ostrich! All bond market participants, in particular issuers (who hold the keys to unlocking the log jam), need to rethink their existing practices and priorities, as explained in our “Five Questions to Consider” in Setting New Standards.

COST OF DOING BUSINESS

Average Bid-Offer Spreads on High-Grade Bonds, 2013–2014

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LIQUIDITY SCAPEGOATS

Exchange traded funds (ETFs) often are blamed for triggering or magnifying market declines. The facts are different: ETFs are open for business in times of market stress, alongside insurers, sovereign wealth funds and other asset owners with a long-term horizon. Case in point: the fixed income selloff in 2013. High yield ETFs posted record volumes while liquidity in the underlying market declined. Market participants may not have liked the prices—but they were able to transact. Two other factoids:

- ETFs focused on global corporate bonds make up just 2.6% of high yield debt and 1.3% of investment grade debt in Barclays indexes, analysis of our ETF database shows.
- ETFs affect primary markets when shares are created or redeemed—which typically accounts for a only a portion of ETF volume. The value of ETF trading on exchanges has averaged more than five times the level of fund creations and redemptions since 2007, our analysis of two large corporate bond ETFs shows. See the chart on the left. This means for every $5 of ETF activity on the secondary market, only $1 of liquidity was needed from the primary (over-the-counter) bond market.

HARVESTING EQUITY ILLIQUIDITY

Investors like liquidity—and are willing to pay for it. The reason? Illiquidity comes with costs. Less liquid stocks and bonds take longer to trade, and transaction costs (bid-ask spreads as well as a trade’s price impact) are higher. Illiquid assets, therefore, generally offer higher return potential over time to compensate for these drawbacks.

Private equity investors have long (and often successfully) played this game, buying illiquid assets at a discount and holding on to collect a premium over time (generally with some TLC involved in the meantime).

What about the opportunity to cash in on illiquidity in public markets? Our research shows buying less liquid equities can be a winning strategy (at least in theory). Consider a portfolio that buys the least liquid of the 1,500 largest U.S. equities and shorts the most liquid ones, while rebalancing monthly.

This ( unleveraged) portfolio would have generated total returns of around 150% since 1988, our analysis shows. See the top right chart on the next page.

The portfolio’s basket of liquid stocks included names that became poster children for market booms and busts. Think JDS Uniphase at the end of 2000, and Bank of America and Citigroup a decade later.

The less liquid basket at the end of 2013 contained a grab bag of stocks, from NASCAR race track owner International Speedway to regional bank Sandy Springs. Illiquidity, by the way, is no guarantee of quick returns: Sandy Springs dived 11% in the first month of this year.

Our simulation did not take into account trading costs. These costs would erode returns, particularly because less liquid securities tend to be more expensive to trade.

“\[The whole system relies on liquidity illusion: We know we can’t all buy or all sell all our assets the same day. If you don’t have a contingency plan if liquidity goes away, then you’re up the creek without a paddle.\]”

— Peter Fisher
Senior Director, BlackRock Investment Institute
The portfolio is (roughly) market neutral—and, therefore, not exposed to big swings in the overall market. It produces modest and steady returns in most years—with the occasional setback (liquid stocks led the overall market recovery in 2009 and 2010).

Combining such a strategy with leverage can be risky—a bit like picking up pennies in front of a steamroller. It tends to underperform exactly when liquidity is needed most. This is why it is crucial to have a contingency plan for dealing with a potential liquidity crunch.

Our simulation shows illiquid stocks outperform in the long run—but not necessarily only because they are illiquid. Controlling for factors such as value, size and momentum reduced the simulated performance by about 15%. See A Matter of Style of March 2014 for more on the importance of peering beneath the hood of style factors.

A 30-year study of U.S. stocks by Roger Ibbotson and other researchers in June 2013 draws similar conclusions. The impact of liquidity was comparable to the value factor and stronger than size and momentum, the study finds.

Good news for long-term investors: A simple illiquidity strategy does not need much turnover. Around 77% of stocks in the least liquid quartile of U.S. equities remain in the same quartile the following year, the Ibbotson study shows.

So what does the global evidence say? (It is perilous to extrapolate from studies that consider U.S. data only, as we detailed in Risk and Resilience of September 2013.) Less liquid stocks outperformed their liquid counterparts in 39 out of 45 markets since 1990 (after adjusting for six common factors such as size and value), a study by Yakov Amihud and others shows. The premium is twice as high in emerging markets as it is in developed markets, according to the study.

Our quantitative gurus crunched the numbers on more than 8,000 global equities (from a portfolio risk perspective, rather than trying to test a return strategy). They found liquidity was a factor in explaining annualized returns since 1996, after controlling each month for 14 other factors plus industries. Momentum and value, however, had the biggest impact on performance. (We followed the Geneva Convention for Data in both this analysis and the simulation: no torturing the data.)

“...if we simply can’t get in and out quickly, and the costs are rising, we’re forced to lengthen the investment horizon. I’m talking about this as alpha; I’m talking about long-horizon alpha ideas.”

— Richard Turnill
Chief Investment Strategist,
BlackRock’s Alpha Strategies Group
**ILLIQUID VALUE**

**Correlation of Illiquidity and Value Equity Scores, 1996–2014**

The more illiquid you go, the more your underwriting of an investment thesis has to change. You’re starting to think about your exit strategy, your trading cost and potential to exit, and the protections that you build into that.

— Jim Keenan
Head of BlackRock’s Americas Credit Team

**BONDS FOR LIFE**

Liquidity has been a factor in corporate bond valuations, at least since the financial crisis. Liquid U.S. investment grade bonds tend to trade at a premium (currently five basis points) to less liquid ones, our analysis shows. In its simplest form, this can be exploited by holding less liquid bonds until maturity.

Patience is required when holding illiquid assets. Any payoff for holding less liquid bonds could prove illusory in periods when liquidity is king. In fact, illiquidity strategies can deliver inferior returns for a long time. Spreads of liquid U.S. investment grade bonds have tightened more than those of their less liquid peers since mid-2007, according to our research. See the chart below. For top issuers, this could be another incentive to standardize and create a liquid curve.

Yet the outperformance of liquid bonds since the crisis has not been a one-way street. Liquid bonds often underperform for fleeting periods during market dislocations such as the Lehman Brothers default and the “taper talk” selloff of May 2013. The reason? When investors need to raise cash in a hurry, they tend to dump the stuff that is easiest to sell (most liquid) first. The price of less liquid assets usually catches up (and then some) later.

**POST-CRISIS LIQUIDITY DASH**


Source: BlackRock Investment Institute, May 2014. Notes: The blue line shows the percentage spread change between bonds in the Barclays U.S. Investment Grade Corporate Index that differ by one standard deviation in mean daily trading volume. A decrease in the percentage spread change indices that liquid bond spreads tightened by more than illiquid bond spreads. Data are daily.

Source: BlackRock Investment Institute, May 2014. Notes: We score over 8,000 global stocks monthly on liquidity and valuation metrics. For value, we use book value to price, sales to price and cash flow to price. For liquidity, we use the share of active trades over 3, 6 and 12 months and two metrics that measure the impact of trading on price. High scores indicate illiquidity and cheaper valuation. The blue line shows the monthly correlation between the two series.

**IN SEARCH OF EQUITY VALUE**

The correlation between illiquidity and valuations in equities waxes and wanes over time. It was at its highest in the late 1990s, when liquid, large-cap technology companies were all the rage, our analysis shows. See the chart above.

The correlation had dropped to zero just before the 2008 financial crisis when investors were no longer compensated for taking on liquidity risk. Liquid stocks have become more expensive in the years since, with the correlation between illiquidity and value returning to its (modest) 1996–2014 average.

The direction of correlation gives a good indication of how liquidity is priced over time—and is an important (and often neglected) measure of risk in portfolios.

Our research focused on U.S. stocks found an overall weaker correlation between illiquidity and value than the global sample. The relationship is relatively weak in U.S. large caps, yet stronger in the small cap world, our analysis showed.

Bottom line: The broader the universe of stocks, the stronger the relationship between illiquidity and value.

“...The more illiquid you go, the more your underwriting of an investment thesis has to change. You’re starting to think about your exit strategy, your trading cost and potential to exit, and the protections that you build into that.”

— Jim Keenan
Head of BlackRock’s Americas Credit Team
REPORT CARD
Asset Scorecard With Visual Representation

<table>
<thead>
<tr>
<th>Category</th>
<th>Ingredients</th>
<th>Liquid Asset A</th>
<th>Illiquid Asset B</th>
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Source: BlackRock Investment Institute, May 2014. Note: The Liquid Asset A and Illiquid Asset B are for illustrative purposes only.

PUTTING IT TOGETHER
So what is the best way to manage liquidity risk in portfolios—and to exploit the return premium in less liquid assets?

- Long-term investors are best placed to take advantage of the return premium. A simple example: A private equity fund with an eight-year lock-up is a more suitable option for a university endowment than for parents saving for their children to attend that same university. Liquidity is king there (especially when the bills start coming due).
- To exploit illiquidity but minimize risk, consider a liquid core portfolio with return-enhancing illiquid sleeves. The liquid portion can be sold to meet any potential cash calls. The key to success? Being (very) comfortable holding the less liquid part through any market storms.

We offer a simple three-step framework for scoring different types of alternative assets, which often exhibit illiquid characteristics. This can be used to score these assets against one another and/or against their liquid counterparts. Scoring and weighing the various factors will be different for each investor—as will the decision on what assets to include or exclude.

1. **Portfolio Fit**: How well does the asset fit with the portfolio’s goals? This includes factors such as return expectations and diversification benefits. Inflation risk is another important consideration. Commodities and real estate, for example, tend to be sensitive to inflation—and can cushion losses in purchasing power. Assets with built-in inflation hedges (think real estate with inflation-indexed rental hikes) offer the greatest certainty of protection.

2. **Return Penalty**: Other features can add to or subtract from an asset’s potential return. Complexity is an important item (although there can be opportunities in unraveling it). Others are performance in periods of market stress and the presence or absence of a lock-up.

3. **Implementation**: Does the asset fit within the portfolio’s mandate, does the fund have the operational capabilities to manage it, and how cheap is the asset at the time of purchase?

In the graphic above, the (illustrative) Illiquid Asset B scores highly on measures such as diversification and inflation sensitivity. Liquid Asset A gets higher marks on measures such as liquidity (naturally), fund operations and cost.

“You do a barbell approach where you go for yield in the illiquid part and put some proportional amount in very liquid credit. When you need to get out, you’re not forced to sell the illiquids. You just have to have more conviction in the illiquid part.” — Sarah Thompson

Head of BlackRock’s U.S. Liquid Credit Research
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