



# Liquidity in Today's Markets

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## Introduction

[Do we have a liquidity problem post-crisis? The Looming Liquidity Crisis. Preparing for a world when liquidity stops growing.](#)

Headlines like these have been commonplace over the past few years and might leave some wondering – why is liquidity such a big deal? Questions about liquidity have become the subject of significant debate among market participants, policymakers, and thought leaders.

The FIA Principal Traders Group (“FIA PTG”) is an association of firms that trade their own capital in a wide variety of asset classes, including equities, fixed income, foreign exchange and commodities. FIA PTG member firms serve as a critical source of liquidity, allowing those who use the markets, including individual investors, to manage their risks and invest effectively. We believe that the presence of competitive professional traders contributing to price discovery and the provision of liquidity is a hallmark of well-functioning markets.

Capital markets are an essential part of a well-functioning economy. Capital markets are the link between savers and investors; they have an impact on people’s savings and on companies’ investment decisions. Fluctuations in the markets have a direct bearing on the real economy. Therefore, it’s critical that markets operate efficiently. While there are many questions and opinions about the current liquidity of our markets, one thing everyone seems to agree on is that liquidity is crucial to the efficient functioning of markets, transferring of risk, and growth of capital, so any significant changes in the liquidity of markets is cause for discussion.

FIA PTG seeks to foster a productive, data-driven discussion about the nature of liquidity in today’s markets and potential policy and structural changes that can be implemented to enhance liquidity provision. To that end, this paper is designed to establish the concepts foundational to this discussion, including what constitutes liquidity and how intermediaries provide liquidity. Further, we attempt to identify the issues being debated around liquidity provision. Finally, we provide general parameters necessary to promote liquidity, thereby establishing a basis for further discussion between market participants and regulators.

# Foundations of Liquidity

One of the challenges to discussing liquidity is actually defining what it means. The term has been used in so many different ways that a constructive conversation requires scoping the term and describing what it is and what it is not.

In the simplest model of a trade, a seller would show up willing to sell a certain quantity at a certain price, and a buyer would appear at the same time, wanting to buy that quantity for that price. Markets would be perfectly liquid because supply would always meet demand in a timely fashion.

But what if the buyer is ready to purchase a week before the seller commits to selling? Or if the seller can only find someone to purchase half of what he needed to sell? Without liquidity providers – firms willing to take the other side of a trade, buyers and sellers would face a long wait before connecting with a counterparty. Alternatively, buyers could be forced to pay higher prices (or sellers may be forced to sell at a discount) in order to make a trade in a timely fashion.

## Defining Liquidity

Liquidity is a measure of market participants' ability to trade what they want, when they want, at a mutually agreed upon price for a specific quantity. As such, adequate liquidity is an essential component of market health. Liquid markets ensure that market participants can efficiently hedge and transfer risk, businesses can easily raise capital, and investors can optimize growth.

## Indications of Liquidity

A market's level of liquidity is indicated by a variety of factors, including a small bid/ask spread, a high number of participants, a deep order book, a high traded volume, and a balanced order book. A highly liquid market has a small bid/ask spread because there is relatively high supply and demand for a product, which fosters price competition. The outcome? Buyers and sellers don't have a large gap between the lowest sell price and the highest buy price. A liquid market will also have a relatively high number of participants and a deep order book, with a number of open buy and sell orders at different prices. A deeper book means that prices won't move dramatically when large buy or sell orders are entered into the market. A higher traded volume also indicates a more liquid market, with buyers and sellers making frequent trades. Finally, a relatively balanced order book is also indicative of a liquid market, with an even demand from buyers and sellers.

An example of a highly liquid market is easy to imagine: consider Apple's stock. The market for it is easy to access, the stock is frequently traded, and it features narrow bid/ask spreads, high trade volumes, and a deep and balanced order book. Consider, on the other hand, the market for real estate in some distressed locations at the height of the financial crisis. The bid/ask spread was huge, as homeowners wanted to sell their houses at or near the price they paid for it, while buyers, such as there were, wanted a steep discount. Actual traded volumes were low, as many people simply abandoned their homes. And the order book was dramatically unbalanced with a high ratio of sellers to buyers. Now, as these same locations become revitalized, the real estate market is slowly becoming more liquid.

## The role of liquidity providers

A key factor that contributes to liquid markets is the presence of liquidity providers. These intermediaries are critical to providing liquidity because they connect buyers and sellers across time and enable supply to meet demand in a timely fashion. Liquidity providers can be on either side of a transaction, as buyer or seller. As such they bridge the gap between market participants, and quite literally *make a market* for an asset. This allows long-term investors to buy or sell stock whenever they want to, without having to wait for another long-term investor looking to do the opposite; it allows farmers to hedge against a drop in crop prices and food production companies to hedge against a rise in the cost of ingredients.

Liquidity provision is commonly understood as acting as an intermediary by continually trading in and out of relatively short-term positions. Liquidity providers tend to send orders to the marketplace at prices that reflect available information regarding asset prices including the risk associated with transacting and holding that asset. The hallmark of liquidity providers is that they continually provide liquidity in all market conditions, not just when they desire to accumulate or close-out longer term investment positions.

Banks, financial institutions, and principal trading firms (PTFs) all act as liquidity providers in today's markets. The different business models and capabilities of these liquidity providers allow them to serve the market in different ways. For instance, banks with large balance sheets may carry more inventory and be able to facilitate larger transactions in a given asset. PTFs, on the other hand, serve investors by maintaining tighter bid/ask spreads, offering reliable market liquidity, and optimizing price discovery across products and asset classes. PTFs do so by effectively processing market information from many public sources and efficiently deploying their capital. Liquidity provision in modern markets requires diversity among liquidity providers to facilitate risk transfer and efficiently match buyers with sellers during continuous trading.

Further, not all forms of liquidity provision are the same. Business models vary from passive liquidity-provider firms to quantitative firms that trade actively, each representing an equal share of activity, and, even within firms, there is a mix of trading strategies. Holding periods also vary: depending on the strategies operated, liquidity providers may hold positions for minutes, hours, days or in some cases even longer.

Because there are so many different ways to consummate trades, liquidity measures cannot be based solely on displayed markets. A measure that relies on only actionable quotes would exclude the beneficial actions of market participants facilitating transactions on other venues. Actual trades are the most fundamental and important measure of a market's liquidity. Whether the trade occurred because one side of the trade was an actionable quote or two orders matched in a central limit order book or an order was brokered, RFQ'ed, blocked or occurred in a dark pool; both the buyer and seller are part of what is measured to quantify liquidity. Without both sides of a transaction, there wouldn't be a trade at all.

Liquidity providers must also manage their inventory. For example, when a market maker quoting in ETFs is hit on the bid, it may manage its risk by executing a hedge through the sale of the underlying ETF components using limit orders that cross the bid offer spread of those underlying components. This combination of both passive and active order flow is essential to a healthy

market's liquidity and price discovery role and thereby helps ensure that assets like ETFs track their net value.

The most liquid, lowest-cost markets are those where there are no barriers to participation by a wide range of liquidity providers, using a mix of strategies and with a variety of holding periods.

# Liquidity Issues

## Diversification

We have touched on how diverse liquidity providers, using diversified strategies, are critical to facilitating risk transfer. What do we mean by diversified strategies? Business models can range from passive to active, and holding periods can vary from seconds to hours to weeks or longer.

There are just as many types of trading strategies at work. Firms can take part in correlation trades that rely on a consistent relationship between the prices of different assets. In spread trading, market participants take both long and short positions in related contracts. Directional trading strategies attempt to predict future market movements. Some market participants make markets by providing two-sided prices at which they are willing to buy and sell. All of these strategies contribute to liquidity.

## The Quality of Liquidity

There are occasionally some questions about whether PTFs provide “valuable” liquidity. This question has a flawed premise because it presumes that liquidity has a quality. We can evaluate the degree of liquidity in a market, but if liquidity is present, we can't say that it is somehow good or bad. Liquidity is a binary variable—it is either present or it isn't. Take for example circumstances at the time of market open. Diverse market participants begin to submit resting orders. These resting orders contribute to market depth. As more and more orders come in and market participants begin to express different points of view, we expect transactions to start occurring.

“But some liquidity is short lived,” according to skeptics. This, again, overlooks the fact that liquidity is not a qualitative metric. Whether or not one party holds the asset after the trade is irrelevant. The liquidity PTFs provide allows for transactions among market participants, regardless of how long they inventory that asset afterwards.

There is also sometimes confusion about price movement in liquid markets. Healthy, liquid, efficient markets react to new information with price changes. So, for instance, news about a product launch may influence that company's stock price, just as a large sell order may influence the price of a futures contract. This is not an example of illiquidity, but rather of price discovery. Price discovery is an important function of our markets and price changes based on new information are inherent to this process.

## Unusual Volatility and Liquidity

During unusual market events where there are periods of extreme volatility, different types of market participants behave differently. This is true of liquidity providers as well. A joint government staff report on volatility in Treasury markets noted this difference in 2015: “In general, the analysis shows that the spike in trading volume and volatility coincided with a sizeable reduction in the depth of orders provided by PTFs and with the posting of much wider bid-ask spreads by bank-dealers. In addition, for brief periods, bank-dealers were absent from the offer side of the cash market.”<sup>1</sup>

Both bank-dealers and PTFs were following rational risk management procedures given the unusual volatility. For PTFs, that meant reducing the quantity of orders while still maintaining tight bid-ask spreads. Importantly, PTFs remained in the market, which contributed to continued liquidity.

## Regulatory Challenges to Liquidity Provision

In April 2017, then Federal Reserve Governor Jerome Powell raised the unintended consequences of including customer initial margin deposits in the computation of capital requirements for financial institutions that provide clearing services: “Take central clearing for clients: this is something we want and we think makes the world a better place, but we apply the leverage ratio to the initial margin posted by clients which makes it more expensive. We see clients getting out of the client clearing business, so we are undermining the clearing mandate.”<sup>2</sup>

In comments made at the World Federation of Exchanges’ IOMA Clearing & Derivatives Conference, John Fennell, chief risk officer of OCC, noted that the leverage ratio is eroding liquidity in capital markets. He expanded on these ideas in a blog, noting that, “the application of the Leverage Ratio, which neglects to consider the hedging benefits between options and other attributes unique to options, will result in vastly increased capital requirements for general clearing members offering clearing services to market makers and liquidity providers. This will fundamentally threaten clearing members’ business models and impact the liquidity and stability of global financial markets.”<sup>3</sup>

Bryan Durkin, President of CME Group, told the CFTC [Technology Advisory Committee](#) (TAC) in February 2018 that the supplemental leverage ratio is already having an effect on liquidity. According to CME market intelligence, “spreads on the S&P options on Feb. 5 – 6 widened significantly more than during similarly stressed markets in the past. We understand the widening of bid-ask spreads to be driven primarily by capital costs, again, associated with the leverage ratio.”

“Capital treatment for PTFs who make markets in exchange-traded derivatives ignores the actual risk and correlations between positions of people offering liquidity on both sides of the market,” Durkin explained. “More specifically, it lacks recognition of delta adjustments for options and recognition of netting sets for options positions,” Durkin said. “This ultimately results in a

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<sup>1</sup> Joint Staff Report on the U.S. Treasury Market on October 15, 2014 at 25.

<sup>2</sup> <http://www.risk.net/regulation/4974791/feds-powell-joins-chorus-of-volcker-rule-critics>

<sup>3</sup> <http://www.risk.net/regulation/basel-committee/4992291/occ-seeks-leverage-ratio-relief-as-liquidity-shrinks>

reduction of liquidity during stress conditions. This happens by applying inappropriate costs to market exposures and this is a direct result of the supplemental leverage ratio.”

# Optimizing Liquidity

There are a number of factors that allow us to measure the degree of liquidity in a market, including the size of the bid/ask spread, the depth of book, the traded volume, and the composition of an order book. All-in execution costs for large and small orders are also important metrics. The audit trail that comes with electronic trading in central limit order books (CLOBs), along with real-time dissemination of market data, makes it easy to analyze these measures of liquidity. Most of these measures have improved materially over recent periods as markets have become more electronic, more transparent and more competitive.

And now to perhaps the most important discussion about liquidity: how can we best promote healthy, liquid markets?

## Market Structure Principles

Regulators have recently stated that initiatives like “all-to-all” trading platforms that focus on reducing the role of the middleman may help re-introduce liquidity in the market.

At a high level, we strongly believe there are basic market structure principles that contribute to well-functioning liquid markets:

- Artificial latency mechanisms, or speed bumps, can be barriers to liquidity provision;
- Market data should be made publicly available in electronic format in as near real-time as technologically practical;
- Any criteria that explicitly or implicitly excludes an entire category of otherwise eligible market participants should be prohibited as per se discriminatory;
- Platform requirements forcing participants to choose between being a liquidity provider or a liquidity “taker” should be prohibited, and
- It must be possible (at least on an opt-in basis) to interact with the market anonymously, on both a pre- and post-trade basis.

Enhanced transparency is one critical tool in creating liquidity. Improving a market’s ability to reflect all relevant information in real-time increases efficiency in price discovery and bolsters market participants’ willingness to provide liquidity. With clear insight into market operations, liquidity providers are better able to manage risk and provide liquidity.

Open and fair access to markets is another key to unlocking liquidity. Limiting participants, whether directly or through difficulty of access, increases concentration risk and decreases liquidity, especially during periods of market stress. For example, during the 2008-2009 financial crisis, liquidity suffered in off-exchange venues, while exchange-traded, transparent, competitive,

centrally-cleared markets with broad participation operated continuously and fairly smoothly. Having transparent access to data on diversity among liquidity providers allows market participants to determine if there is concentration risk in any single market.

Conversely, there are factors that can impede liquidity provision. Excessive fragmentation, complexity, and limited market access all harm competition and discourage liquidity in markets. Artificial latency mechanisms, or speed bumps, can be barriers to liquidity provision. Equity market rules require orders to be routed to exchanges displaying the best price. As the U.S. Securities and Exchange Commission considers latency proposals from multiple exchanges, we risk creating a hall of mirrors where market participants are forced to route orders to delayed exchanges, only to encounter stale quotes that are no longer accessible. It will be impossible to know which prices are real and which are latent reflections. This could lead to decreased liquidity, lower fill rates and inferior executions.

## Conclusion

Healthy markets with a diversity of liquidity providers facilitate efficient risk management, capital transfer, and economic growth. As market participants and policy makers consider the degree of liquidity in today's markets, FIA PTG encourages a discussion that is based on quantitative data around liquidity metrics. Additionally, we caution against premising any discussion with the concepts of good and bad liquidity, which categorizes liquidity simplistically and falsely based on the type of market participant providing it. Finally, comparing the liquidity present in today's markets with that of markets prior to the financial crisis is unhelpful, as it ignores critical changes in regulation and enhancements in technology. Instead, we urge an analytical approach that evaluates liquidity within the context of the current health, transparency, efficiency, and competitiveness of our markets and weighs potential policy changes not in terms of their ability to match prior market conditions, but rather to provide liquidity and growth moving forward.