A Megatrends Primer

NAVIGATING LIQUIDITY IN THEMATIC ETFs

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OVERVIEW

Thematic ETFs are one of the fastest growing and most rapidly evolving segments of the ETF landscape[1]. These products tend to sidestep traditional sector, geographic, and market capitalization classifications to assemble concentrated baskets of equities unified by a structural growth opportunity. Themes that have attracted significant assets under management include robotics, genomics, clean energy and infrastructure[2].

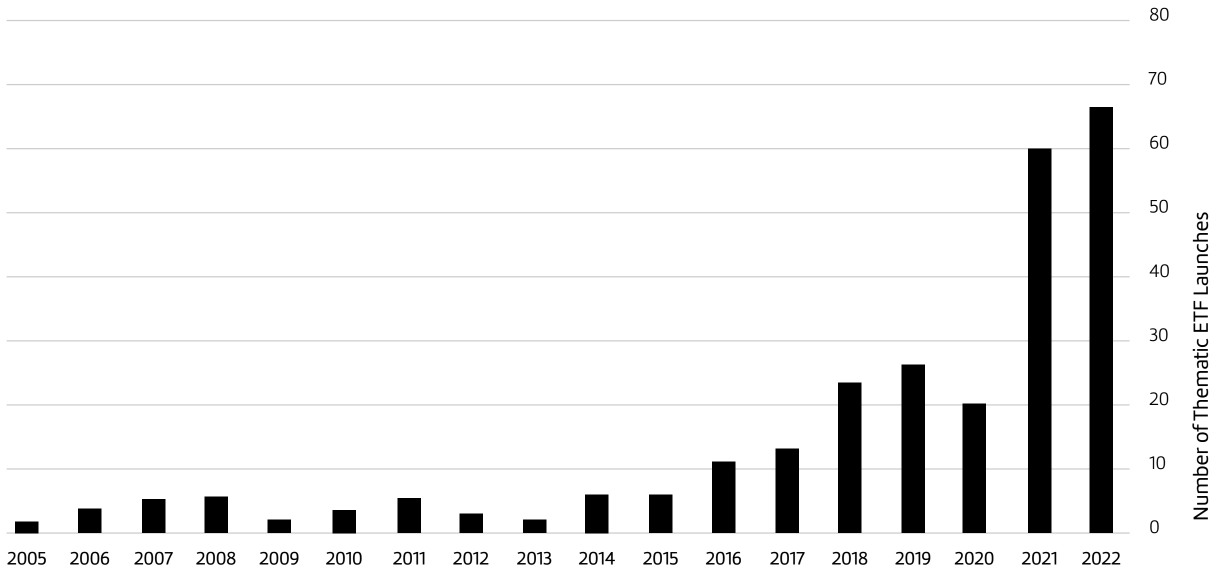
While these themes may seem like one-off or unrelated concepts, BlackRock has developed a top-down framework to identify and organize the broad range of long-term themes, known as "Megatrends." To distinguish these themes from short-lived fads, BlackRock defines Megatrends as "transformational forces shaping the future of our global economy and society."

BlackRock maintains five Megatrend categories, including:

1) **Tech Breakthrough**
2) **Demographics & Social Change**
3) **Rapid Urbanization**
4) **Climate Change & Resource Scarcity**
5) **Emerging Global Wealth**

Investors can choose among several index-based and actively managed ETFs to gain exposure to various themes aligned with these Megatrends, helping investors to target growth opportunities with greater precision.

Thematic ETFs Launched per Year in the U.S.*



[1] BlackRock as of 12/31/22. The U.S.-listed Thematic ETF category has $31B in AUM in 2018, $43B in 2019, $124B in 2020, $148B in 2021 and $87B in 2022. While Category AUM has fallen given recent market headwinds, it remains more than 2x larger than it was 5 years ago.
[2] Global Business Intelligence, BlackRock as of 12/31/22. Robotics ETF exposure, represented by the iShares Robotics and Artificial Intelligence Multisector ETF, gathered $247M in flows between 1/1/2020 and 12/31/2022. The fund grew from $59M to $220M in AUM over this time period. Genomics ETF exposure, represented by the iShares Genomics Immunology and Healthcare ETF, gathered $241M in flows between 1/1/2020 and 12/31/2022. The fund grew from $27M to $155M in AUM over this time period. Clean Energy ETF exposure, represented by the iShares Global Clean Energy ETF, gathered $5,365M in flows between 1/1/2020 and 12/31/2022. The fund grew from $431M to $5,124M in AUM over this time period. Infrastructure ETF exposure, represented by the iShares U.S. Infrastructure ETF and the iShares Global Infrastructure ETF, gathered a combined $2,397M in flows between 1/1/2020 and 12/31/2022. The iShares U.S. Infrastructure ETF grew from $7M to $1,762M in AUM over this time period. The iShares Global Infrastructure ETF grew from $3,482M to $3,949M in AUM over this time period.
* Source: Bloomberg Terminal Data

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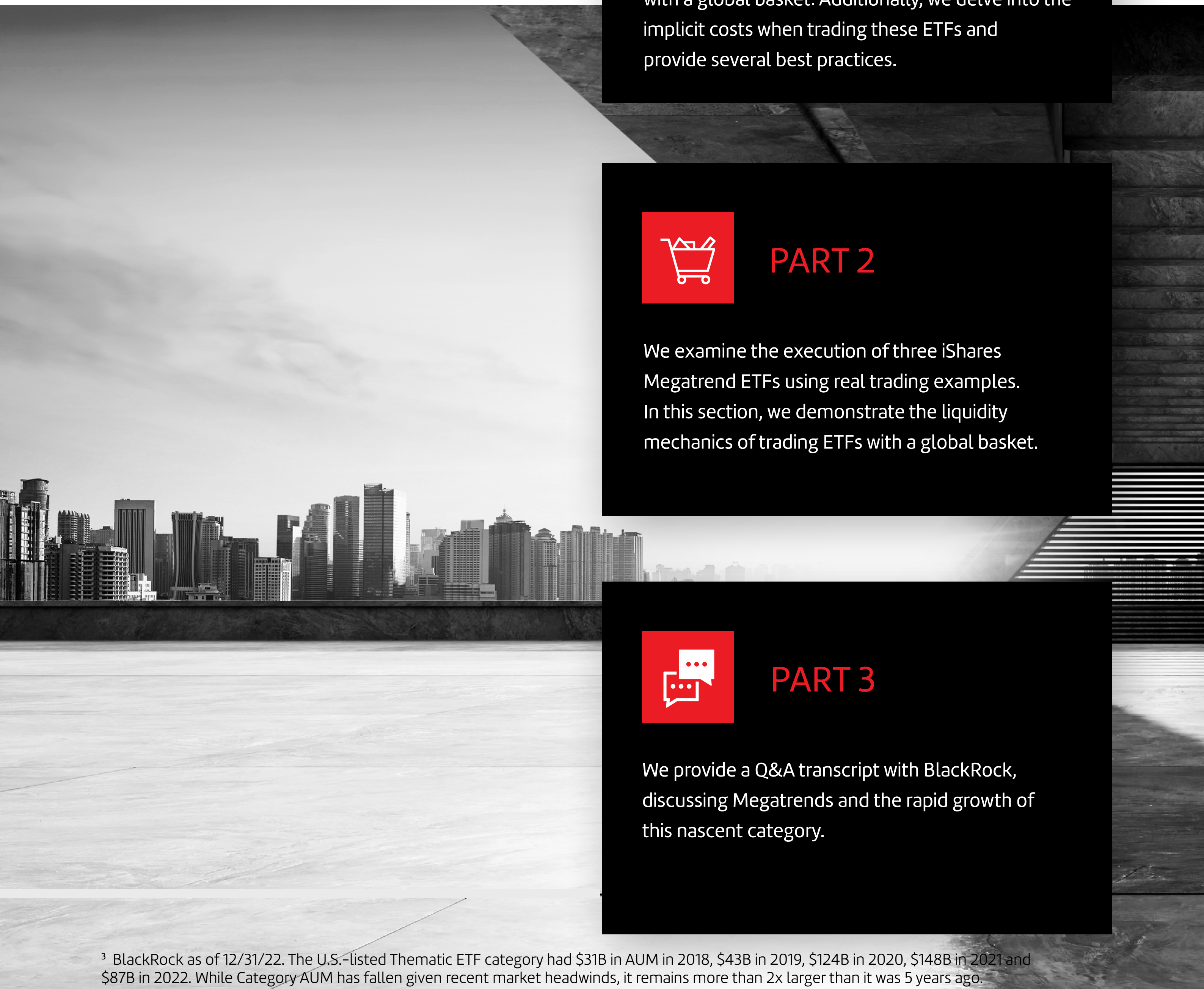
INTRODUCTION

Given these themes cut across regions, sectors and market capitalizations, and are often concentrated equity baskets, they have unique trading considerations. The purpose of this paper is to serve as a primer on the liquidity of Megatrend ETFs and examine various trading considerations for this fund category that is growing assets year-over-year[3].

This primer is structured as follows:



PART 1

We discuss risk trading and NAV (Net Asset Value) trading when assessing the execution of ETFs with a global basket. Additionally, we delve into the implicit costs when trading these ETFs and provide several best practices.

PART 2

We examine the execution of three iShares Megatrend ETFs using real trading examples. In this section, we demonstrate the liquidity mechanics of trading ETFs with a global basket.

PART 3

We provide a Q&A transcript with BlackRock, discussing Megatrends and the rapid growth of this nascent category.

[3] BlackRock as of 12/31/22. The U.S.-listed Thematic ETF category had $31B in AUM in 2018, $43B in 2019, $124B in 2020, $148B in 2021 and $87B in 2022. While Category AUM has fallen given recent market headwinds, it remains more than 2x larger than it was 5 years ago.

PART 1

LIQUIDITY CONSIDERATIONS

Global Baskets

Not all, but most, Megatrend ETFs are global in nature and will often hold companies from many countries. This is an important feature, as leading companies involved in the robotics theme, for example, are often based in Europe, Japan, and China. Investing only in the U.S. would miss a significant part of the robotic theme's opportunity set. But when executing an ETF that has multiple countries in the basket, there will be a "time-zone mismatch," whereby the ETF's trading venue is open, but a portion of the underlying stock exchanges are closed. This is particularly relevant in the U.S. PM when equity markets in Europe and Asia are not open.

EXCHANGE	HOURS OPEN* in Eastern Standard Time
TOKYO STOCK EXCHANGE	8:00 P.M. – 10:30 P.M. / 11:30 P.M. – 2:00 A.M.
SHANGHAI STOCK EXCHANGE	9:30 P.M. – 11:30 P.M. / 1:00 A.M. – 3:00 A.M.
HONG KONG STOCK EXCHANGE	9:30 P.M. – 12:00 A.M. / 1:00 A.M. – 4:00 A.M.
SHENZHEN STOCK EXCHANGE	9:30 P.M. – 11:30 P.M. / 1:00 A.M. – 3:00 A.M.
FRANKFURT STOCK EXCHANGE	3:00 A.M. – 11:00 A.M.
EURONEXT **PARIS**	3:00 A.M. – 11:30 A.M.
LONDON STOCK EXCHANGE	3:00 A.M. – 11:30 A.M.
TORONTO STOCK EXCHANGE	9:30 A.M. – 4:00 P.M.
MEXICO STOCK EXCHANGE	9:30 A.M. – 4:00 P.M.

*Flow Traders, Analysis of each exchange hours of operation, as of 31 December 2022

PART 1

LIQUIDITY CONSIDERATIONS

When ETFs trade but exchanges that are trading the underlying stocks are closed, liquidity providers typically cannot hedge with all the underlying stocks. However, they may be able to hedge with correlated U.S.-based stocks, American Depository Receipts (ADRs), and futures. Liquidity providers, such as Flow Traders, build models to estimate the value of stocks on exchanges that are closed and can provide liquidity despite parts of the basket not trading.

When investors receive a price from a liquidity provider on any ETF, that price accounts for the costs and risks incurred. Those costs and risks usually differ when trading an ETF with global constituents.

Potential costs associated with providing liquidity

+ =

HEDGING COSTS

Cost of correlated hedges (e.g., stocks, futures, other ETFs):

Cost of Creation / Redemption (if deemed necessary by liquidity provider – it is important to note not all trades lead to primary activity)

POTENTIAL SLIPPAGE

(aka hedging risk)

In a scenario where a portion of the underlying stocks are closed, liquidity providers may put up a "proxy hedge":

Confidence in this hedge will partially determine how the liquidity provider prices the ETF

COSTS OF TRADING

Price clients see and can execute at:

Liquidity providers will reflect a net price to the client and this will have associated costs embedded in the transaction level

PART 1

LIQUIDITY CONSIDERATIONS

As seen above, on some but not all trades, a liquidity provider may use the creation and redemption mechanism to add or remove shares from the market. In this process, the underlying shares will be executed and thus the liquidity of the ETF is directly contingent on the underlying stocks. This process is how an ETF's tradability is derived from the liquidity of the underlying assets. In section three, we will quantify this through a metric referred to as "Basket Liquidity."

Sector & Style Agnostic Baskets

Just as thematic ETFs tend to be global in nature, they often cut across traditional sector definitions as well. For example, a technology sector ETF may be aligned with the Global Industry Classification System (GICS) and focus on large cap information technology stocks. But a thematic ETF focused on robotics may hold companies hailing from the IT, industrials, and even health care sectors if the stocks are relevant to the theme. Additionally, a thematic ETF could hold large, mid, and small cap stocks, as well as those typically considered value or growth, cutting across styles.

For trading purposes, this means the underlying construction of a thematic ETF will influence its liquidity. Importantly, an ETF will follow the liquidity of its constituent holdings. If the fund contains a concentrated basket of heavily traded, large cap stocks, the hedging will likely be efficient and relatively cheap. If an ETF holds more thinly traded, small cap stocks that span numerous sectors, this could make the hedging of the ETF more costly. This may be reflected in transaction costs and is one of the key reasons it is important to analyze the composition of an ETF's basket.

PART 1

LIQUIDITY CONSIDERATIONS

Execution Styles

One execution style used when trading ETFs is risk trading. Risk trading can be thought of as a nearly instantaneous transfer whereby the investor requests that liquidity providers show a price where they could buy (or sell) an ETF. This often occurs via an electronic platform known as a request-for-quote (RFQ). Risk trading may be appropriate when there is an immediate need to buy (or sell) an ETF as the trade can be accomplished in a short amount of time and at a known price.

If a risk execution is decided upon by the investor, there is immediate risk that needs to be managed by the liquidity provider who takes the other side of the trade. The following scenario demonstrates a "behind-the-scenes" example of a liquidity provider's perspective.

1. Investor goes to three liquidity providers via an RFQ platform to buy $10 million of XYZ ETF at 11:00 A.M. EST. Three liquidity providers respond with a quote and the investor selects one of the three offers to sell.

2. Unless the selected liquidity provider had XYZ ETF in its inventory, they are now short $10 million of XYZ ETF and susceptible to price moves of the ETF.

3. The liquidity provider will likely protect themselves from short-term price changes in the ETF through a hedge. Assuming XYZ ETF is partially composed of stocks that are closed, it is nearly impossible to execute a one-for-one hedge with those stocks. Therefore, the liquidity provider must put up a "proxy hedge." This hedge may be a portfolio of correlated single stocks that are open, a future, or another similar ETF.

Continuing with the previous example, assume XYZ ETF has a country break-down of 50% U.S., 30% U.K. and 20% South Korea, 20% of the basket will be closed at the time of execution – South Korea. The U.S. and U.K. components will likely be able to be hedged with high precision as the markets are open and liquid at 11:00 A.M. EST. For the 20% of the basket representing the South Korean stocks that are closed, an alternative proxy hedge such as a KOSPI futures could be used. In some cases, there may be "slippage" between the South Korea exposure in the ETF and the broad market hedge. The liquidity provider may choose to tighten or widen their ETF quote to account for this degree of confidence (or uncertainty). This is the "hedging risk" illustrated on page 6.

4. Once the hedge is applied, to close out the liquidity provider's short position, they can do one of the following:

   a. Either create the ETF to offset the short position

   b. Buy the ETF from other market participants to offset the short position

For illustrative purposes only

PART 1

LIQUIDITY CONSIDERATIONS

Another commonly used execution strategy for ETFs is trading versus NAV. For every ETF, there is a NAV published after the U.S. market closes. Rather than trading at a known price intraday, an investor can agree to a NAV trade with a liquidity provider, which will offer an execution at the official NAV +/- an agreed-upon spread. Below we illustrate the factors of how the NAV is calculated, emphasizing instances when the ETF contains global stocks.

Components of NAV:

1 Official closing price of the stock

Regardless of where the stock trades, the official closing price as determined by the local exchange will be an input for the NAV of the ETF.

2 FX rates of the associated countries

For global stocks, there is a conversion from the local currency of the stock into dollars. BlackRock ETFs use the FX rate as of 4 P.M. EST.

3 Fair value adjustments — if applicable

BlackRock adjusts their NAVs for ETFs that have non-U.S. components. The goal is for the NAV to capture market movements more accurately after the local exchange closes. This is best illustrated by returning to the example of a product with exposure to 50% U.S., 30% U.K., 20% South Korea. If global markets rally at 3 P.M. EST, the U.K. and South Korea exchanges are, of course, closed. If the NAV calculation uses the prices from the local U.K. close and local South Korea close, then these will be stale and not reflect the global rally that occurred. The fair value adjustment captures this move and more accurately reflects the intrinsic value of the ETF.

It is common practice for investors to choose between a fair value NAV or non-fair value NAV when requesting a quote from a liquidity provider. This is specified before the trade. If non-fair value is requested by the investor, the factors that determine the NAV are the official close (#1 above) and relevant FX rates (#2 above).

PART 1

LIQUIDITY CONSIDERATIONS

From the perspective of a liquidity provider, the hedging that takes place on a NAV trade is different from that of a risk trade. A liquidity provider will hedge shortly after the risk trade is done as they have immediate exposure. For NAV trading (fair value or non-fair value), the hedging process typically takes place at or around the close of the ETF's underlying stocks. For global basket, this means that liquidity providers usually hedge different components of the NAV when the underlying exchange is closing (50% U.S. at 4 P.M. EST, 30% U.K. at 11:30 A.M. EST, and 20% South Korea 2:30 A.M. EST via an overnight desk). Despite the nuances of NAV trading, the mechanics above take place behind the scenes and the liquidity provider reflects the costs and risk into a simple quote (i.e. NAV + 10bps or NAV -4bps) that may or may not be actioned by the investor.

The second trading example in Part 2 details a NAV trading example in practice.

An additional execution style is known as agency trading. Also referred to as trading "on-screen," this is when a larger order is broken down into smaller orders and routed to an electronic trading strategy, often to target a benchmark (i.e. Volume-Weighted Average Price). This is often done to minimize impact when trading a larger position. While this execution style is beyond the scope of this paper, it is important to mention when discussing ETF liquidity.

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PART 1

LIQUIDITY CONSIDERATIONS

Best Practices

Time

Consider the exchange hours for each regional exposure. For developed market equities, 10:00–11:00 A.M. EST may be ideal as it provides an equilibrium after the U.S. market opens at 9:30 A.M. EST, but also allows sufficient time before the London Stock Exchange closes at 11:30 A.M. EST. The times above are meant to serve as one consideration and may not always be necessary to achieve strong execution.

Size

Since ETF liquidity is a function of the underlying basket liquidity, every ETF has a "Basket Liquidity" metric that can be found on the BlackRock Pre-Trade Tool. This figure provides insight on the liquidity of the ETF's underlying basket and how much could be traded through the creation and redemption process. This can serve as a strong indicator of how liquid an ETF really is.

Price

Consider consulting with ETF capital markets teams and liquidity providers prior to trading. Additionally, an investor may consider requesting a two-way indicative market (i.e. a price where one could buy and sell the ETF). Even if an investor's intention is to buy a product and be a long-term investor, knowing the "round trip" cost of trading can be an important factor.

Part 2

TRADING EXAMPLES

ETF Description

ICLN

iShares Global Clean Energy ETF

All figures in this section are dated as of November 1st, 2022

AUM:	**$4.78bn**
ADV (90 day):	**~5.8mm shares**
ETF ADV (20 day):	**$181mm**
Basket Liquidity (20 day):	**$7bn**

Trading Scenario

Investor wants to buy 200,000 shares ICLN through a risk market

- Time of day: ~12:00 P.M. EST
  - ~60% underlying closed at time of trade
- In competition RFQ where five liquidity providers were requested to quote
- National Best Bid or Offer (NNBO): 24.50 / 24.51
- Four liquidity providers came back with a quote
- Investor bought at 24.53 (2 cents above the national best offer)

The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com.

Key Takeaways

- Although ICLN had over $4 Billion in AUM as of the end of 2022, this should not be the metric considered to assess liquidity. Rather, the basket liquidity ($7 billion) and the low trade size as a percentage of ETF ADV (1.1%) should be emphasized.
- ETFs can still be priced competitively despite a significant portion of the basket being closed.
- Investors should be thoughtful about their RFQ roster as not all liquidity providers quote every product as shown above (five requested, four quoted).

Part 2

TRADING EXAMPLES

ETF Description

IGF

iShares Global Infrastructure ETF

All figures in this section are dated as of November 1st, 2022

AUM:	**$3.4bn**
ADV (90 Day):	**~560,000 shares**
ETF ADV (20 Day):	**$22mm**
Basket Liquidity (20 Day):	**$7bn**

Trading Scenario

Investor wants to buy 169,098 shares IGF through a NAV execution benchmarked against the current day's NAV strike

- Time of day: ~11:45 A.M. EST versus the current day's NAV date
  - ~50% of the basket closed at time of trade
- In competition RFQ where five liquidity providers were requested to quote
- Five liquidity providers quoted, and the investor selected +12bps as the winning quote
  - Cover (i.e. second best quote) was +16bps
- NAV isn't published until that evening and 12bps is added to the price to account for liquidity provider's risk and costs

The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com.

Key Takeaways

- Despite roughly 30% of the basket being closed at the time of the request, competitive liquidity was still able to be sourced.
- Although the size of the trade (~$9mm) is seemingly a significant portion of the ETF ADV ($22 million), basket liquidity was the key indicator that this ETF could be executed with low impact.
- If there is flexibility on timing, consider a NAV trade – especially when a portion or the entire basket's underlying equities aren't actively trading. When constituents of the basket are closed, a NAV trade can allow flexibility when a liquidity provider hedges their exposure. In turn, this can help to reduce their risk and potentially saves costs which can be passed along to the investor.

Part 2

TRADING EXAMPLES

ETF Description

IRBO

iShares Robotics and Artificial Intelligence Multisector ETF

All figures in this section are dated as of November 1st, 2022

AUM:	**$218mm**
ADV (90 Day):	**~37,000 shares**
ETF ADV:	**$914k**
Basket Liquidity (20 Day):	**$74bn**

Trading Scenario

Investor wants to buy 348,000 shares IRBO through a risk market

- Time of day: ~1:00 P.M. EST
  - ~45% of underlying closed at time of trade
- In competition RFQ where five liquidity providers were requested to quote
- NBBO: 26.98 / 27.03
- Two liquidity providers came back with a quote
- Client bought 27.01, two cents **inside** the national best offer

The performance quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting www.iShares.com or www.blackrock.com.

Key Takeaways

- The liquidity for this trade could be sourced in the primary market so the size of the order being 5x ADV was not an important factor in assessing liquidity. The liquidity provider who showed the best price likely used an Authorized Participant, created the ETF shares, and delivered the ETF shares to the investor looking to buy.

- Basket liquidity is a helpful metric to assess ETF liquidity. The more liquid the basket, the more liquid the ETF will generally be as liquidity providers can access the primary market for creations and redemptions.

PART 3

QUESTIONS AND ANSWERS

1 Can you explain the life cycle of how BlackRock's Megatrends evolve from identification of a theme to the launch of an ETF?

We are constantly researching themes, speaking with portfolio managers and analysts across BlackRock as well as meeting with industry experts to understand the latest technological breakthroughs, healthcare advancements and demographic trends. In fact, we have our eyes on dozens of potential themes at any given time. But honing in on a compelling subset that are high conviction, pure play, and long-term is a critical part of our research process. To narrow our list, we dive deep, leveraging an exhaustive checklist of 30+ questions[4] that tests the strength of a particular theme across several areas, such as the size of the total addressable market, stage of adoption, barriers to adoption, investable universe, and regulatory tailwinds, to highlight a few.

If we are positive on a theme after this research process, we will work with an index provider or active portfolio manager to turn the theme from an idea to an investment strategy focused on high purity and liquidity. For an index-based product, we will spend several months seeking a custom set of rules that targets the most attractive aspects of a theme and that seeks to future-proof the process to evolve alongside the theme.

[4] BlackRock as of December 2022. Subject to change.

QUESTIONS AND ANSWERS

2 **How does BlackRock organize and classify Megatrends? What are the five key Megatrends?**

BlackRock organizes Megatrends into five categories, each of which has underlying, investable themes. The five Megatrend framework is leveraged across the firm, used by teams ranging from index to active to alternatives.

Tech Breakthrough

Innovation in technology driving exponential progress in the tech sector and beyond

i. Sub-themes include cybersecurity, blockchain and robotic

Demographics & Social Change

Aging populations alongside a new generation of consumers

i. Sub-themes include genomics & immunology, future food and WFH

Rapid Urbanization

The rise of cities in emerging markets and their revitalization in developed markets

i. Sub-themes include global, U.S. and EM infrastructure

Climate Change & Resource Scarcity

Distinct from sustainable investing, with a focus on themes with the potential for outsized growth from the drive for a cleaner, greener tomorrow

i. Sub-themes include clean energy, electric vehicles and efficient resource management and usage

Emerging Global Wealth

The rise of middle-class consumers in developing markets

i. Sub-themes include China Tech

QUESTIONS AND ANSWERS

3 How does BlackRock think about distinguishing short-term trends versus long-term structural themes?

As investors, it's important to pay attention to both short and long-term trends. We believe long-term themes are propelled forward by concurrent economic, regulatory, and societal forces. They are likely to play out over years regardless of any singular GDP print or inflation statistic. Take electric vehicles (EVs) as an example:

- From an economic perspective, we've seen battery costs fall by 90% since 2010, allowing the cost of an EV to fall dramatically, increasing affordability for the masses.

- From a regulatory perspective, we recently saw the Inflation Reduction Act pass both houses of Congress, with tax-credits up to $7,500 for consumers who purchase an EV.

- From a societal perspective, we continue to see younger generations show concern for the environment, with Millennials and Gen Z the two likeliest generations to prefer EVs.

Shorter term trends can be powerful too. In the current environment, investors may be compelled to focus in on energy or agricultural producers amid supply chain disruptions and sustained inflation. These exposures can be significant return generators, but we generally view them as more tactical positions and investors may need to time entry and exit points accurately.

4 Can you discuss institutional adoption of Megatrends? What channels have been early adopters? How do you expect this to grow and change over time?

There has been a significant increase in institutional interest in Megatrend investing over the past few years[5]. We've seen tremendous growth in the asset manager and ETF strategist spaces, particularly surrounding the integration of Megatrends in 100+ models, across traditional and stand-alone Megatrends-only models.

The key driver here is Financial Advisor (FA) demand, as Megatrend strategies are used as both portfolio and practice differentiators. The portfolio side of the story is Megatrends' role as a differentiated alpha driver. We are seeing FAs refine traditional views of growth and technology to embrace innovation around the world and across the economy. In practice management, Megatrend ETFs can resonate with clients. They can allow for end investors to get their arms around the stories that may help drive portfolio performance – the same stories driving change in their lives and the world around them – and to therefore stay engaged and invested over time.

We're also seeing use cases by high-net worth teams who are looking to provide low-cost, transparent, and liquid alternatives to their private market allocations, and we expect this demand to accelerate. As the Megatrend category grows in assets, liquidity increases and options markets may arise, we expect these funds to become increasingly attractive alternatives to traditional sector strategies.

5 COVID-19 changed many facets of our world. Can you discuss:

1. How this accelerated the investment thesis behind Megatrends?

2. How institutional players changed their outlook on Megatrends?

COVID-19 clearly impacted all aspects of the global economy, but we saw several themes drastically accelerated by the pandemic. First, the need to rapidly develop effective vaccines brought about a revolution in mRNA technology. Many of the leading companies developing mRNA technology are found in the iShares Genomics immunology and Healthcare ETF (IDNA), a strategy we launched well before COVID-19[6] because of our

[5] Source: BlackRock as of March 1, 2023
[6] Based on holdings as of March 1, 2023. Inception date for IDNA is June 11, 2019

PART 3

QUESTIONS AND ANSWERS

interest around breakthroughs such as gene-editing, immunotherapy treatments and of course, vaccines. However, the pandemic brought about greater funding for mRNA-based research and stronger regulatory support, two tailwinds that are likely to persist.

The second major area we saw accelerate was digitization, as billions of dollars were quickly deployed to facilitate remote working, tele-health and virtual education. Several related technologies benefitted, such as cloud computing, cybersecurity, and data centers. We continue to see the lasting impact of these investments as hybrid work arrangements persist even despite offices reopening.

Third, globally disrupted supply chains drew more attention to infrastructure, as the need to repair ports, roads and bridges became increasingly apparent. In the U.S., the Infrastructure Investment and Jobs Act became law. It is beginning to benefit infrastructure enablers such as construction companies, who are seeing increased demand for their services, as well as infrastructure operators such as utilities, who are receiving grants from the government to supplement their existing cap-ex spending.

These catalysts were not simply moments for themes, they catapulted forward a series of innovations that are now fostering further innovation – be it the robots more recently recruited to combat supply chain disruption, neuroscience as a venue for pushing the breakthroughs of genomics and immunology into new territory or the rise of blockchain among the many consumers embracing digital commerce.

6 Can you discuss how BlackRock considers thematic fit versus practical implementation of a portfolio? For example, what considerations are there for including thinly traded, microcap stocks that fit the theme?

When developing our iShares Megatrend index ETFs, our primary goal is to deliver thematic beta, which we achieve by targeting stocks with the most significant exposure to a particular theme. When managing our BlackRock Megatrend active ETFs, our primary goal is to outperform the beta of themes by selecting particular firms poised to lead and over/underweighting sub-themes in real-time. We partner closely alongside our world-class portfolio engineers and portfolio managers to help our ETFs trade efficiently, at tight spreads and (for index funds) closely track their indices. For all of our iShares Megatrend ETFs we have minimum market cap and ADV requirements for the underlying securities to seek ample liquidity for investors of all sizes.

About Flow Traders

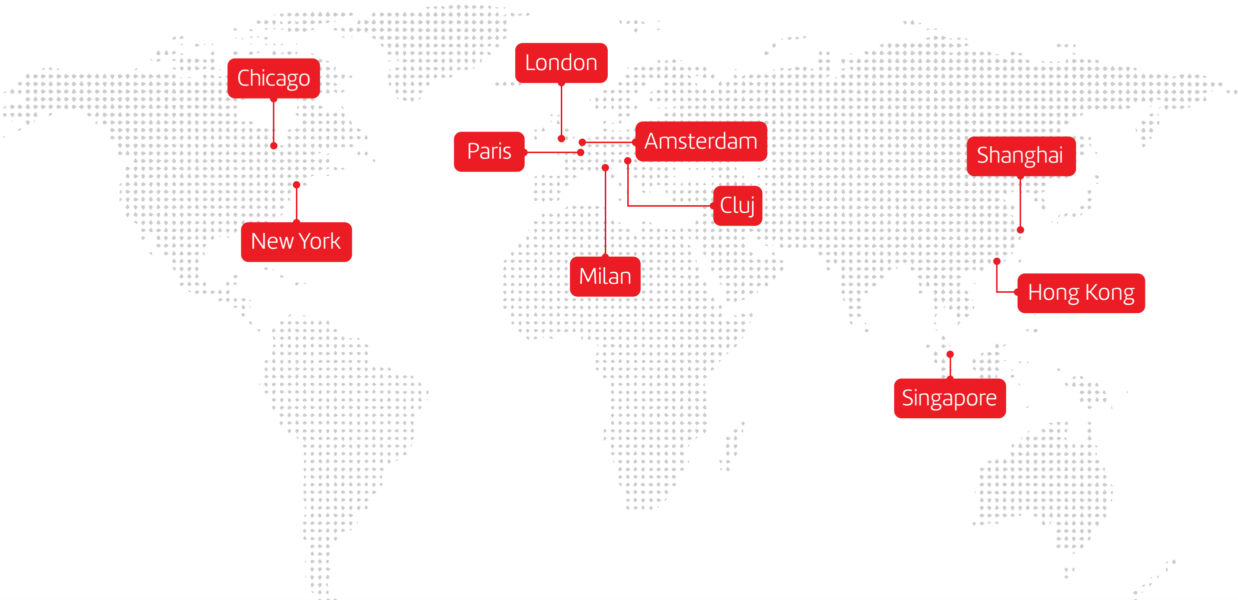
Flow Traders is a leading global technology enabled liquidity provider and market marker specializing in Exchange Traded Products (ETPs), Digital Assets, Fixed Income, Commodities and Foreign Exchange and provide secure and continuous liquidity across all major exchanges and trading venues, globally, 24 hours a day.

Our trading desks cover Europe, Asia and the Americas from our offices in Amsterdam, London, Milan, Paris, Cluj, New York, Chicago, Singapore, Shanghai, and Hong Kong.

For more information, please visit our website or follow Flow Traders on LinkedIn:

/company/flow-traders/

www.flowtraders.com



About BlackRock

BlackRock's purpose is to help more and more people experience financial well-being. As a fiduciary to investors and a leading provider of financial technology, we help millions of people build savings that serve them throughout their lives by making investing easier and more affordable. For additional information on BlackRock, please visit

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About iShares

iShares unlocks opportunity across markets to meet the evolving needs of investors. With more than twenty years of experience, a global line-up of 1300+ exchange traded funds (ETFs) and $2.91 trillion in assets under management as of December 31, 2022, iShares continues to drive progress for the financial industry. iShares funds are powered by the expert portfolio and risk management of BlackRock.

Learn more about iShares Megatrends at **iShares.com/Megatrends**

iShares by BlackRock

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Investing involves risk, including possible loss of principal.

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