Q1 2020

Derivatives Market Structure 2020

GREENWICH
DATA | ANALYTICS | INSIGHTS

In partnership with FIA

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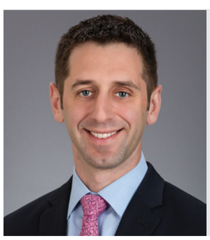

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Executive Summary

The global derivatives market has undergone tremendous change over the past decade and, by most measures, has come out more robust and efficient than ever. Increased transparency, more central clearing and vastly improved technology for trading, clearing and risk-managing everything from futures to swaps to options has created an environment in which nearly 80% of the market participants in this study believe liquidity in 2020 will only continue to improve.

To understand more deeply where we've been and where the derivatives market is headed, Greenwich Associates conducted a study in partnership with FIA, an association that represents banks, brokers, exchanges, and other firms in the global derivatives markets. The study gathered insights from nearly 200 derivatives market participants—traders, brokers, investors, clearing firms, exchanges, and clearinghouses—examining derivatives product usage, how they manage their counterparty relationships, their expectations for regulatory change, and more.

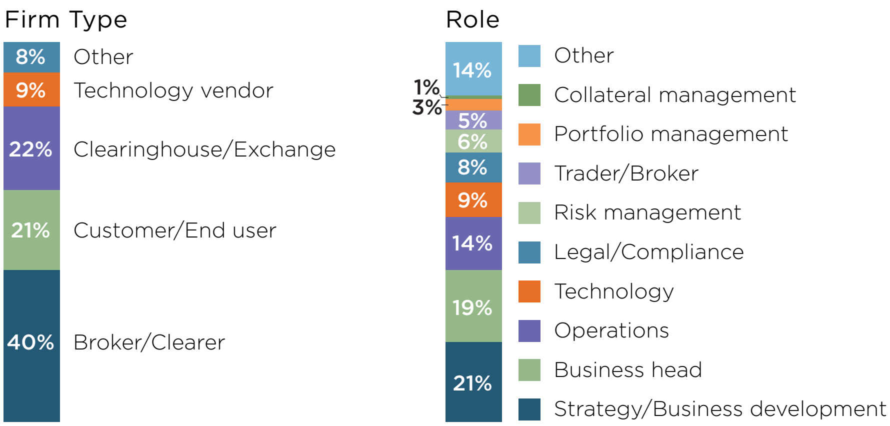
The results painted a picture of an industry with the appetite and opportunity for growth, but also one with challenges many are eager to see overcome. The approaching Libor transition, continued rollout of uncleared margin rules, ongoing concern about capital requirements, and a renewed focus on clearinghouse "skin in the game" are on the minds of most derivatives market participants. Each of these issues contain as many opportunities for the market as complexities and, ultimately, will help the market safely grow as derivatives maintain their critical place in global finance.

The results also provided important insights into the dynamics of derivatives clearing as a business. Clearing firm respondents said they are investing in growth by extending their services into new geographies and expanding the scope of the products they clear. But they are setting a higher priority on making improvements to their internal workflows and client service. That reflects one of the key findings from customers: 64% cited "quality of operational processes" as an important measure for their clearing firm relationships.

Methodology

This research is based on data collected from 189 derivatives market participants between November 2019 and January 2020. Respondents include asset managers, hedge funds, broker-dealers, clearing firms, proprietary trading firms, exchanges, clearinghouses, and other industry participants. Questions asked were about their habits, opinions and expectations for the global derivatives markets in the next 3–5 years. Greenwich Associates collaborated with FIA to both develop the questionnaire and to gather responses from key industry participants.

RESPONDENTS

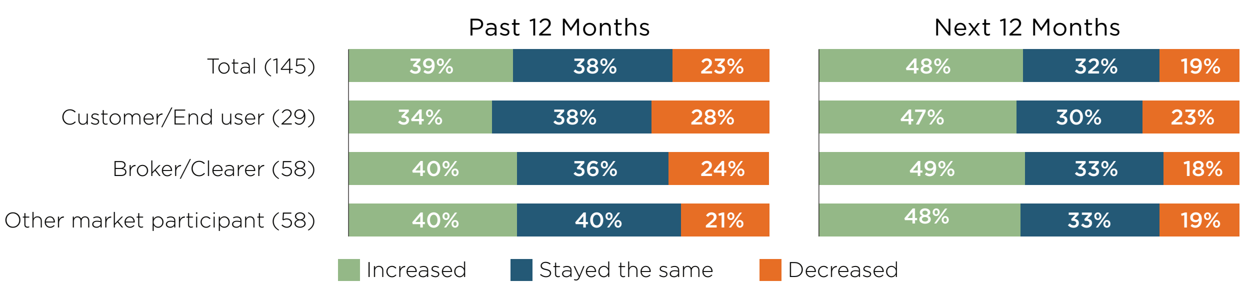


Note: Based on 189 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

Introduction

More than three-quarters of derivatives market participants saw liquidity remain intact or improve in 2019, with over 80% expecting the same for 2020. Furthermore, almost half believe liquidity will improve even more in the next 12 months—a sentiment held by brokers, clearers and investors alike. These results are a strong vote of confidence from the end users, investors, clearers, brokers, traders, and exchanges involved in the global derivatives markets, and complement the more than 36% growth in listed derivatives trading worldwide between 2016 and 2019.

EXPECTED LIQUIDITY OF DERIVATIVES MARKETS



Note: Numbers in parentheses reflect number of respondents. May not total 100% due to rounding.
Source: Greenwich Associates and FIA 2020 Derivatives Study

Nevertheless, concerns and suggestions for improvement still abound. In the aftermath of the financial crisis, the global derivatives markets have become particularly aware of the importance of continually fine-tuning market structure, adhering to new standards for market conduct and ensuring systemic risk is kept at bay. The major focal points leading into the 2020s are vastly different from those of the 2010s, but they remain focused on ensuring safe and efficient markets while keeping liquidity and market access intact.

Capital, Libor and UMR

The cost of capital remains front and center for derivatives market participants. This, of course, is not a new concern but one that has been evolving for at least the past decade after Basel III was approved in November 2010. Since capital calculations include all derivatives-related activities, including the clearing services that banks provide to their customers and the capital that banks contribute to clearinghouse default funds, the rules have a dramatic impact on the economics of clearing. This has caused some clearing firms to reduce their exposure to the clearing business by offloading unprofitable clients or, in some cases, exiting the clearing business altogether.

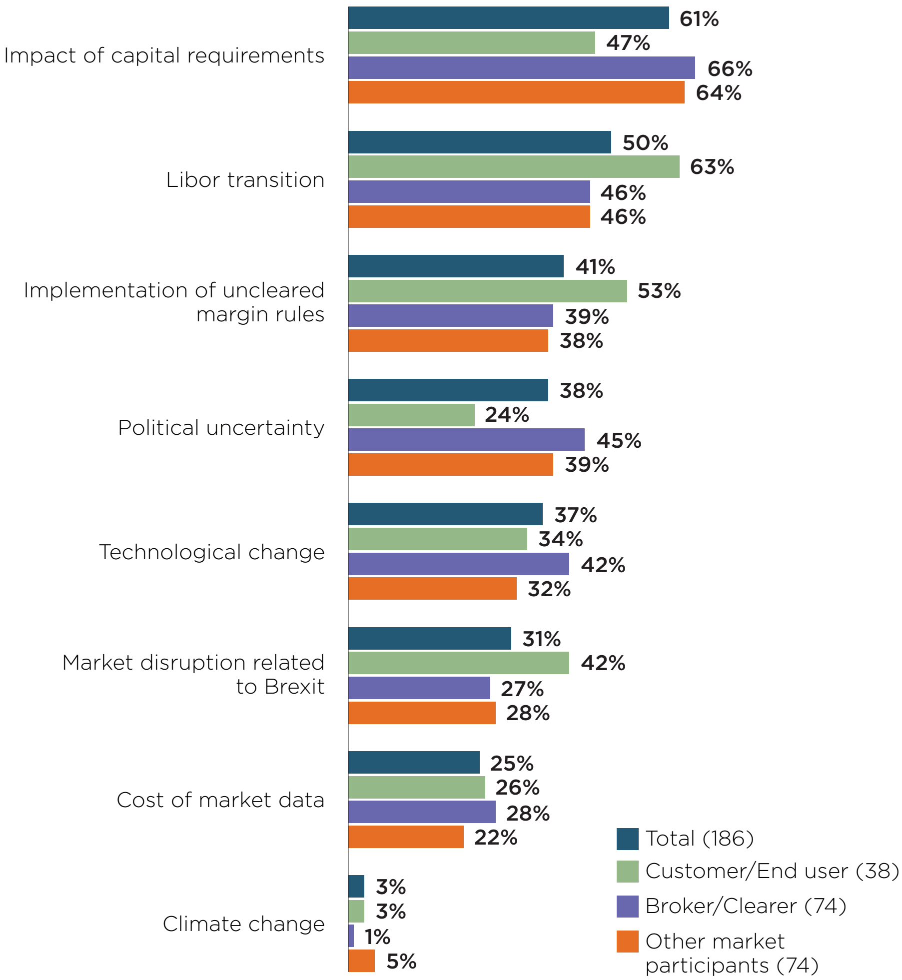
Since capital calculations include all derivatives-related activities, the rules (Basel III) have a dramatic impact on the economics of clearing.

The implementation of those rules is still not fully complete, and market participants continue to grapple with changes made thus far. It is unsurprising that brokers, clearers and clearinghouses (CCPs) see this as a bigger issue than do end users. While the banks' cost of capital ultimately impacts the price end users pay to clear derivatives, managing the complexity of those rules is largely left to the banks.

End users are more focused on the transition away from Libor, expected in 2021, and the implementation of Phases 5 and 6 of the Uncleared Margin Rules (UMR) over the next two years. Both have the potential to impact end users at many levels by, among other things, changing their product mix to include more products linked to alternative reference rates to manage the former and more cleared products to manage the latter.

Market participants are well aware that the transition away from Libor will have a big impact on the interest-rate derivatives markets. But even though regulators expect Libor will come to an end in less than two years, only 21% of end users participating in this study feel prepared and have a migration plan in place.

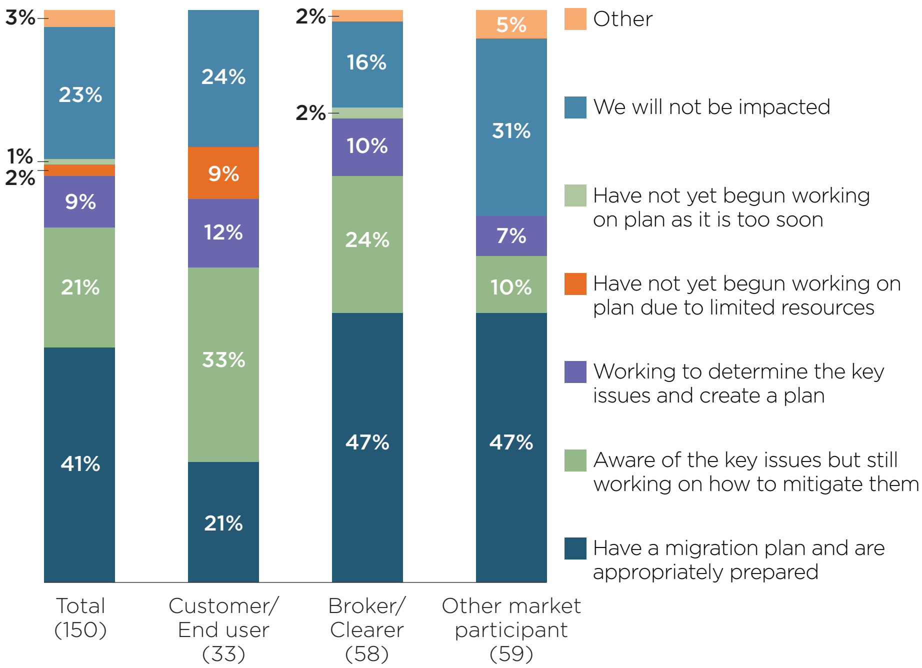
TOP ISSUES FACING GLOBAL DERIVATIVES MARKET TODAY



Note: Numbers in parentheses reflect number of respondents. Top three issues selected.
Source: Greenwich Associates and FIA 2020 Derivatives Study

For end users hedging U.S. interest rates, the transition to SOFR as a Libor replacement poses an additional challenge. SOFR is a fundamentally different index (measuring overnight secured rather than term unsecured funding levels). Some but not all of the current users of the Eurodollar futures contract will be able to hedge with SOFR futures. Given that the Eurodollar is the world's most successful futures complex and has $14 trillion outstanding, even small reductions in volume and open interest because of a hedge mismatch for end users can have large follow-on impacts. This is one of the reasons why end users put the Libor transition at the top of their list of issues facing the global derivatives markets today.

PREPAREDNESS FOR LIBOR TRANSITION



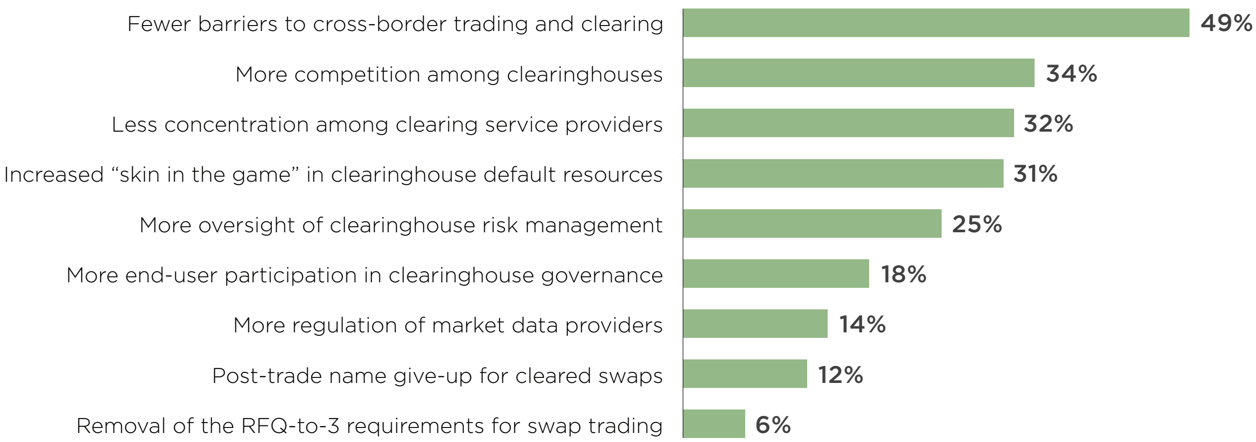
Note: Numbers in parentheses reflect number of respondents. May not total 100% due to rounding.
Source: Greenwich Associates and FIA 2020 Derivatives Study

Uncleared margin requirements are creating different, albeit equally important concerns, for both the sell side and buy side. While the exact number of buy-side firms impacted by UMR is still debated, the complexity of renegotiating long-established derivatives documentation between counterparties and putting in place new third-party custodial agreements has proven extremely time-consuming. Such operational issues are, of course, on top of the real economic impact of posting initial margin in places where it was not required before. The cost of that capital could prove to be a major economic disincentive to using uncleared derivatives.

Market Structure: Potential for Change

The industry's top change request is to lower barriers for cross-border trading and clearing, with end users and exchanges/CCPs in our study pointing here more often than others. Running a truly global business is inherently complex, and having to operate within multiple layers of redundant regulations only adds to that pain. To be fair, finding perfect common ground among global regulatory regimes is no easy task. Each country has its own laws and national issues that make cross-border cooperation and coordination difficult at best, and the U.K's exit from the European Union has made this even more challenging.

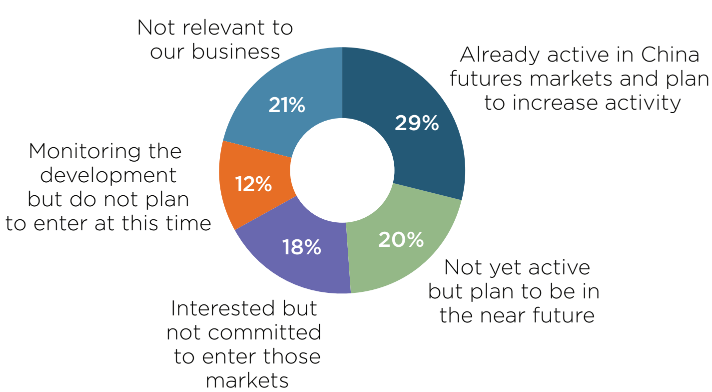
ELEMENTS OF DERIVATIVES REGULATION/MARKET STRUCTURE WITH POTENTIAL FOR CHANGE



Note: Based on 170 respondents selecting top three elements.
Source: Greenwich Associates and FIA 2020 Derivatives Study

The interest in Chinese markets by U.S. and European firms only adds to the importance of efficient cross-border operations. Of our study participants, 29% stated they are already active in Chinese futures, 20% are planning to enter the market soon, while 18% are exploring opportunities there.

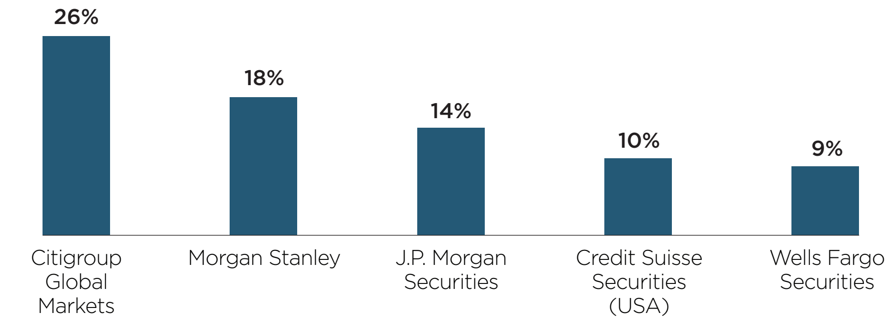
FIRM ACTIVITY WITH REGARD TO CHINA’S FUTURES MARKETS



Note: Based on 135 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

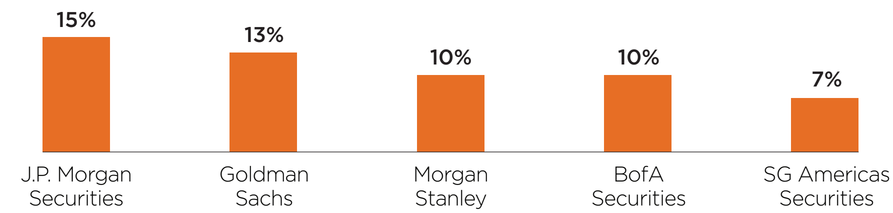
Market participants would also like to see more competition among both clearinghouses (CCPs) and clearing service providers. Case in point: The top five futures commission merchants (FCMs), the term used to describe clearing firms in the U.S., hold 77% of the cleared swap business in the U.S., as measured by customer funds held in segregated accounts as of December 2019. Further, the majority of cleared swaps are handled by three CCPs, CME, ICE or LCH, and most futures contracts can only be traded and cleared in one place.

TOP 5 FCMs BY CUSTOMER FUNDS—SWAPS



Note: Data as of December 2019. Percent measures share of the total amount of customer funds held in segregation.
Source: CFTC, FIA FCM Tracker

TOP 5 FCMs BY CUSTOMER FUNDS—FUTURES



Note: Data as of December 2019. Percent measures share of the total amount of customer funds held in segregation.
Source: CFTC, FIA FCM Tracker

Clearing firms in particular remain focused on clearinghouses having "skin in the game" (SIG) and ensuring the industry has visibility into CCP risk management. Neither issue is new, of course. Greenwich Associates research examined the risk measures put in place by the major clearing-houses back in 2015[1], with many of the key findings still relevant now:

> ***Few debate the importance of SIG. Even the clearinghouses agree that aligning their incentives with those of their members make sense.***

Nevertheless, the debate remains active and was reintensified in the fall of 2019 when a group of large buy- and sell-side firms published a paper in response to a CCP default, again making the case for more clearinghouse SIG and other changes to clearinghouse risk management. We expect this discussion to continue for the foreseeable future.

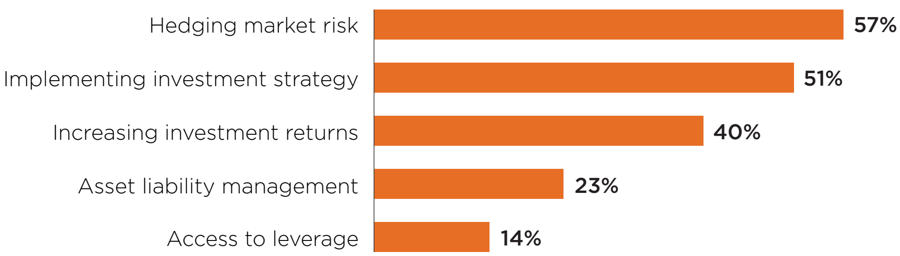
Lastly, we found it interesting that formerly hot-button issues related to swap execution facilities (SEF), namely post-trade name give-up and removal of the RFQ-to-3 requirement, are very low on the list of requested changes. This is particularly notable now as the Commodity Futures Trading Commission (CFTC) has recently proposed eliminating post-trade name give-up and continues to tweak SEF rules, given the data collected since the mandate took effect in 2013.

[1] https://www.greenwich.com/equities/systemic-risk-and-impacts-central-clearing

Understanding Derivatives End Users

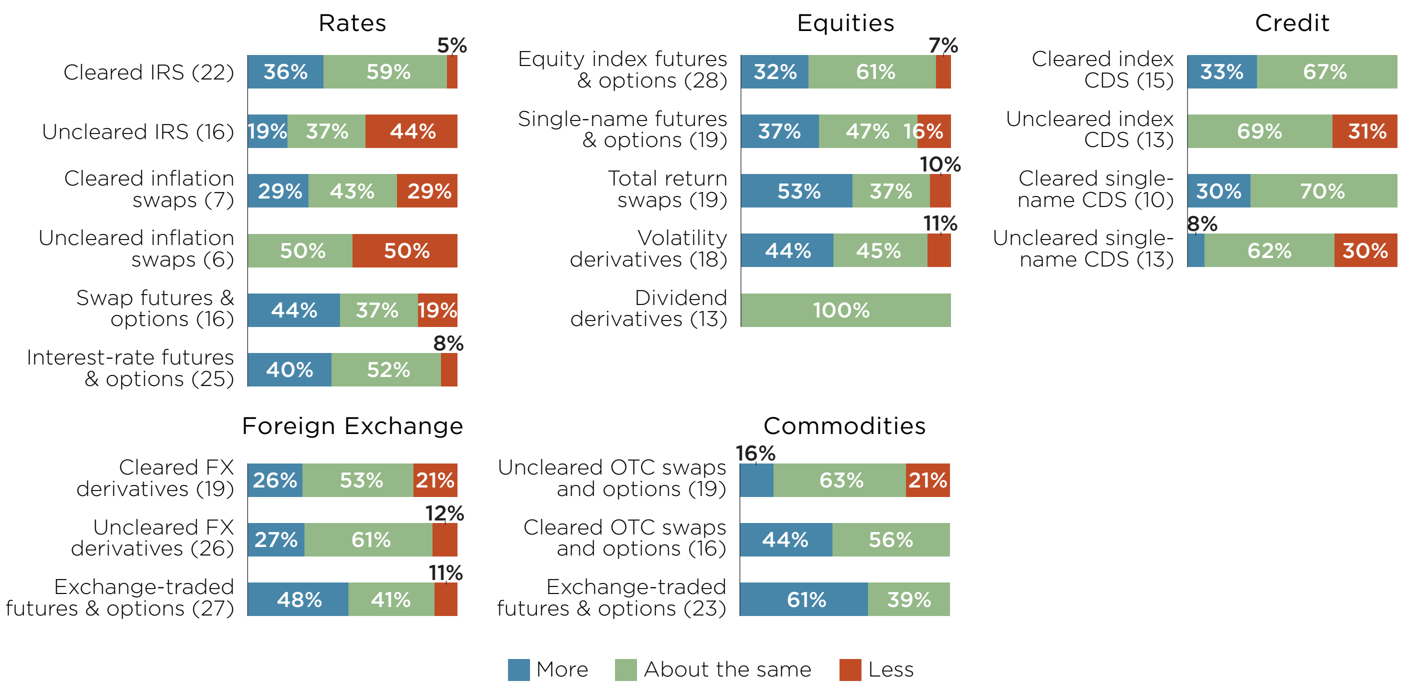
It remains important to continually examine why the end users tap into the derivatives market, particularly as it relates to the market structure's evolution. Hedging market risk, a main driver of the market's creation, remains the top use case. Over half of end users also pointed to using derivatives to implement their investment strategy. Both points should serve to remind us how critical these markets are to the investment community. Derivatives are about much more than gaining leverage and should be more accurately thought of as tools used to put money to work in the most efficient way possible.

END USERS' PURPOSES FOR DERIVATIVES TRADING



Note: Based on 35 end-user respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

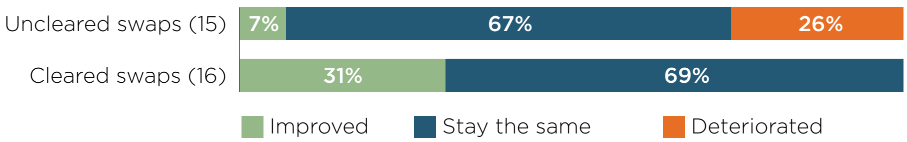
HOW PRODUCT USAGE HAS CHANGED IN THE PAST 12 MONTHS



Note: Numbers in parentheses reflect number of respondents. May not total 100% due to rounding.
Source: Greenwich Associates and FIA 2020 Derivatives Study

Product usage expectations point to a shift away from uncleared to cleared derivatives. For instance, 36% of respondents expect their use of cleared interest-rate swaps to increase in the next 12 months, while 44% expect their use of uncleared interest-rate swaps to decline. For commodity derivatives, 44% of respondents expect their use of cleared swaps and options to increase, and 21% expect their use of uncleared swaps and options to decline.

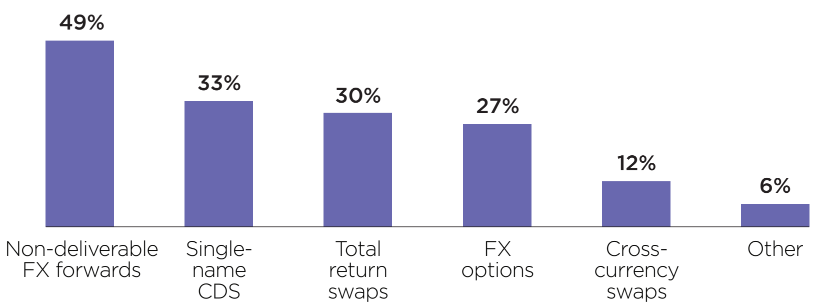
LIQUIDITY CHANGE IN PAST 12 MONTHS WHEN TRADING



Note: Numbers in parentheses reflect number of respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

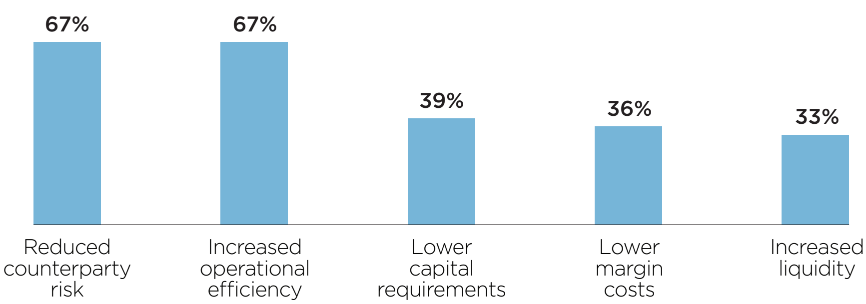
It comes as no surprise then that nearly one-third also expect liquidity in cleared swaps to improve in the coming year, while roughly one-quarter expect liquidity in uncleared swaps to decline. While much of the end users' affinity for clearing thus far has come from reduced counterparty risk and operational efficiency, additional moves toward clearing in the next few years will be pushed along by the phase-in of initial margin requirements on uncleared derivatives as required by UMR.

PRODUCTS WITH POTENTIAL FOR INCREASED AVAILABILITY OF CLEARING OVER NEXT FOUR YEARS



Note: Based on 33 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

ECONOMIC INCENTIVES TO USE CLEARING



Note: Based on 33 respondents selecting up to three incentives.
Source: Greenwich Associates and FIA 2020 Derivatives Study

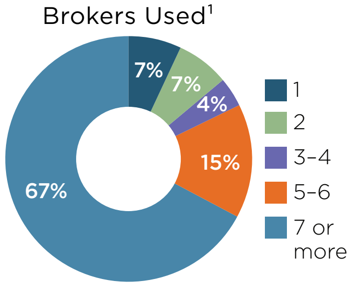
The expected impact of UMR also goes a long way to explain the end users' wish list for increased clearing by product in the next four years. FX non-deliverable forwards (NDF), single-name credit default swaps (CDS) and total return swaps (TRS) are heavily used products in FX, credit and equity markets, respectively, that will see their users posting more initial margin than ever before. This additional cost put on investors is more than enough incentive to begin clearing those products. Cleared NDFs have some traction today. A combination of economic incentives and operational concerns have limited growth among end users thus far, with mostly dealer-to-dealer transactions cleared, given dealer margin and capital requirements. But UMR will likely be a strong enough catalyst to finally bring more buy-side flow into clearinghouses, driving real change.

The Client to Clearer Relationship

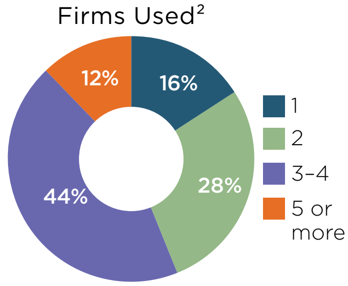
Two-thirds of investors execute cleared derivatives with seven or more firms, while almost three-quarters clear with only between two and four. The barriers to entry for executing brokers are considerably lower than they are for clearing brokers, which has resulted in much more choice for end users, with large dealers, regional dealers and nonbank liquidity providers all offering execution services. To clear those trades, however, there are both fewer choices and fewer incentives for end users to spread their business around. But that is not without good reason.

BROKER AND CLEARING FIRM USAGE

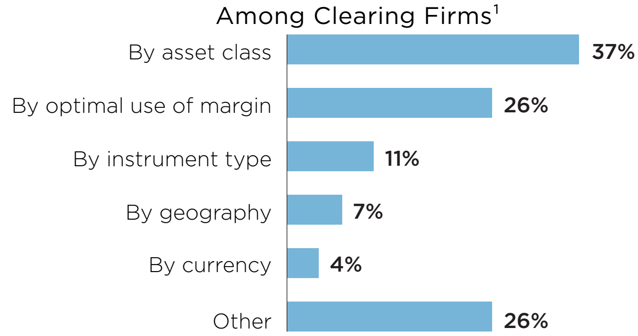
Number of Executing Brokers Used[1]



Number of Clearing Firms Used[2]



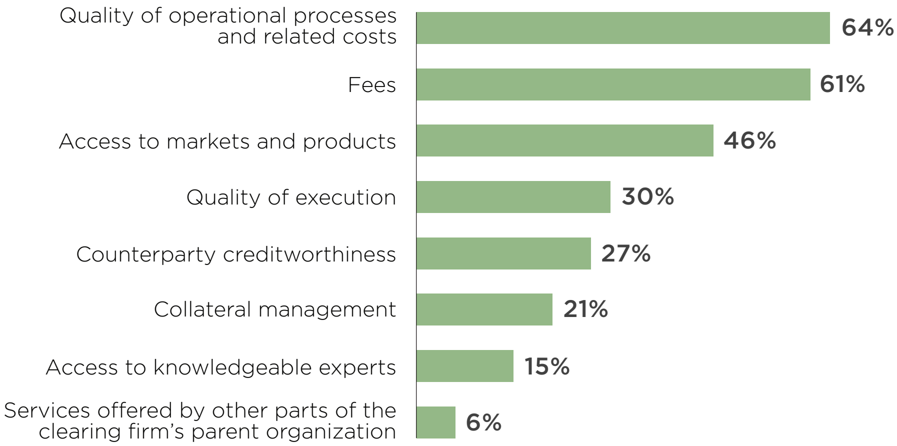
How Positions Are Allocated Among Clearing Firms[1]



Note: [1]Based on 27 respondents. [2]Based on 32 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

End users allocate their business across clearing firms primarily by asset class and in such a way that margin use is optimized. Those two things are inextricably linked, given the largest margin offsets come within each asset class bucket—between interest-rate swaps and futures positions, for example. Clearing services may also be part of a larger offering that could include access to cash products and/or funding services. As such, clearing those positions through a single FCM is often the best choice.

KEY QUALITY MEASURES FOR CLEARING FIRM RELATIONSHIPS

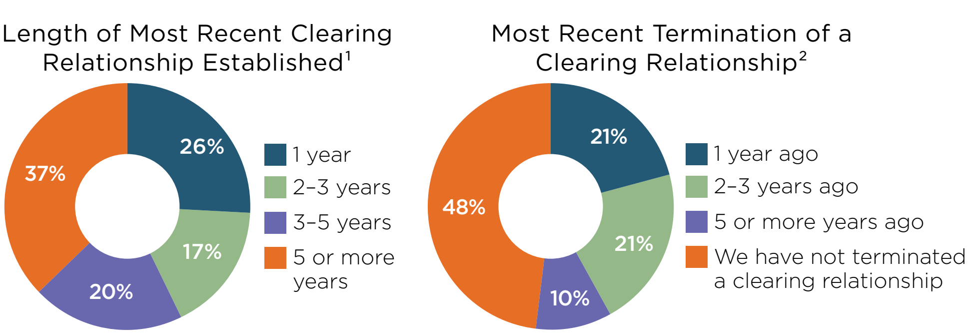


Note: Based on 33 respondents selecting up to three quality measures.
Source: Greenwich Associates and FIA 2020 Derivatives Study

It is also much more operationally efficient for end users to manage their clearing costs, margin requirements, risk, and operational infrastructure with a limited number of entities. That explains why the quality of the operational processes of an FCM is the top measure for derivatives users. Clearing at its heart is a post-trade, risk-reduction tool that is expected to work flawlessly. It is not surprising that fees also matter. It is true that the clearing business is concentrated among a few firms, but the competition remains fierce, and pricing remains a part of that battle.

Breadth of products available for clearing is also important. In a world where most end users prefer to have a limited number of clearing relationships, they need to work with those firms that allow them to clear every product they hope to trade. This is particularly true within each asset class, given the importance of clearing products with cross-margining opportunities with the same clearing firm. It is important to note that breadth is less important for executing brokers, where achieving best execution is key. Executing brokers with regional or product expertise can be the best route to achieving best execution, with those trades still cleared via the end users' clearing firm of choice.

CLEARING RELATIONSHIP LENGTH AND TERMINATION



Note: [1]Based on 30 respondents. [2]Based on 29 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

Ultimately, end users' satisfaction with the clearing broker community is quite high. Nearly half of study participants have never terminated a clearing relationship, and 57% established their newest clearing relationship three or more years ago. While it is operationally complicated to change clearers from both a technology and business perspective, end users are not afraid to make a change when the economic incentives tell them they should.

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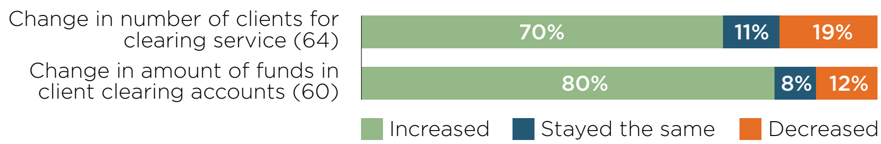
The Sell-Side Perspective

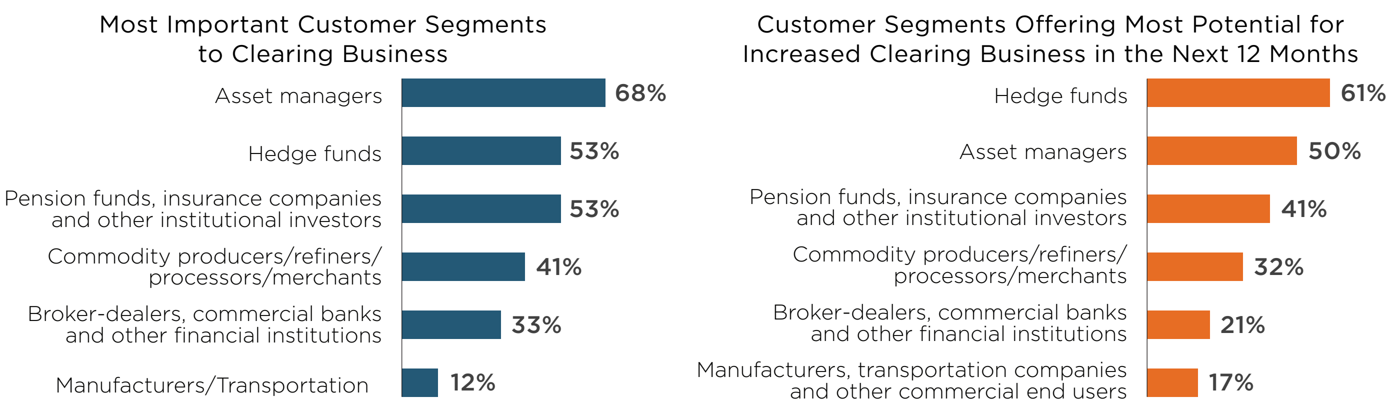
These trends have been good for the clearing firms. Seventy percent report that they have increased the number of clients for their clearing service in the past five years, and 80% saw an increase in the total funds held in client clearing accounts in the same period. This reflects the increased usage of clearing for derivatives and the growing use of derivatives in most parts of the world.

CLIENTS AND FUNDS IN CLEARING ACCOUNTS—PAST 5 YEARS



Note: Numbers in parentheses reflect number of respondents from clearing firms and other intermediaries.
Source: Greenwich Associates and FIA 2020 Derivatives Study

MOST IMPORTANT CUSTOMER SEGMENTS TO CLEARING BUSINESS



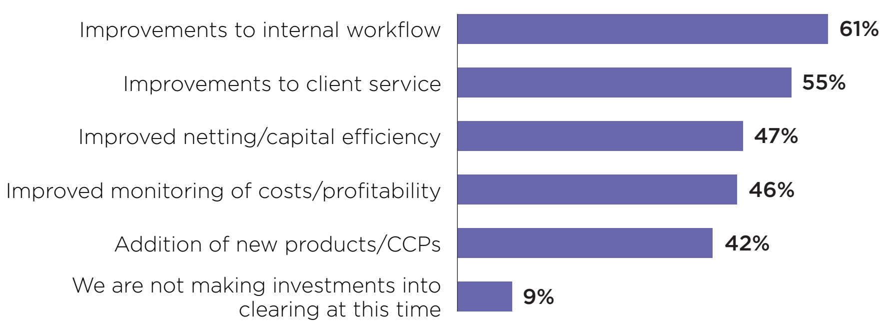
Note: Based on 66 respondents selecting up to three segments.
Source: Greenwich Associates and FIA 2020 Derivatives Study

Asset managers are seen as the most important customer segment ahead of hedge funds, pensions and other derivatives users. Their generally larger assets under management and diverse portfolio types generate notable fees for the FCMs that service them. Looking forward, FCMs see hedge funds as offering the most potential for new business. While their cleared balances are often smaller, they generally turn over their portfolio more frequently than other customer types. This may reflect optimism for active management in general.

From a regional perspective, the majority of growth is expected to come from outside of the U.S., particularly in Asia-Pacific and continental Europe. The growth of Chinese markets and post-Brexit landscape both bring the potential of new clients and new products.

Of course, taking advantage of these growth opportunities requires continued investing in the business. Unsurprisingly, 91% of sell-side respondents are actively investing in their clearing business. Those investments are collectively focused on improving the customer experience, with improvements to internal workflows and client service topping the list. The next three areas slated for improvement all align with how clients judge their clearing-firm relationships: improvements to netting/capital efficiency, monitoring of costs/profitability (which can, in turn, lead to the lowest possible fees for clients) and the addition of new products/clearinghouses, which expands product breadth.

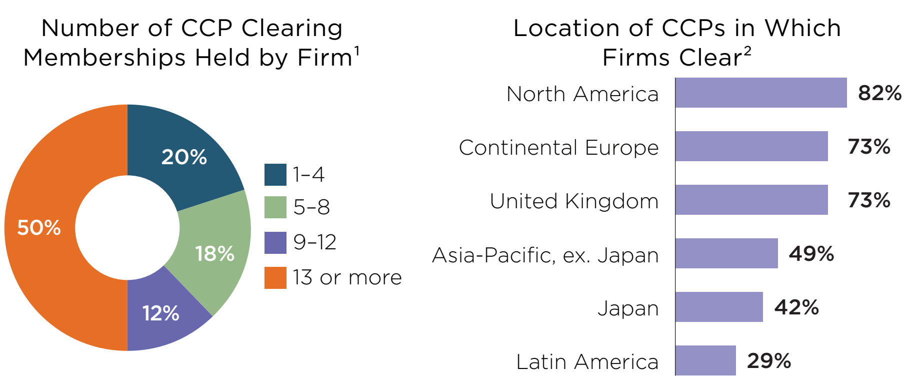
INVESTMENT AREAS FOR DERIVATIVES CLEARING FIRMS



Note: Based on 66 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

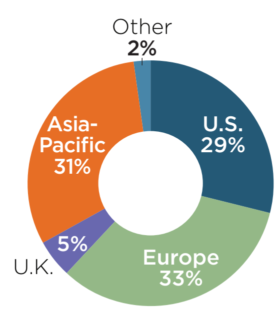
The clearing business went through a revolutionary change 10 years ago, and we do not expect to see a new revolution in this decade. However, the influx of new technology into capital markets, coupled with the sell side's focus on increasing profitability through efficiency, should result in improved service for end users and a more sustainable business for the clearing firms going forward.

NUMBER AND LOCATIONS OF CCP CLEARING MEMBERSHIPS



Note: [1]Based on 50 respondents. [2]Based on 66 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

REGION WITH HIGHEST GROWTH POTENTIAL FOR CLEARING BUSINESS IN NEXT 12 MONTHS



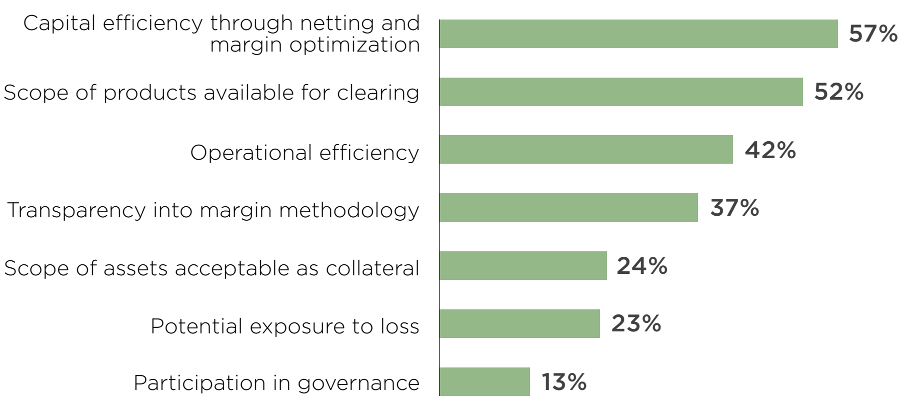
Note: Based on 58 respondents.
Source: Greenwich Associates and FIA 2020 Derivatives Study

While the largest clearinghouses in the world account for a huge portion of the overall market, half of the FCMs involved in this study are members at 13 or more clearinghouses. This speaks to the client demand for FCMs to provide access to as many financial products as possible. The FCMs, in turn, are then tasked with managing those CCP relationships.

Many of the same factors end users consider when evaluating the quality of their clearing firms are also used by the clearing firms to evaluate their CCP relationships. Capital efficiency through netting and margin optimization, product scope/breadth and operational efficiency are all top metrics.

Focus on margin methodology and acceptable collateral are also quality metrics, although both are extensions of the top metric—capital efficiency via netting and margin optimization. However, it is also important to note that these quality metrics are not just about reducing costs and the amount of capital tied up in the clearing process, but also about gaining a robust understanding of CCP risk processes.

KEY FACTORS IN MEASURING RELATIONSHIP QUALITY WITH CCPs



Note: Based on 62 respondents selecting up to three factors.
Source: Greenwich Associates and FIA 2020 Derivatives Study

The post-crisis reforms moved much of the risk in derivatives markets out of bank balance sheets and into clearinghouses, greatly increasing their systemic importance. In recognition of this fact, global regulators have developed a more comprehensive and rigorous set of standards for these clearinghouses. Over the last decade, the leading CCPs have improved many areas of their risk management. Nevertheless, given the amount of risk CCPs are entrusted with managing, a continual push for transparency and refinement is called for and is broadly healthy for the market as a whole.

Looking Forward

Cleared derivatives are an integral part of the global capital markets. For those in the industry, their usefulness is old news. For the sake of completeness, however, it is always worth restating that derivatives help a wide range of end users manage risks and improve returns.

Changes to the market structure that came out of the financial crisis were a net positive for the market as a whole, despite the cost and complexity of making those changes. Looking ahead, the market will continue to focus on the cost of capital—both what it does to encourage/discourage certain behaviors and how well risk can be managed without making certain types of transactions unaffordable. The Libor transition is also a big deal. While the transition certainly creates a burden for market participants, it also creates tremendous opportunity for those able to help their clients adapt. Futures, swaps and options products tied to new reference rates around the world are poised for growth, with some likely to become as critical to the market's functioning as existing benchmark products.

Operational efficiency will be key to the industry's continued success. For clients, this is a top priority—more important than even fees. Clearing firms are well aware of this, and in the coming years, the investments they are making to improve the quality of their internal workflows and client service will start paying off. Ultimately, a more efficient end-to-end trading and clearing process driven by technology innovation will ensure growth over the next decade and beyond.

The market will continue to focus on the cost of capital—both what it does to encourage/discourage certain behaviors and how well risk can be managed without making the market unaffordable.

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