INTELLIGENCE ON BUSINESS, TECHNOLOGY AND REGULATION IN THE CLEARED DERIVATIVES INDUSTRY 12.2020

FIA MARKET VOICE

Fintech's Breakthrough Innovators

TRACKING THE SUCCESS OF FIVE STARTUPS FROM FIA'S FIRST INNOVATORS PAVILION

ALSO: Riskfuel Named FIA's 2020 Innovator of the Year.

INSIDE:

China Opens Markets Further
Seventh international futures contract to launch in China as barriers are lowered for overseas investors

A View from the Top
CFTC Chairman Heath Tarbert discusses digital assets, self-regulation, and relations with Europe

A Closer Look at Margin
FIA white paper measures the impact of pandemic volatility on CCP margin requirements

FIA Features

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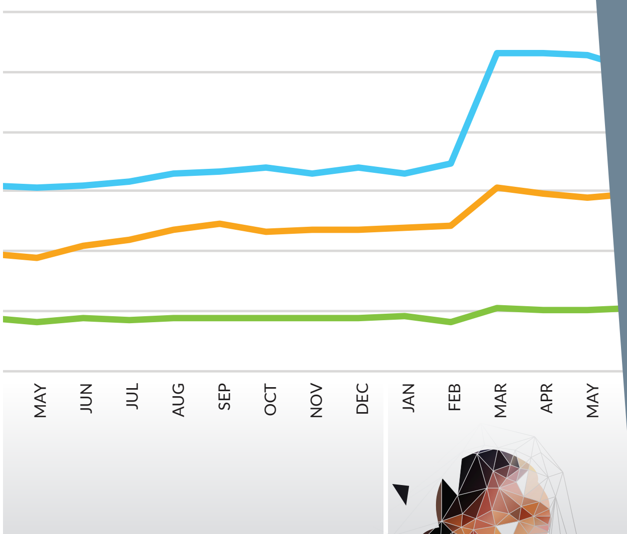

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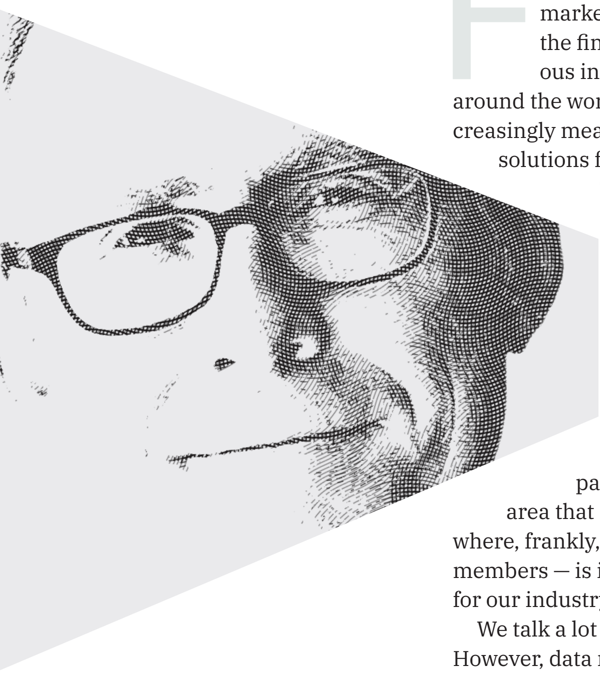
BY WALT LUKKEN, PRESIDENT AND CEO OF FIA

Prioritizing Data Standardization

FIA's "Tag 1031" effort to resolve brokerage rate issues is an important example of industry-led solutions



FIA's core mission is to support open, transparent and competitive derivatives markets, and to protect the integrity of the financial system. This is most obvious in our work with various regulators around the world; however, FIA's mission increasingly means we are supporting industry-led solutions for our members, too.

There are numerous examples of recent achievements on this front, from FIA's efforts this spring supporting and monitoring industry actions related to COVID-19 to our annual industry-wide disaster recovery exercise that tests business continuance, process recovery and connectivity for market participants. But one ongoing work area that is particularly important — and where, frankly, FIA needs cooperation from its members — is in regards to data standardization for our industry.

We talk a lot about the importance of data. However, data must be reliable and standardized to truly provide value to market participants. Inconsistencies at best cause extra friction and complexity, and at worst can result in costly errors or increase market risk by providing incorrect signals.

Standardizing data is never an easy task, as multiple independent stakeholders must come together and agree on a shared format. However, FIA is uniquely positioned to facilitate this process because we understand the perspectives of a wide variety of market participants. And thanks to our long history of working with members of all shapes and sizes and geographies, the industry trusts us to safeguard the integrity of the derivatives ecosystem as a whole.

And at a higher level, data standardization efforts can be important exercises in creating proactive, industry-led solutions. We can all agree that it is preferable to voluntarily improve our cleared derivatives ecosystem rather than simply wait for the burden of strict regulatory mandates.

It's for these reasons that we are calling upon our industry to continue its work on the FIA Execution Source Code, aka "Tag 1031." While we've made progress, it's crucial we retain focus on this important effort.

Tag 1031 is an FIA-led initiative in conjunction with FIA Tech, and aims to provide futures industry participants with a standardized data schema that identifies the execution method used for exchange traded derivative trades at their point of origin. This allows executing and clearing brokers to easily reference the appropriate brokerage rate for the execution method.

We can all agree that it is **preferable to voluntarily improve** our cleared derivatives **ecosystem** rather than simply **wait for the burden** of strict regulatory **mandates**.

On the surface, it may sound like these Tag 1031 source codes are simply about facilitating efficient brokerage settlement in an increasingly complex world of execution services, platforms and providers. But the Execution Source Code initiative is also about crucial operational priorities for FIA — including data standardization, reducing friction for market participants and bringing our industry together to solve our collective problems.

Our industry has thrived by providing derivatives market participants a wide range of choices across technology, brokerage and clearing providers. Standardization efforts like Tag 1031 provide a shared foundation that allows for the "unbundled" services that are a great strength for our industry, allowing for healthy competition and customer choice.

To date, derivatives markets have already made significant progress on this issue. CME Group, the largest futures exchange in the US, achieved full implementation of Tag 1031 in November 2019, and Eurex, the largest futures exchange in Europe, went fully live in support of the Execution Source Code in November.

But we still have a long way to go. Until all derivatives exchanges and service providers support this initiative, significant brokerage settlement problems will persist. And that leads to a higher increase in top-day trade breaks and discrepancies in brokerage.

We strongly encourage exchanges and service providers to prioritize the Tag 1031 effort both because of its tangible impact on reducing friction

The **Execution Source Code initiative** is also about **crucial operational priorities** for FIA — including data standardization, reducing friction for market participants and **bringing our industry together** to **solve our collective problems.**

in brokerage settlement, but also because it's an important exercise in building a comprehensive, industry led solution on a front-to-back issue.

Equally important, we need widespread adoption among the firms that execute and clear trades for customers. Several of the world's largest futures brokers have fully implemented Tag 1031 in their order entry and trade processing systems, and I encourage the rest of the community to follow their lead.

At FIA, our members come first, and that's where we find our priorities. And it's clear that a host of our members across the trading cycle are impacted by these issues — even if some are only affected in small ways. MV

The Exchange

INDUSTRY NEWS, REGULATORY DEVELOPMENTS, TECHNOLOGY ADVANCES AND DATA TRENDS

A Focus on Operations and Technology

A roundup of recent FIA-led efforts that address short-term challenges as well as long-term, strategic issues for the cleared derivatives industry.

BY JEFF REEVES

CCP workstream focuses on preventing future give-up trade backlogs

FIA's new CCP engagement workstream held its first meetings in the US and EU this summer, and developed an initial list of recommendations for improving processing and capacity issues identified by spikes in both volume and volatility earlier this year. CCPs in the APAC region will also be consulted in the near future, and FIA will continue to gather feedback with the goal of providing clear recommendations to improve clearing operations.

Discussions included potential causes of give-up trade backlogs in times of market stress, and potential industry recommendations to prevent these backlogs in the future. Specifically, FIA has prioritized a number of short-term recommendations that include broader sharing of FIA's trade break escalation contact list and a CCP engagement protocol that includes improved processing capacity on the day of trade as well as T+ processing improvements.

FIA issues call for data standardization, via focus on "Tag 1031"

FIA published an open letter to industry leaders urging market participants to prioritize industry-led data standardization solutions, including encouraging further adoption of FIA Execution Source Code, aka "Tag 1031."

The joint letter from FIA President and CEO Walt Lukken and FIA chairman Nick Rustad notes that "the Execution Source Code initiative is also about crucial operational priorities for FIA—including data standardization, reducing friction for market participants and bringing our industry together to solve our collective problems."

Market Structure Committee provides new forum for all member firms

FIA has created a new Market Structure Committee, managed from Europe and open to all members, with the goal of providing a monthly forum for firms to explore key issues in this important area. Current work areas include:

- Operational resilience
- Cyber security
- Operations and execution

Exchanges and other market participants will have the opportunity to engage directly with each other to bring forward challenges and potential opportunities worthy of future discussion. Members interested in joining the Market Structure Committee should contact forums@fia.org.

FIA coordinates industry preparedness for election volatility

In response to concerns that the US Presidential elections could trigger volatility, and considering the challenges firms faced during March's Covid-19 related volatility, FIA organized a series of industry wide calls to discuss preparedness. On 29 October, FIA held a call with the US Operations Board, the European Operations Committee and representatives from exchanges and CCPs where it was agreed to hold daily clearing members check-in calls during the first week of November. During this call, FIA members expressed a

Sign Up for FIA's Monthly OpsTech Email

FIA recently launched a monthly email service to better inform its technology and operations members of our recent work in these important areas. If you would like to join the distribution list, please contact **Jeff Reeves at jreeves@fia.org**.

preference for CCPs to extend clearing windows when needed and agreed to use a standard template for communicating and resolving trade breaks. Additionally, FIA updated and circulated a contacts list covering:

- Top-day clearing
- T+ clearing
- Escalation contacts
- Deliveries,
- Brokerage

The check-in calls during the first week of November were well attended with upwards of 50 participants joining and proved their worth when dealing with an issue with give-ups/take-ups that occurred at one exchange.

70 firms participate in 17th annual FIA Disaster Recovery Test

On 24 October, FIA's Market Technology Division hosted a coordinated global industry effort to test business continuance, process recovery, connectivity and functionality between exchanges, clearinghouses and their member firms, and vendors. Participants were provided with an opportunity to test the resiliency of their trading infrastructure by conducting order entry from alternate recovery sites and verifying connectivity with exchanges and clearinghouses.

A total of 20 exchanges and clearinghouses participated along with 64 FCMs, 5 vendors and 1 regulatory body.

Cybersecurity 'war room' scenario simulates response to data center loss

More than 30 representatives across 18 different member firms took part in FIA's fourth annual cybersecurity "war room" scenario on 10 November. This year's scenario involved a major co-location data center loss that poses a potential systemic risk to the futures markets and its participants. Via moderated breakout sessions, participants discussed the business technology and regulatory impacts of the disruption as well as the potential responses and resolutions.

John Rapa, managing partner and CEO at Tellefsen and Company, was the moderator again this year. Janet Guido of ABN AMRO, Mike Phillips of vSEC LLC and Dan Vohasek of ICE also assisted as breakout room leaders.

Experts say industry should prioritize same-day trade processing/give-up acceptance

Bouts of extreme volatility, record volume, and market stress hit the market in early 2020 in the wake of the COVID-19 pandemic. However, participants at an FIA Expo panel on 11 November noted that this real-world stress test of the clearing industry provided an important opportunity to identify core areas that need enhancement and modernization.

Some of the primary lessons learned, according to panelists, were a need to focus on transparency, standardization and a commitment to prioritizing same-day trade processing/give-up acceptance to prevent backlogs. A survey of the Expo audience also clearly identified operational risk management and processing efficiency as the biggest areas of future concern for market participants.

Survey of market participants shows most were "well prepared" for COVID disruptions

FIA recently conducted a survey of member firms to determine their level of pandemic preparedness and response planning in advance of the COVID-related disruptions in March and April, how they coped with a remote workforce and any problems they encountered.

Among other findings, the survey determined that more than half of respondents began communicating a response plan to staff as early as January or February. More than half also reported no problems with collaboration tools such as Zoom or VPN clients. On a scale of 1 to 5, where 1 was not well prepared and 5 was very well prepared, the average score among survey respondents for their firm was more than 4.3. However, on the same scale they only rated key service providers' preparedness a 3.5.

The survey also found that 85% of firms have an emergency notification system or call tree, and 75% of firms coordinated their responses with local agencies, regulators or other entities. MV

Data

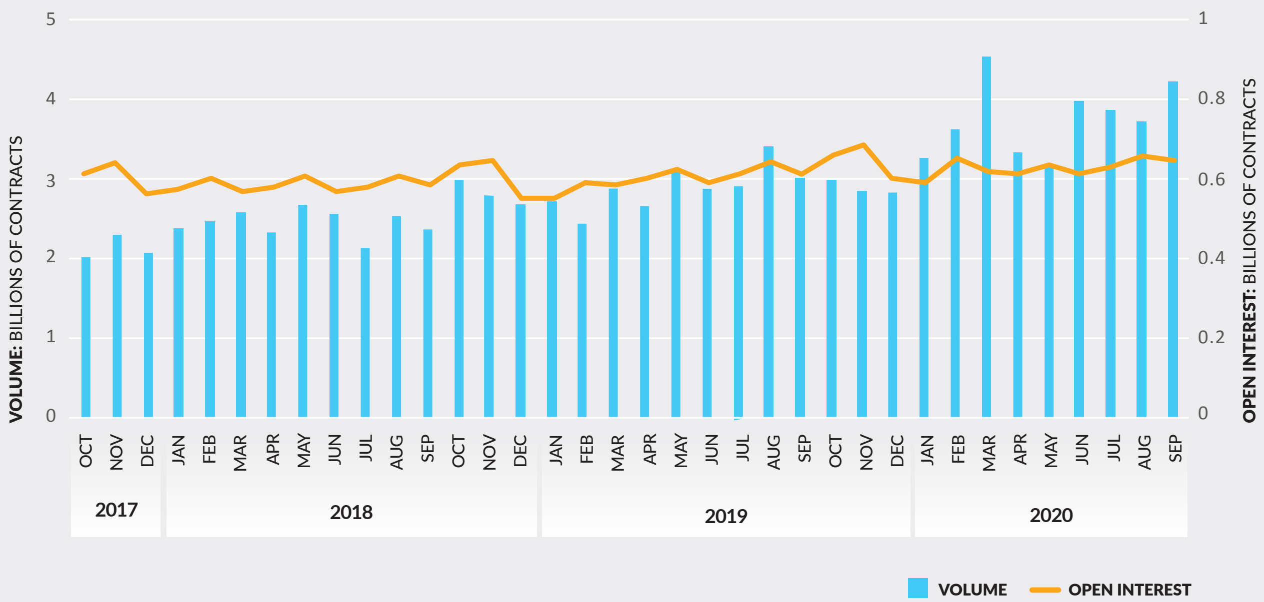
Top 15 Exchanges

Ranked by number of futures and options traded in September

RANK	EXCHANGE	Volume	Y/Y Change	Open Interest	Y/Y Change
1	National Stock Exchange of India	849,520,763	48.8%	10,513,340	16.8%
2	B3	598,319,828	85.7%	118,826,424	21.2%
3	CME Group	355,654,545	-9.9%	88,894,632	-30.2%
4	Intercontinental Exchange *	248,547,883	23.0%	77,748,138	-3.6%
5	Nasdaq *	233,945,977	65.6%	5,563,159	-46.7%
6	Dalian Commodity Exchange	223,061,222	95.2%	9,590,558	46.1%
7	CBOE Holdings *	218,222,662	32.7%	274,577	-34.3%
8	Shanghai Futures Exchange	205,801,617	41.6%	6,136,080	14.3%
9	Korea Exchange	190,282,601	77.2%	10,537,225	13.9%
10	Moscow Exchange	187,178,401	22.5%	9,880,208	-12.2%
11	Zhengzhou Commodity Exchange	184,451,188	118.5%	6,370,877	67.8%
12	Eurex	162,710,919	-12.3%	143,681,934	-4.0%
13	Borsa Istanbul	123,346,388	245.9%	13,510,258	193.0%
14	Bombay Stock Exchange	94,147,850	10.1%	1,059,407	0
15	Miami International Holdings *	86,720,980	140.7%	N/A	N/A
	ALL EXCHANGES	**4,237,512,105**	**41.2%**	**964,849,769**	**5.4%**

* Open interest does not include equity options cleared by OCC

Global Futures and Options Trading



Top 10 SEFs

Ranked by latest quarterly trading volume, in billions of dollars of notional value

RANK	SEF	Credit	Y/Y	FX	Y/Y	Rates	Y/Y	Total	Y/Y
1	NEX			192.10	-36.5%	10651.497	-9.3%	10843.58	-10.0%
2	Tullett Prebon	101.44	-31.8%	10502.68	-7.4%	7484.42	-29.7%	8636.13	-27.6%
3	Tradeweb	470.15	-2.1%			7713.32	-45.2%	8183.48	-43.8%
4	BGC	.34	-87.2%	791.50	-9.5%	2879.80	-14.1%	3671.65	-13.2%
5	Bloomberg	1439.29	-30.1%	165.47	67.3%	1835.18	-47.0%	3439.95	-38.8%
6	Tradition	20.80	-36.6%	678.95	-6.8%	1,644.42	-26.8%	2344.17	-22.1%
7	GFI	4.40	-63.5%	478.58	-21.3%	774.83	318.6%	1257.81	56.2%
8	Dealerweb					1248.21	19.9%	1248.21	19.9%
9	IGDL					1021.83	-48.5%	1021.83	-48.5%
10	TR			101.74	-22.5%			101.74	-22.5%
	ALL SEFS	**2041.08**	**-25.8%**	**3476.90**	**-10.7%**	**35311.97**	**-27.7%**	**40,829.95**	**-26.4%**

Source: FIA SEF Tracker

Top 15 FCMs in the US

Ranked by total customer funds* at the end of the most recent quarter

RANK	FCM	Futures	Y/Y Change	Part 30	Y/Y Change	Swaps	Y/Y Change	Total	Y/Y Change
1	JP MORGAN SECURITIES LLC	49.10	103.8%	6.44	33.9%	19.82	23.2%	75.37	67.5%
2	MORGAN STANLEY & CO LLC	25.26	48.6%	7.32	36.3%	26.03	19.1%	58.61	32.5%
3	GOLDMAN SACHS & CO LLC	33.54	52.2%	9.97	13.7%	10.33	32.8%	53.83	39.5%
4	CITIGROUP GLOBAL MARKETS INC	15.14	42.2%	3.91	22.3%	34.63	8.3%	53.68	17.2%
5	BOFA SECURITIES INC	23.34	43.6%	4.88	20.0%	9.64	5.9%	37.86	28.7%
6	CREDIT SUISSE SECURITIES (USA) LLC	6.93	31.7%	4.75	26.8%	12.19	-3.0%	23.87	10.6%
7	BARCLAYS CAPITAL INC	8.93	50.2%	3.45	-5.2%	9.19	20.8%	21.58	25.5%
8	SG AMERICAS SECURITIES LLC	14.13	1.2%	5.96	4.6%	0.93	35.2%	21.03	3.3%
9	WELLS FARGO SECURITIES LLC	3.98	11.8%	0.49	-2.8%	14.51	30.2%	18.99	24.8%
10	UBS SECURITIES LLC	6.67	35.7%	0.92	-28.4%	0.76	-12.3%	8.36	18.1%
11	MIZUHO SECURITIES USA LLC	5.59	25.8%	0.83	3.3%	0.00	-100.0%	6.42	22.3%
12	BNP PARIBAS SECURITIES CORP	4.04	52.8%	0.21	-1.3%	1.86	52.8%	6.10	50.1%
13	INTERACTIVE BROKERS LLC	5.37	32.7%	0.58	14.6%	0.00	NA	5.95	30.7%
14	HSBC SECURITIES USA INC	3.79	51.6%	0.12	-10.0%	1.45	29.0%	5.35	42.7%
15	ADM INVESTOR SERVICES INC	4.96	16.0%	0.27	-5.1%	0.00	-100.0%	5.23	14.7%
	ALL FCMS	**244.82**	**46.8%**	**51.80**	**16.4%**	**142.13**	**15.8%**	**438.75**	**31.4%**

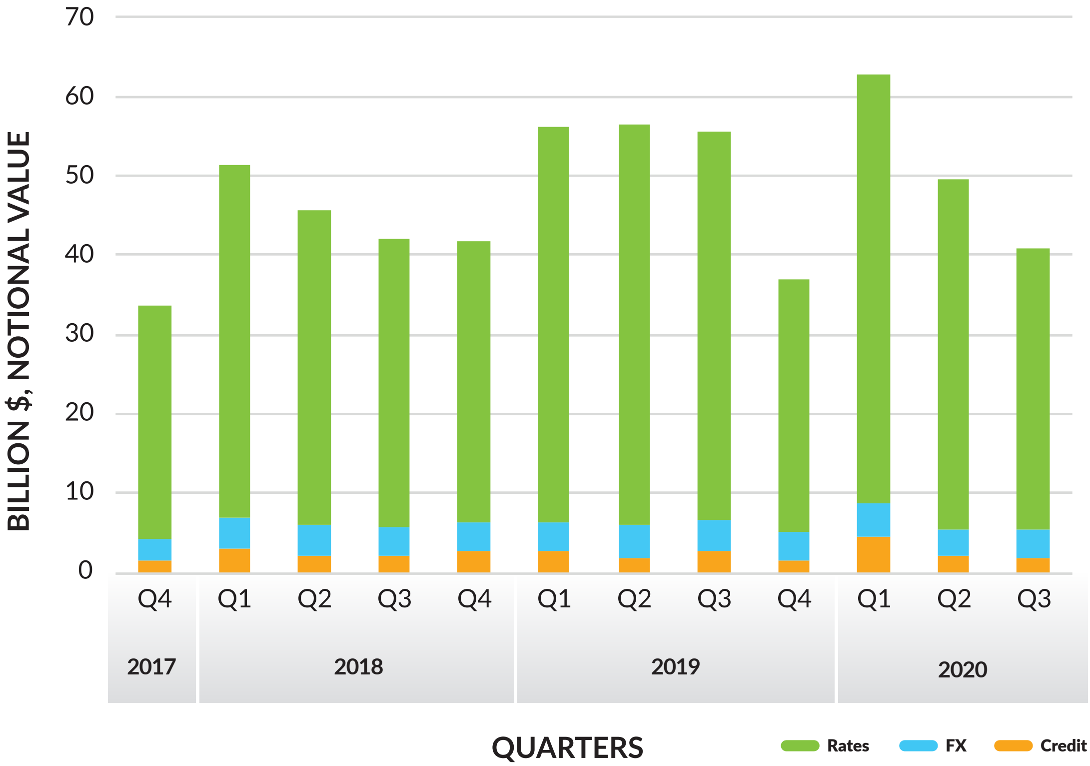
Source: FIA FCM Tracker

Note: Customer funds data include only the amounts that FCMs are required to hold in segregated accounts. Proprietary funds deposited in customer segregated accounts are not included.

Note: Futures represents customer funds held for futures and options traded in the U.S. Part 30 represents customer funds held for trading outside the U.S. Swaps represents customer funds held for cleared swaps.

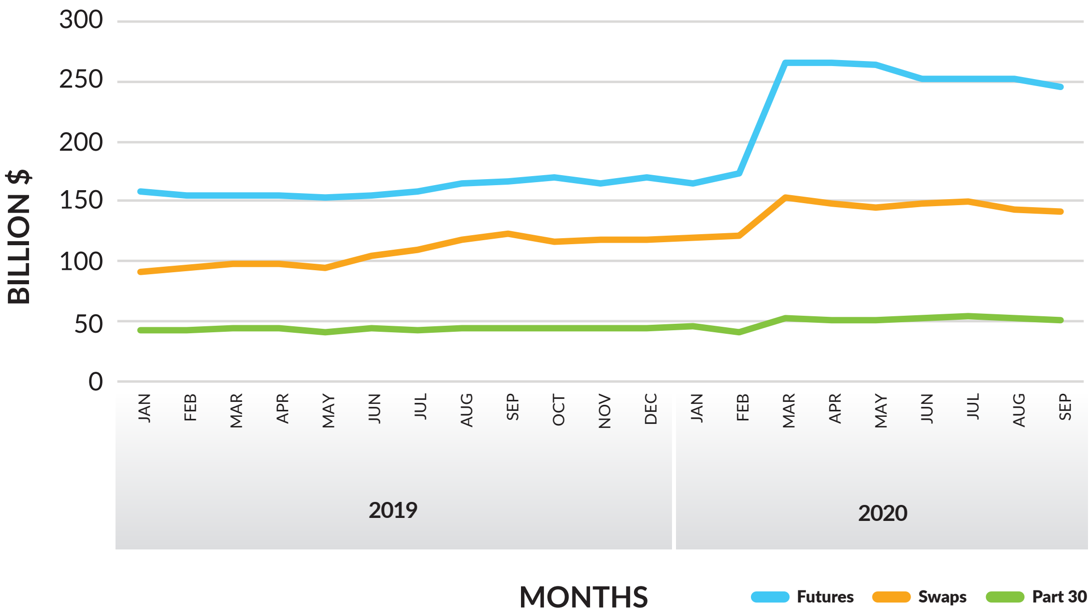
*Numbers are in USD billions

SEF Volume by Quarter



Source: FIA SEF Tracker

Customer Funds at US FCMs



Source: FIA FCM Tracker

FEATURE

Fintech's Breakthrough Innovators

FIVE SUCCESS STORIES FROM FIA'S FIRST-EVER SHOWCASE FOR STARTUPS SHOW FIRMS MAKING A MARK IN DERIVATIVES MARKETS

BY JEFF REEVES AND KIRSTEN HYDE

Five years can be an eternity in the life of a startup. And as FIA's Innovators Pavilion celebrates another year of showcasing the next generation of technological solutions for the derivatives industry, it is worth looking back at the first class of FIA Innovators five years ago to see how the fintech landscape has evolved in the intervening years.

In 2015, FIA welcomed 20 companies to its first-ever showcase for fintech startups. The group featured a wide array of offerings, from artificial intelligence technologies designed to improve trade processing and surveillance, to big data solutions that help brokers and trading firms manage data more efficiently, to back-end tools for traders and IT professionals that simply make markets easier to navigate.

Not all of them survived. Some were unable to gain traction and ceased operations. Others were acquired or restructured. But the following five stand out for their success in turning an innovative idea into reality.

ASCENT TECHNOLOGIES

Ascent Technologies was founded in 2015 to help derivatives firms and other financial institutions determine their regulatory obligations and keep pace with regulatory change — more efficiently, more accurately, and at lower cost. As regulators and lawmakers around the globe embarked on a massive program of regulatory reform that created new frictions for the derivatives industry, Ascent dedicated itself to the idea that technology can ease regulatory burdens.

"By and large, derivatives firms and other financial institutions are trying their best to be in compliance, but it is incredibly difficult," said Brian Clark, Ascent's CEO. Not only must they decipher actual obligations amid "oceans of regulatory text," the rapid pace of change means tomorrow's requirements could be significantly different, and keeping these obligations up-to-date in one place is a huge pain point for many in the market. The result is increased regulatory risk and rising odds of missing a compliance requirement.

"By and large, derivatives firms and other financial institutions are trying their best to be in compliance, but it is incredibly difficult."

BRIAN CLARK, ASCENT CEO

Ascent was built specifically to address this challenge, using machine learning and natural language processing to break down regulatory text into what Clark calls "granular obligations" – precise, individual acts imposed on the firm, detailed down to the line level of regulation. Ascent's technology then maps these requirements to an organization based on its specific operations, and continues to monitor future changes to update the firm's obligations accordingly.

The goal is simple: save market participants time and money, reduce their regulatory and reputational risk, and keep them from getting fined. Ascent saves customers save 99%+ of their time per regulation in getting to their obligations, and with greater accuracy.

In the five years since the Chicago-based company was featured in FIA's Innovators Pavilion, it has expanded and enhanced its platform. It also has won the confidence of major investors, including a $19.3 million Series B funding round in 2019 led by Drive Capital, with additional investments from ING, Wells Fargo, and Alsop Louie.

Ascent continues to evolve as it looks to the future, including a recent upgrade of its user interface as well as integration with IBM OpenPages that allows customers to feed regulatory data from Ascent directly into IBM's GRC (governance, risk, and compliance) platform. And with a flurry of pandemic-related regulatory changes in 2020, many firms are relying on Ascent to help them navigate the current environment by both generating their obligations and keeping them updated as rules change.

"Ascent was founded in response to the 2008 global financial crisis to allow our customers to fully understand their regulatory obligations and risk at a fraction of the time and cost. As a result, we fully understand the uncertainty and fear that our customers might be feeling right now. Ascent exists to alleviate that uncertainty, providing complete transparency into each and every regulatory compliance obligation and risk," Clark said.

CASSINI SYSTEMS

After this year's extreme volatility in margin requirements, the value of a firm like Cassini Systems should be crystal clear. This London-based technology firm offers collateral and margin analytics for both cleared and uncleared derivatives. The goal is to give firms transparency on what is driving margin in their portfolio so that they can optimize trading decisions, forecast their future margin requirements, and minimize collateral funding costs.

Though founded in 2014, just a year before the first FIA Innovators Pavilion, Cassini has quickly proven itself an important part of the global cleared derivatives ecosystem. Though the initial business focused on cleared OTC interest rate derivatives in response to mandatory clearing requirements, the platform has expanded steadily and now offers analytics for derivatives across 90 exchanges worldwide.

"The focus of our clients and prospects is spread across the full range of assets," said Cassini founder and CEO Liam Huxley. "We have some clients who only use us for futures and options, others who only use us for bilateral and cleared OTC."

Cassini also has pushed hard to integrate its solutions in multiple order management, execution and collateral platforms. This year the company has partnered with AcadiaSoft, IHS Markit and Singapore Exchange, further extending the reach of its services.

Amid the focus on margin requirements in 2020, Cassini has seen increased attention from participants in exchange traded derivatives markets, said Huxley. He noted particular interest in fungible trade analysis — that is, "finding equivalent trades on other exchanges that can produce margin offsets while maintaining the same risk profile."

"The focus of our clients and prospects is spread across the full range of assets. We have some clients who only use us for futures and options, others who only use us for bilateral and cleared OTC."

LIAM HUXLEY, CASSINI FOUNDER AND CEO

Looking forward, Huxley said Cassini is expanding into the repo markets "to bring our collateral cost management into the full set of funding tools," and extending its customer outreach in the hedge fund and prime brokerage arenas. Cassini also is planning a new user interface that will allow better access to front office tools.

CLOUDMARGIN

The pandemic created market volatility and with that a greater need for effective collateral management and automation and security of the process. One firm that has seen demand for its services grow during the crisis is CloudMargin.

The London-based company was founded in 2014 with the aim of bringing operational and cost efficiencies to collateral management. Thanks to its use of cloud technology, CloudMargin bypasses many of the shortfalls of legacy, on-premise software, enabling clients to quickly implement and access its secure collateral management platform for all asset classes and dealer data. Workflow steps are available in one place and users can fully automate or create checks across the process.

> **"Centralization and automation give control back to teams at a firm-wide level. With full visibility into the collateral management process and data across the enterprise, firms have the ability to be more efficient with their collateral."**
>
> STUART CONNOLLY, CLOUDMARGIN CEO

"Centralization and automation give control back to teams at a firm-wide level. With full visibility into the collateral management process and data across the enterprise, firms have the ability to be more efficient with their collateral," said Stuart Connolly, a former managing director at Goldman Sachs who joined the company in 2019 as CEO.

"CloudMargin has been sought after to provide that secure opportunity for firms to get up and running quickly and to put risk management practices in place across collateral and exposure. On a long-term basis, given the impact of COVID-19 beyond market volatility, we are seeing more interest and priority among firms to transform their tech stack to a cloud/agile environment," he added.

Underscoring the strength of its business model, CloudMargin closed a $15 million investment round in September this year with three major financial institutions – Deutsche Börse and existing clients Deutsche Bank and Citi.

"These institutions, which have a deep understanding of collateral management challenges the industry is facing, now have an important voice on our board," said Connolly. "The investment will help CloudMargin execute our strategy from a product, people and regional standpoint. Our vision is to solve the true tail of manual process still occurring in the industry by building a networked platform as a single central point."

The company plans to invest the new funds in research and development and in scalability, as well as expand its footprint in the US and Asia with additional sales and client services resources.

Other important milestones for CloudMargin have been the partnerships it has developed in the industry. For example, in July 2019 it announced a strategic partnership with AcadiaSoft, a provider of risk and collateral management services for the non-cleared derivatives community. This allowed AcadiaSoft to integrate CloudMargin's service into its core platform, thus establishing an end-to-end solution addressing all agreement, margin call reconciliation and collateral processing needs in one place.

"The partnership with AcadiaSoft gives us the ability to provide a seamless workflow across messaging to settlement and the only one-stop-shop for Uncleared Margin Rules (UMR) compliance," Connolly said.

Last month, CloudMargin announced a partnership with global fintech firm Finastra to deliver an integrated collateral and margin management solution, a move that will likely further expand its global reach.

"There has been a lot of automation and efficiency created in the industry, but this has a tendency to trail off at the post-trade level. CloudMargin is all about trying to create more of that efficiency in the collateral lifecycle, taking out risk wherever possible. Modern technology and SaaS [software-as-a-service] have democratized the cost of this process as well as the access," Connolly said.

DUCO

One of the core values of Duco, a provider of cloud-based data integrity and reconciliation services, is "keep it simple." In an industry where technology vendors typically vie with each other on feature complexity, this strategy has worked remarkably well.

Since featuring in the Innovators Pavilion in 2015, London-based Duco has closed a $28 million funding round, expanded its presence to Edinburgh, New York, Singapore and Wroclaw, and grown to more than 120 employees globally.

It has also seen its reconciliation system adopted as a global, enterprise-wide solution by an enviable list of major financial institutions. Around 100 financial firms, including 14 of the top 30 global banks, use Duco's services as well as more than 600 indirect clients through Duco's partner ecosystem.

Founded in 2010 by CEO Christian Nentwich, a computer science postgraduate from University College London, Duco helps to automate and improve the efficiency of middle- and back-office processes with its software-as-a-service solution.

"In financial services there aren't many systems you can just switch on in 24 hours and start using within a week or two. Simplicity is always our top goal."

CHRISTIAN NENTWICH, DUCO CEO

Its technology allows banks, brokers, asset managers and exchanges to normalize, validate and reconcile any type of data in Duco's cloud. Given how much manual work still exists in the back office, a self-service model of reconciliation with no requirement to install software offers relief from additional workload at a time when the strain is showing.

For Duco, ease of adoption is a priority. "In financial services there aren't many systems you can just switch on in 24 hours and start using within a week or two. Simplicity is always our top goal," said Nentwich.

"Like everyone else, we were preparing for the worst in March, but then our April to June quarter set an all-time sales record with many new firms signing up rather than existing customers paying more."

CHRISTIAN NENTWICH, DUCO CEO

In 2018, Duco completed an investment round led by Insight Venture Partners, Eight Roads Ventures and NEX Opportunities. The round also included an investment from former CEO of SunGard, Cristóbal Conde. A large part of this cash infusion has gone on supporting the company's product and market expansion.

Earlier this year, the company launched Duco Alpha, an advanced machine learning platform fully integrated in the Duco service. The new functionality recognizes the root cause of common exceptions, predicts resolution times, and suggests resolution actions. According to Nentwich, Duco Alpha has saved clients 3,000 hours of work since March 2020.

Like many other providers of cloud-based services, Duco has seen an increase in new business since the coronavirus-induced lockdowns in March this year. The "new normal" of work-from-home has shone a harsh light on operational data tasks that rely on manual work, legacy technology and on-premise installations.

"Like everyone else, we were preparing for the worst in March, but then our April to June quarter set an all-time sales record with many new firms signing up rather than existing customers paying more," Nentwich said.

"In the work-from-home scenario, cloud wins. Self-service wins. Long project and old school installed software loses. Also, since Duco often replaces Excel-based processes, we hit one of the core operational risk pain points when staff are sitting at home: keeping controls running and auditable," he said.

The company is now executing on product plans outside the traditional data integrity/reconciliation space, although details are under wraps currently.

MORE ON FIA.ORG

Visit **FIA.org/innovators** for more details on the 2020 Innovators Pavilion, as well as past competitors and Innovator of the Year recipients.

TICKSMITH

According to Francis Wenzel, CEO of TickSmith, a provider of big data applications for capital markets, there are estimates that 90% of the data in the world today has been created in the last two years.

That rings true in the financial industry, which has always been a voracious consumer of data – whether that is traditional forms of market data or new types of alternative data from non-financial sources.

TickSmith addresses the growing need of exchanges, banks and buy-side institutions to explore and unlock value from the large and growing amount of data available in the world today.

"TickSmith helps clients by giving them a platform that makes it simple for them to manage data at scale, and also makes it simple to add content, package it, monetize it, distribute it and connect it to applications," said Wenzel.

The Montreal-based company was founded in 2012 with the aim of transforming how organizations consume and distribute data by removing the complexities of traditional data management infrastructure.

The company's flagship GOLD (Gather-Organize-Leverage-Distribute) service is a modular end-to-end data management platform built on open-source technologies and optimized to run on the Amazon Web Services cloud. In fact, the company has been certified by AWS as one of its technology partners, making it easier for banks that use AWS to onboard its data platform.

GOLD securely pools, validates, and cleans data regardless of format, source and size. It structures and tags data into a customized catalog to simplify discovery and delivers data to users and systems with governance and control, meaning clients can devote more time on higher-value tasks such as interpreting and analyzing data.

Since featuring in the Innovators Pavilion in 2015, TickSmith has secured several high-profile client wins, including the National Bank of Canada, which deployed TickSmith's data management platform to support its global equity derivatives group. TickSmith also was brought in by CME Group to power its DataMine historical data portal, making all the data created by CME's markets, together with alternative data from third-party firms, more easily accessible.

> **"TickSmith helps clients by giving them a platform that makes it simple for them to manage data at scale, and also makes it simple to add content, package it, monetize it, distribute it and connect it to applications."**
>
> FRANCIS WENZEL, TICKSMITH CEO

Other clients have found TickSmith's technology to be an effective way to back-test their risk models on historical data, as well as improve their best execution and transaction cost analysis. That type of analysis depends on having the ability to ingest large amounts of financial data, consolidate the data in one place, and perform the analytics in close to real-time.

As TickSmith has continued to grow, it has succeeded in raising funding from venture capital firms such as Illuminate Financial Management. The London-based firm, which specializes in capital markets fintech, made an investment of CAD $2 million in TickSmith in 2017 that enabled it to accelerate the commercialization of its business and expand its presence in London and New York.

"Consolidating high quality data and making it easily accessible is crucial throughout the whole trade lifecycle," Mark Beeston, a managing partner at Illuminate, said when the investment was announced. "TickSmith is at the forefront of this trend and is a vital piece of a next-generation, highly scalable and modular financial infrastructure, built on big data technology." MV

FIA Innovators Class of 2015

Aesthetic Integration
Airex
Allocated Bullion Solutions
Ascent Technologies
Cassini Systems
CloudMargin
Decryptex Financial Laboratories
Direct Match
Duco
EESAT
Global Markets Exchange Group
Green Key Technologies
GX2 Systems
Metamako
Narrative Science
Neurensic
Ogg Trading
TickSmith
Tradelegs
untapt

Riskfuel Named FIA's 2020 Innovator of the Year

Options AI named runner up, Wematch wins new 'People's Choice' award at Innovator's Pavilion

BY FIA STAFF

Riskfuel, a real-time risk management and valuation solutions provider, was named FIA's Innovator of the Year as part of the annual Innovator's Pavilion for fintech startups. The runner up was Options AI, an intelligent trading interface for retail options investors. The 2020 Innovator's Pavilion also featured its first ever "People's Choice" award, which was claimed by trade negotiation platform Wematch.

These three companies were among the nine companies participating in the annual Innovators Pavilion at the FIA Expo on 10-12 November.

Now in its sixth year, the award-winning Innovators Pavilion is designed to accelerate the adoption of innovation in the derivatives industry. More than three dozen applications for places in the Pavilion were reviewed by a selection committee comprised of technology experts from banks, trading firms and venture capital firms, and the nine companies were selected based on their relevance to the derivatives industry and the innovativeness of their products and services.

The lineup this year included companies that are applying emerging technologies to meet the demand for more efficient processing of information at all stages of the trading and clearing process. The group also included companies aiming to level the playing field for retail traders as well as companies offering innovative data solutions for commodity markets.

A full list of the nine companies that participated in the 2020 FIA Innovators Pavilion were:

- **Blue Water Financial Technologies**, a provider of asset valuation, Mortgage Servicing Right (MSR) distribution, MSR hedging and electronic solutions to MSR investors and mortgage lenders.
- **Capitalise.ai**, an innovative trading automation platform that aims to help brokerage firms amplify the trading performance of their customers.
- **Disent**, a technology firm that offers a visual interface for combining analytic models.
- **OilX**, an analytic framework that turns commodity markets data into real-time actionable insights.
- **Options AI**, an intelligent trading interface for retail options investors.
- **Riskfuel Analytics**, a real-time risk valuation platform for derivatives.
- **Sylvera**, a data and research firm focused on providing insight into carbon markets.
- **TradeX**, a market data management and analytics platform.
- **Wematch**, a trade negotiation platform that deploys artificial intelligence to improve trading desk workflow in interest rate derivatives and equity derivatives markets.

FEATURE

Limiting Liquidity Risks

FIA WHITE PAPER EXPLORES THE IMPACT OF PANDEMIC VOLATILITY ON CCP MARGIN REQUIREMENTS

BY FIA STAFF

In October, FIA released a white paper that examines the dramatic increase in margin requirements at derivatives clearinghouses during the first quarter of 2020 due to increased market volatility related to the pandemic.

Although the clearing system performed well during exceptional volatility and trading volume, the increase in margin requirements created a large and sudden demand for liquid assets that contributed to stress in the financial markets. FIA views this episode as an important test of the clearing system and in this paper puts forward several recommendations to improve margin models.

"Our analysis demonstrates that the system worked, but it was strained during the economic crisis created by the Covid-19 shutdown and business cycle downturn. As an industry, we must look at those strains and make the adjustments needed to avoid undue pressure on liquidity," said FIA President and CEO Walt Lukken.

The analysis is based on data published by the Commodity Futures Trading Commission and 10 major derivatives clearinghouses as well as data provided by FIA clearing members. The key findings include:

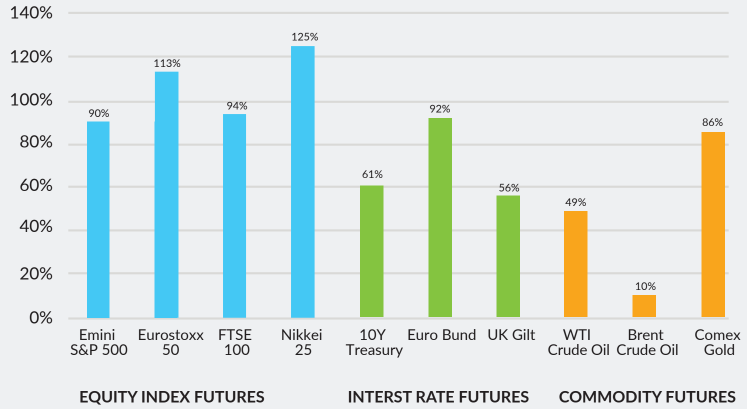
- Initial margin requirements for certain benchmark contracts in the US, Europe and Japan jumped by more than 100% between the beginning and the end of the first quarter of 2020, with most of the increase happening during the month of March.
- The amount of initial margin held by the 10 major derivatives clearinghouses rose from $563.6 billion at the end of 2019 to $833.9 billion at the end of the first quarter of 2020, an increase of $270.3 billion or 48%.

"Our analysis demonstrates that the system worked, but it was strained during the economic crisis created by the Covid-19 shutdown and business cycle downturn. As an industry, we must look at those strains and make the adjustments needed to avoid undue pressure on liquidity."

FIA PRESIDENT AND CEO WALT LUKKEN

Margin Call

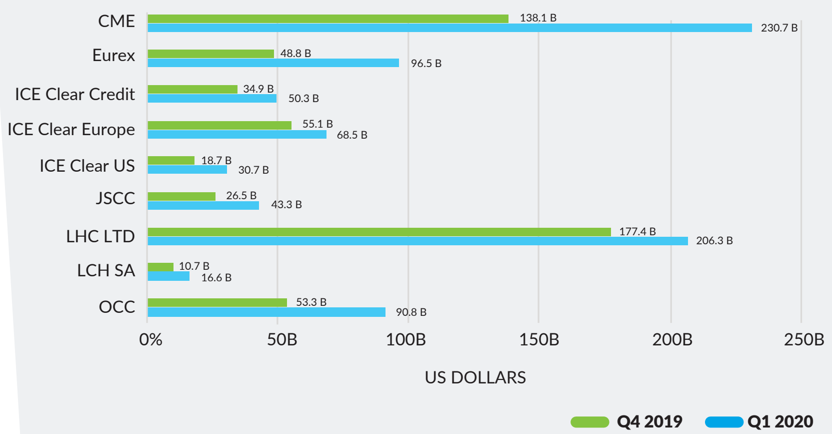
Percent increase in initial margin requirement between Jan 1 and Mar 30, 2020



Source: Data published on CCP websites and provided by FIA member firms.

Differences in Margin Models

Quarter-end initial margin held at CCPs



Source: Public Quantitative Disclosures, FIA CCP Tracker

GET THE WHITEPAPER AT FIA.ORG
You can download a PDF of the full whitepaper, "Revisiting Procyclicality: The Impact of the COVID Crisis on CCP Margin Requirements," at **FIA.org**.

- Customer funds in futures and swaps accounts at US clearing firms jumped by $138 billion from February to March 2020. That was the largest jump in the history of the US futures industry and far exceeded the increases that took place during the financial crisis of 2008.

FIA's paper explains that sudden increases in margin requirements create a type of feedback loop called procyclicality. Margin calls drive demand for liquid assets, just when those assets are scarce due to market stresses. This drive for liquid assets can spill over into other financial markets and can contribute to systemic risk.

"March 2020 was a real-life stress test of the system and it provides an opportunity to examine the data and consider where adjustments are needed. Clearing has made the financial system safer, but extreme jumps in initial margin over short periods of time put a lot of stress on clearing members and their customers," said Jacqueline Mesa, FIA's COO and SVP of Global Policy.

FIA's paper seeks to promote dialogue on the issue of procyclicality in clearinghouse margin requirements and makes several recommendations for improvements to margin models. FIA calls for:

- improvements to the design and application of margin floors, one of the main tools for controlling procyclicality;
- a framework for measuring the potential for large and sudden increases in initial margin and using those measurements in the calibration of margin levels;
- changes to the way clearinghouses use intraday margin calls that would reduce funding pressures on clearing members; and improvements to margin models that will make them more robust and dampen procyclical effects.

This paper is part of a continuing effort by FIA to enhance risk management in the clearing system. In 2015, FIA published a global CCP risk position paper and followed up in 2018 with additional CCP risk management recommendations. FIA has also issued several reports and white papers on managing the risk of electronic trading. MV

FEATURE

China Opens Futures Markets Further to Outside World

SEVENTH INTERNATIONAL COMMODITY FUTURES CONTRACT TO LAUNCH IN CHINA AS BARRIERS ARE LOWERED FOR OVERSEAS INVESTORS

BY KIRSTEN HYDE

China's drive to open its futures markets to the outside world gathered pace in November when new rules making it easier for international investors to trade in China's markets came into force. In addition, a copper futures contract, tipped to become a key benchmark, launched in Shanghai while the China Securities Regulatory Commission announced that international trading of palm oil futures contracts would begin in December.

The new rules, which went into effect on 1 November, replace the schemes that governed foreign access to the country's onshore capital markets – the Qualified Foreign Institutional Investor scheme and its yuan-denominated sibling RQFII – with a unified qualified foreign investor regime.

Half a dozen commodity futures are already open to direct participation by international investors, including crude oil and iron ore futures.

The new rules simplify and speed up the process through which international investors can apply for a license to access Chinese markets. They also expand the categories of products in which a QFI can invest.

Under the previous regime, foreign funds could invest in stock index futures. Under the new regime, the range of accessible products will be expanded to include bond futures listed on the China Financial Futures Exchange and commodity futures and options traded on exchanges in Dalian, Shanghai and Zhengzhou.

Half a dozen commodity futures are already open to direct participation by international investors, including crude oil and iron ore futures. Chin-Chong Liew, a partner in the Hong Kong office of law firm Linklaters, expects these futures contracts will likely be among the first batch of futures products opened up to QFIs.

Speaking on 10 November on a webinar hosted by FIA on China's latest steps to open its markets, he said: "While the exact scope of these products will be announced in the weeks ahead, we understand that they will be made available in phases. The first phase will be those commodity products already available under direct access, plus a couple more which are more liquid, and then more will become available later in phase two."

FAST TRACK FOR QFI LICENSES

Under the new rules, the eligibility criteria has been relaxed and several quantitative criteria, such as minimum term of operation and size of assets under management, have been removed, meaning a wider range of market participants can apply to become QFIs, John Xu, a partner in the Shanghai office of Linklaters, said on the webinar.

The application process has also been streamlined and electronic filing has been enabled. In addition, the CSRC has committed to a shorter review period of 10 working days to decide whether to grant a QFI license, down from 20 days previously.

The new rules also enable QFIs to appoint multiple onshore custodians, as well as onshore futures brokers and exchange clearing members.

"An issue from a legal perspective is, are we protected because QFIs will be giving margin to the broker who then hands it over to the CCP in the futures exchange. The good thing to note is that under Chinese law, margin always belongs to the provider, so the QFI is protected," said Liew.

With the broadened investment scope, the new rules also reinforce corresponding compliance obligations, including more transparency of QFIs' investment activities for regulators. For example, the CSRC has the right to require a QFI to report information on its offshore hedging positions and other information related to its securities and futures investment in China.

"Under the QFI regime, the theme is very much of opening up and allowing easier access for QFIs," Liew said. "It really is a high point of openness and capital market development for China."

COPPER FUTURES

In another major development, foreign participants began trading bonded copper futures on the Shanghai International Energy Exchange on 19 November. This is the sixth contract opened to direct access by foreign entities.

The move to internationalise existing contracts or launch new ones is part of China's goal to strengthen its pricing power in the commodities markets it dominates. In the non-ferrous metal market, China is the largest consumer of copper, accounting for more than half the world's consumption of the metal, which is used in everything from electronics to construction.

China also wants to expand the use of the yuan for transactions overseas, part of a long-term strategy to raise the profile and influence of the currency. At the

The move to internationalise existing contracts or launch new ones is part of China's goal to strengthen its pricing power in the commodities markets it dominates.

same time, the government wants domestic companies to be able to hedge more against volatility. Allowing foreigners to trade these contracts goes some way towards achieving its ambitions.

China already has a copper futures contract listed on the Shanghai Futures Exchange, but foreign entities need to set up a local company to use it. The one listed on SHFE's subsidiary INE provides foreign entities with direct access to a contract that is identical to SHFE copper futures in terms of size and price quotation units, but it excludes value-added tax, making it similar to international prices.

While the contract is settled in yuan, investors using an overseas intermediary can use dollars for the initial margin. The product also will be delivered into so-called bonded warehouses, which are outside the customs area and free from import duties and taxes. This will help it to compete with the London Metal Exchange, which is owned by Hong Kong Exchanges and Clearing and has no warehouses on the mainland.

At present, the international copper pricing benchmark is the LME contract, denominated in dollars, but some analysts say the INE contract could also eventually become a key benchmark.

"This contract makes a lot of sense, and we see it as having a high chance of being extremely successful, given over 70% of copper consumption is now in Asia, plus there is more material available in the China bonded zone than on the LME. As such, we see this as the market of last resort for purchasers," said Colin Hamilton, managing director, commodities research at BMO Capital Markets.

"We would expect this contract to become a key benchmark for global copper once liquidity increases, provided international market participants can gain confidence in the delivery systems, tax implications and RMB exposure," Hamilton told *MarketVoice*.

UK-based brokerage Sucden Financial said it was one of the first overseas companies to trade the contract supported by overseas intermediary Bands Financial. INE also announced 15 market makers for the product, including units of China Minmetals Corp. and Chinese brokerage CITIC Securities.

AGRICULTURAL FUTURES

China has so far internationalised six commodity futures contracts. The first was a yuan-denominated crude oil contract, launched in March 2018 on INE. This has been relatively successful, having attracted interest from foreign traders, but volumes are still well below those of Brent and West Texas Intermediate.

Next China opened up its existing iron ore contract on the Dalian Commodity Exchange to foreign participants and in doing so established a global benchmark. The other contracts are TSR 20 rubber and low-sulphur fuel oil listed on INE, and purified terephthalic acid on the Zhengzhou Commodity Exchange.

Starting from 22 December, foreign investors will also be able to trade palm olein futures on the DCE, the CSRC announced on 20 November. China is the world's second largest importer and third largest consumer of palm oil.

"Market participants generally share the view that RBD palm olein futures, after being open to overseas traders, will be DCE's first agricultural futures product to open up to the world," the exchange said. "As a significant step in the internationalization of China's futures market, it will further improve the ability and level of China's futures market to serve the global industrial chain."

A senior DCE official told the FIA Asia conference last year that the exchange is also working to open up its soybean futures contracts. MV

CFTC's Tarbert: Global Standards for Crypto and CCPs Are Top Industry Priorities

In an in-depth Q&A, the US derivatives regulator discusses his views on digital assets, current relations with Europe, and the goals of his agency reorganization.

In July 2019, Heath Tarbert took over as chairman of the US Commodity Futures Trading Commission with an ambitious policy agenda in mind. In the first few months, he held more than two dozen meetings with almost all of the agency's 700-plus employees and marshalled them behind a new mission statement. His vision for the agency, he said, was to promote the "integrity, resilience, and vibrancy" of the derivative markets and for the CFTC to set the "global standard" for sound regulation.

As the pandemic of 2020 unfolded, the CFTC faced historic disruptions in its work environment. But though priorities shifted and the agency was forced to adapt, Tarbert still found a way to deliver. Since taking the helm of the agency, the chairman has presided over more than one open meeting per month. And even though many in Washington are taking a breather amid the transition of power from President Trump to President-elect Joe Biden, Tarbert is quick to point out there's still work to be done in December — and that he plans to do it.

MarketVoice spoke recently with CFTC Chairman Heath Tarbert via video call to get a sense of what he has accomplished in this unprecedented year, and what he sees as the future priorities for the agency.

FIA: A year ago at our Expo conference in Chicago, you previewed what some might call an aggressive agenda. Since then you have held 19 open meetings, proposed 24 rules and approved nearly 35 final rules, including the position limits rule that has been pending since Dodd-Frank. How did you manage to get so much done in such a short period of time?

HT The first thing I did even before I set foot in the agency was to figure out who the team was going to be. I couldn't do everything and get that much accomplished alone. We had to pick the right people.

Then, once we got the right people together, it became, "What are we going to focus on?" And

CFTC Chairman Heath Tarbert visiting the New York Stock Exchange with the agency's other four commissioners, from left to right: Dawn DeBerry Stump, Brian Quintenz, Dan Berkovitz, and Rostin Behnam. "What I've tried to do during my tenure thus far is to avoid the politicization of the agency, to have collegiality at the top level among the commissioners, and a healthy dialogue with all stakeholders."

focusing on something means that, by definition, you're not going to do other things. So we had to make trade-offs.

Then once we figured out what we were going to do, we had to be very focused on executing. That meant planning each and every week over the past year to get all this done. I always use the quote by Thomas Edison, "vision without execution is hallucination."

So really it was a matter of just staying on top of things, selling that vision, getting everyone on board and then meticulously planning to bring that vision into a reality. And then, of course, we had to keep our eye on the ball amid the pandemic, maybe the biggest challenge that the agency has had in its 45 years of existence.

There will be some new faces in Washington in 2021. What advice can you give about how to get things done at the CFTC?

HT First of all, for anyone that's going to have my job or any of the commissioners' jobs in the future, regardless of when that is, I think it's really important that they take the time to understand the importance of the derivatives industry and how it contributes to the American economy.

Futures, options, and swaps are absolutely critical to risk management and mitigation but also to price formation. A lot of people look at the derivatives industry and they think, well, this is some esoteric group of financial instruments. But this industry has a really critical connection to the real economy. And if our derivatives markets aren't working well, there's a good chance our economy won't work as well as it could.

That's the first piece of advice. The second would be that the issues confronting the derivatives markets are not political issues, but important and nuanced public policy issues that are often best served with thoughtful consensus, which involves dialogue with industry and other key stakeholders. What I've tried to do during my tenure thus far is to avoid the politicization of the agency, to have collegiality at the top level among the commissioners, and a healthy dialogue with all stakeholders.

If we get this right, we won't have a situation where the CFTC has these bipolar swings back and forth with radical policy change. So while my agenda in some ways has been "aggressive," as some might say, I've tried to make it a largely consensus-driven moderate agenda so those changes will stand the test of time.

One of the main features of your recently completed position limits rule is that it delegates significant authority to the industry, via exchanges, to review and approve hedging strategies. Self-regulation is also a feature of the securities markets, but not other sectors of finance. What is your view on this idea of having an industry regulate itself?

HT I think people set up a dichotomy, where on one far extreme some say, "the government has to stay out of these markets and let markets take care of themselves" and on the other extreme, "markets can't regulate themselves, that's the fox guarding the henhouse."

That's a false dichotomy. To me the optimal system of regulation is this hybrid model where you have robust self-regulatory organizations like the exchanges and the National Futures Association, but you also recognize the inherent limitations of those self-regulatory bodies. That's where the government comes in, to back the system up, to provide oversight, supervision and ultimately to ensure core principles are met. But at the same time, our markets have flexibility and agility that you never would have with simply a government regulator.

I would argue that the hallmark of the American system and our derivatives markets is this proper blending of the two. If you harness both the attributes that the government has and only the government can bring to bear, but also those powerful private sector incentives, you will come up with the optimum regime for regulation.

You recently announced a structural reorganization of the CFTC. What was the primary purpose of those changes?

HT One of the biggest things was allocating resources to where they were needed the most. On the information technology side, we had a single unit that had the largest number of CFTC employees and contractors [and] that was not market facing. So we created a new Division of Data that really is going to be the interface for the future for the market—bringing in data, cleaning up that data, and then analyzing that data for the rest of the CFTC and to support all of the policy functions. We want to continue to become a data-driven agency, and this will enable us to do that.

And what about market participants and ultimately customers? Well, the customer education function used to be housed with the same division where we had HR and the routine administrative things, and then it was moved to public affairs because it had an outward facing function. But my view was that all market participants, from the biggest swap dealers all the way down to the individual farmer or rancher, should be in the same division. The same people that are looking at FCMs should also be the same division that thinks about customer issues, and vice versa. So we took the customer education function and we put that into a single division that looks at market participants.

The other thing we did was we reallocate a number of examiners in New York to look at clearinghouses. We've seen the emergence of new clearinghouses, particularly in the crypto space, and unlike FCMs that have SROs like the exchanges or NFA there is no one looking at these new clearinghouses except for the CFTC.

While the disruptions caused by COVID created headaches for the CFTC, Tarbert said the "silver lining" was that he was "able to be more laser-focused on getting the agenda done" and "we've used it as an opportunity."

In July you issued a four-year strategic plan that said, "We will develop a holistic framework to promote responsible innovation in digital assets." Can you expand on that?

HT Sure, let's unpack it and its various components. First of all, the term "digital assets" comprises a number of new 21st century commodities. The two biggest that are currently out there are bitcoin and ether. They are both commodities within the CFTC jurisdiction. So literally this agency covers everything from corn to crypto, as I like to say.

The next part of that plan, working backwards, is "responsible innovation." We want our markets to innovate. As I said in my recent speech at the FIA Expo, energy derivatives, FX futures, all of these things at one time were viewed as radical and disruptive. But ultimately they became a bedrock of our derivatives markets. There's a chance that digital assets will do the same, so we want to see vibrancy in our markets, but we also want to see responsible innovation. When crypto exchanges are unregulated, there's a concern that it's a bit of a Wild West so we've stepped up our enforcement in that area for fraud and manipulation.

So then what does the "holistic" part of it mean? Well, digital assets present such unique issues. How does custody work? How are they valued? How do you store them when they are not like bushels of wheat? We have to go throughout our entire set of regulations from exchanges to clearinghouses to FCMs and we have to think about how digital assets are trading as a derivative instrument of some sort.

That's what I mean by holistic. If we're going to get it right, we can't do it piecemeal. We have to think systematically throughout our regime that dates back, at least statutorily, to the 1936 Commodity Exchange Act. We have to ask ourselves, "if we were to write that today, how would digital assets fit in?"

There is a jurisdictional boundary with the US Securities and Exchange Commission that affects the treatment of digital assets. If something is a security, it falls under the SEC. If it's a commodity, it falls under the CFTC. But digital assets don't always fall neatly on one side or the other. Could you talk about your relationship with the SEC on this issue?

HT The SEC is clearly one of our most important regulatory partners, if not the most regulatory important partner we have in the United States. Derivatives markets and the securities markets are highly interconnected. It's important because both agencies have a slightly different focus — the SEC on capital formation, and the CFTC on risk mitigation and price formation. It does make sense to have two specialist agencies, but because of the inherent connections, it's critical that we work together and we coordinate.

Many of these crypto assets are in fact securities and they are not something that should be treated as commodities. So it's important for me to acknowledge and respect the SEC's expertise in making sure there's adequate disclosure and registration when something is in fact a security.

That said, I think when something approaches what I would call the "crypto ideal," it starts to look a lot more like a commodity, in that it's a store of value that exists apart from the efforts of others or a particular business. Like gold or corn or wheat, with its own value that's based on its inherent relationship to supply and demand and not because of the actions of particular people that are backing it.

Relations between the CFTC and the SEC haven't always been smooth. You worked with SEC Chairman Jay Clayton before you joined the CFTC. How much of a role did that play in getting your two agencies to work together?

HT The truth is, I have known Jay Clayton for 20 years. I also have known [SEC Commissioner] Hester Peirce for over 10 years. She was my colleague at the Senate Banking

Committee. There's no question that those relationships were really helpful when I walked in the door at the CFTC. But we've put a lot of thought into our relationship. For the first time in 45 years of shared history, we had a joint open meeting where we voted on the security futures margining rule and a request for comment on portfolio margining. We also harmonized some of our swap regulations to match the SEC's definition of a US person because, in my view, there was no reason why the SEC and the CFTC had two different definitions of what it means to be an American!

Looking past the SEC to other global regulatory bodies, how would you describe the current state of those relationships, particularly with Europe?

HT I would say we probably have the best relationship now with Europe and its regulatory authorities that the CFTC has had in recent memory, and maybe ever. Most CFTC chairmen who were my predecessors came into the job with substantial domestic experience and had to learn the international stuff. Well, I was the opposite. I was very new to agricultural markets, energy markets and the traditional CFTC stakeholders, if you will. But I had served as head of the international division at the US Treasury Department and I was a full member of the Financial Stability Board in Basel. I also co-chaired both the US-EU financial regulatory forum and the newly set up US-UK financial regulatory working group. So I came to the job with a deep international background and had to learn the domestic side while my most of predecessors had to do the opposite.

Take someone like John Berrigan, the senior civil servant in the European Union that runs DG FISMA (Directorate-General for Financial Stability, Financial Services and Capital Markets Union). For two years he and I co-chaired the US-EU forum. So literally all outstanding financial regulatory issues between the United States and the European Union he and I had been working on together for a couple years.

That really made things a lot easier for me to know how Europe is thinking about this, about how we get from where we are today to a win-win solution. Because ultimately, you know, either side could beat the other side up, but my goal was to find how we can agree to a set of measures to strengthen our relationship — just like my consensus-building on the domestic rulemaking front.

Are you satisfied with the outcome with respect to how US clearinghouses will be supervised by European authorities under EMIR 2.2?

HT The short answer is yes. I think we've arrived at a win-win solution where none of our clearinghouses, at least under the current metrics, would be viewed as systemically important to Europe. But at the same time, we recognize that they are relevant to Europe. While they're not going to be supervised and directly regulated by Europe, we're working with ESMA [European Securities and Markets Authority] to create an MOU [memorandum of understanding] where there would be robust information sharing. So ESMA would understand and get insight into what's going on in our two largest and systemically important clearinghouses in the United States, but because they're not systemically important to Europe they would not be directly regulated by Europe. And that MOU will be reciprocal, so we'd get the same intelligence about their clearinghouses.

Can you talk specifically about the Brexit process and the potential negative effects on market participants in the US?

HT Well, one of the ways we view Brexit here at the CFTC is to make sure that whatever the UK and the EU ultimately do, vis-a-vis each other, has no unintended consequences from a financial stability perspective. Secondly, we want to ensure that the United States is not somehow collateral damage.

Ultimately we've asked both the Europeans and the British to say that regardless of what they ultimately are going to agree to, let's try to avoid a situation where there's some kind of forced liquidation at a clearinghouse in London, for example. We've been successful thus far, but this issue will come up this time again next year if there's not a resolution. We may find ourselves in the same situation, since equivalence has simply been extended one year but it may not be extended again.

Another point is that I've emphasized the importance of actually enhancing our relationships with both the UK and the EU as a result of Brexit. Rather than looking at it as just mitigating downside risk — to make sure that the US is not collateral damage — let's also look at this as an opportunity to build stronger relationships with each. We recently signed a historic MOU with the Bank of England that enhances our comity and deference together with respect to clearinghouses based in the UK and US.

Sticking with the international theme, you are actively engaged in IOSCO. What are the top issues that you think are on the horizon for international standard-setters?

HT I must say that for too long, the CFTC simply did not have a seat at the table when it came to international standards. Literally it was just seven years ago before we finally got admitted as a full member of IOSCO. And I was privileged to become the vice chair of the board, which I think ensures that the CFTC not only has a seat at the table but has an influential seat.

As far as the big issues you'll see IOSCO, the FSB and other standard-setting bodies focused on, in the last 10 years since the financial crisis we've seen large parts of the global financial system move from the traditional banking sector to what people often refer to as "market-based finance." When we say that we're really talking about funds and asset managers. So there's this question as to how we should regulate that part of the industry. Do they represent financial stability and other risks? And

Speaking at the FIA Expo in Chicago, CFTC Chairman Heath Tarbert outlined his rulemaking agenda and discussed his views on the agency's mission.

how do we grapple with that? There's been a continuing work stream on non-bank financial intermediation and non-bank finance, and that will continue to go on because I think that trend is only continuing. With COVID, for example, you saw the banks quite frankly not lending as much as one would expect as they were constrained by liquidity and capital and other things. Instead, you saw market-based finance jumping in.

There's also an issue of what all of these bodies do with respect to the potential emergence of a global stablecoin. The idea that you could have one or more crypto assets that becomes so important that it functions just like another fiat currency and has that kind of constituency is a horizon issue. What does that mean for monetary policy? What does that mean for financial stability? What does that mean for money laundering and terrorism financing concerns?

And finally, near and dear to our hearts and to those of FIA's members, you'll see a continued workstream on CCPs. That's particularly true with respect to resolution and recovery planning as well as issues relating to margin sensitivity and procyclicality. One of the big takeaways from the historic volatility due to COVID was that the derivatives markets not only worked but they worked extremely well. They were not amplifiers for systemic risk. In fact, quite the opposite. They were shock absorbers for systemic risks. But I think people will continue to look back at margin models and look at the interplay of the various market participants and continue to ask questions about how it could work better.

FIA recently released a white paper on the impact of pandemic volatility on CCP margin requirements and potential liquidity risk. How do you think policymakers around the globe are thinking about this margin issue right now and how things might be improved?

HT I think there are issues regarding transparency and predictability. It's one thing for margins simply to be procyclical but it's another to catch people off guard and not understand the magnitude of the margin calls vis-a-vis the magnitude of market movements.

Based on anecdotal evidence, I think the transparency levels are not necessarily the same across CCPs. In some cases, we know some market participants were caught off guard. But there's also the question as to whether market participants themselves were prepared, particularly not so much the clearing members but rather the customers. Then there's the question, how procyclical should initial margin be? Should you have measures that would mitigate the procyclicality and how should those metrics be built in — either from a product or a portfolio approach? There are pros and cons, and some would argue that the portfolio approach makes more sense if you're truly worried about systemic effects and defaults. But there's a price to that: if there's more margin posted in good times that puts a strain on farmers, ranchers and other end-users in the markets.

Unlike some of the other areas like global stablecoins, I'm not expecting this to be an area of radical change but more of a technical and nuanced approach to potentially calibrating certain things. But nonetheless, given its criticality to the FIA and your membership, it's something that you're going to want to watch closely.

On a more personal note, how are you doing in this new working environment brought on by the pandemic?

HT Well, personally I think I'm working harder than ever. There's less time for chit-chat and for traveling, but I try to find the silver lining. And the silver lining here is that by having such a reduced travel schedule and less face time in the office, I'm able to be more laser-focused on getting the agenda done. I believe that's true with the senior leadership team at the CFTC, but also much of the staff as well. It's enabled us to focus in a way that maybe would have been much more difficult during normal times and we've used it as an opportunity. LabCFTC, for example, has had some 60 different trainings inside the CFTC. So we're doing a lot more reading, a lot more writing, and we've tried to make the most of it.

The other thing is, as Nietzsche said, "that which does not kill you will only make you stronger." And the fact that we accomplished this historic agenda but we did it during COVID makes me a much more battle-tested CEO and leader, and so hopefully I can bring those skills to bear not only at the agency but in whatever I do afterwards. MV

SGX Bull Charge Charity Run Goes Virtual, Raises S$3.6 Million

Annual event was open to both local and international participants for the first time

BY KIRSTEN HYDE

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SGX Bull Charge, the flagship charity initiative of Singapore Exchange that raises money for charities supporting underprivileged children and families, the disabled and the elderly, went virtual this year as the COVID-19 pandemic put a stop to mass gatherings.

For the first time, SGX's annual charity run was transformed into a two-week virtual fundraiser to prioritise the well-being of participants as they went the extra mile for a good cause. Participants were allowed to run at their own pace and space in the two weeks from October 30 to November 13 and the event was open to both local and international runners.

The 17th annual SGX Bull Charge Charity Run delivered in a big way despite this format change, raising more than S$3.6 million. It surpassed its goal of logging 100,000 km from participants as the event finished with more than 150,000 km walked or run as part of its virtual event. True to its word, SGX donated S$1.5 million as a result, matching contributions dollar-for-dollar, and committed an additional 1,000 volunteer hours to charity.

In partnership with Community Chest, Singapore's National Council of Social Service's fund-raising arm, all proceeds from this year's run will be channelled to a range of charities and social welfare organisations. These include AWWA Ltd., Autism Association (Singapore), Fei Yue Community Services, HCSA Community Services, and Shared Services for Charities.

"Given the challenges the world is facing today, it has become even more important for us to look after each other," said Loh Boon Chye, chief executive officer of SGX, in announcing the virtual event. "We are excited to rally the financial community in new ways to raise funds for our beneficiaries. Over the years, they have come to rely on our corporate sponsors and partners, and we are confident that our collective efforts can support them through this period."

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> LOH BOON CHYE, CEO, SGX

Since its inauguration in 2004, the SGX Bull Charge has become an annual fixture on the corporate calendar, bringing together thousands of runners from the financial community and Singapore's listed companies and raising nearly S$43 million for 50 charities.

"Charities and non-profit organisations, which depend heavily on corporate philanthropy for critical funding, have been severely impacted this year as corporate donations are projected to reduce substantially," SGX said. "The pandemic may have thrown a spanner in the works, but it has not affected our determination to continue looking after our beneficiaries during these difficult times." MV