SIFMA Insights

Operations Conference & Exhibition Debrief

May 2019

Key Takeaways

Recently, SIFMA hosted our 46th annual Operations Conference & Exhibition. With multiple days of presentations and events and nearly 1,000 attendees, we gained insights into top-of-mind topics for market participants. Inside this note, we recap just some of what was seen and heard, including: Markets Musings; Regulatory Recap; and Fintech's Future.

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Please see the following companion notes at: https://www.sifma.org/insights/

SIFMA Insights Spotlight: The History of the EU & Brexit Timeline
SIFMA Insights Spotlight: DTCC's Important Role in US Capital Markets
SIFMA Insights Spotlight: Building Resilience with a Culture of Cyber Awareness

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SIFMA is the leading trade association for broker-dealers, investment banks and asset managers operating in the U.S. and global capital markets. On behalf of our industry's nearly 1 million employees, we advocate on legislation, regulation and business policy, affecting retail and institutional investors, equity and fixed income markets and related products and services. We serve as an industry coordinating body to promote fair and orderly markets, informed regulatory compliance, and efficient market operations and resiliency. We also provide a forum for industry policy and professional development. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit http://www.sifma.org.

Markets Musings

U.S. capital markets are the largest and among the deepest, most liquid and most efficient markets in the world; they are the bedrock of our nation's economy. Efficient and resilient market structure is key to sustaining investor confidence and participation in markets. As such, we highlight key capital markets topics heard at the conference:

Fixed Income

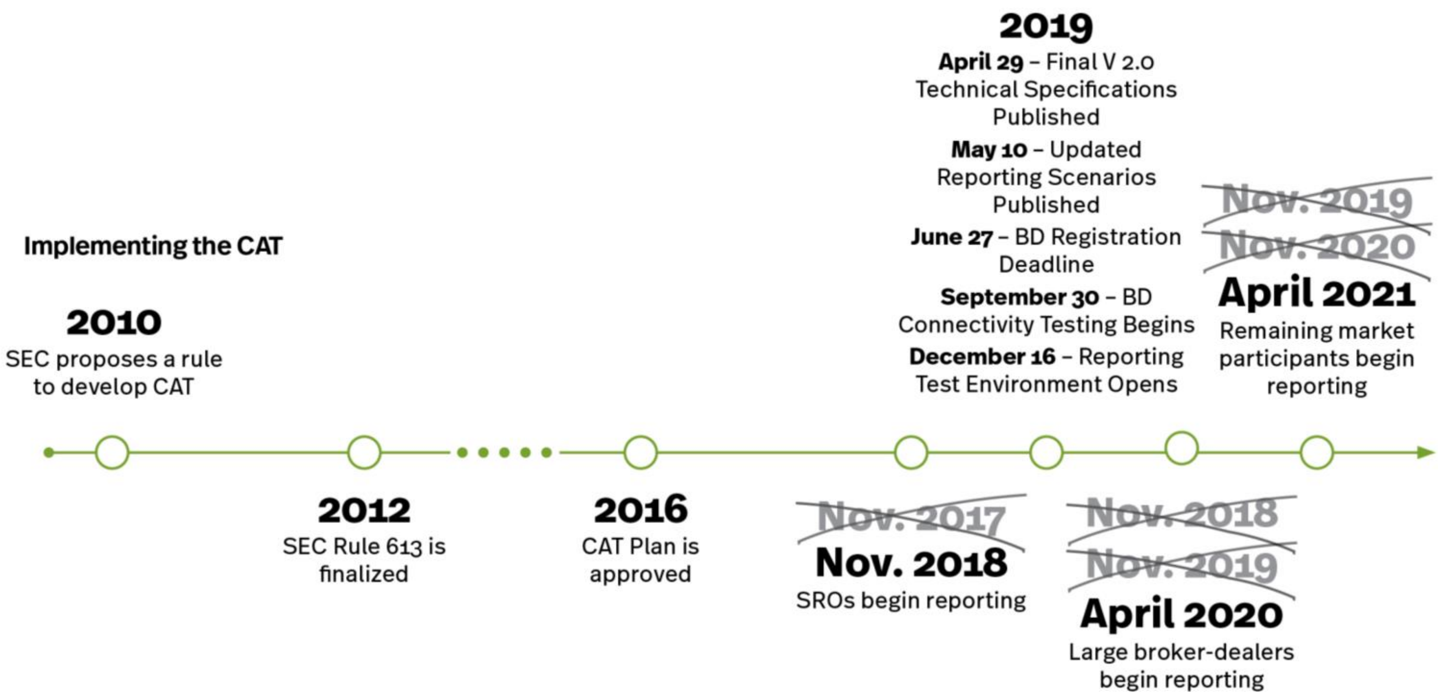
- Treasury Market Practices Group (TMPG) – Almost a year after the October 15, 2014 U.S. Treasury (UST) flash rally – where there was a rapid and wide move in UST prices with seemingly no cause – a Joint Staff report identified potential causes as (a) an increased number new types of market participants and (b) the increased speed of execution. The TMPG also studied the event and found some market participants did not apply the same risk management rigor in UST trading as in other markets, i.e. risk management best practices had not kept pace with Treasury market changes.

  Given the importance of the UST market, the TMPG has published draft best practices for clearance and settlement in the UST market. A keynote speaker at our conference from NEX Group (a CME Group subsidiary) and the TMPG discussed key questions to ask around measuring counterparty risk, including (among others): Who is your actual counterparty and what risk does it pose? How could this risk change over time? Can you measure the size of this risk and with appropriate frequency? What risk does a clearing firm pose to my firm? What role does prime brokerage play in UST markets? How do I assess when my firm's credit extensions from other firms could dry up? What are the risk management safeguards at clearing firms, trading platforms (as electronification continues to grow) and central counterparties (CCP)?

Equities

- Equity Market Structure (EMS) – SEC Commissioner Robert Jackson noted, "We need to ask if the U.S.' current EMS works for investors today, and I am pleased the SEC is in the space trying to do the right thing on a hotly contested issue." While no new insight was provided on potential proposals to tweak or more significantly change EMS, he reiterated other Commissioners' and the Chairman's comments at earlier SIFMA conferences that proposed changes need to be evidence based. He mentioned the transaction fee pilot as an example of how he likes to see the SEC work – it was bipartisan and adopted unanimously. While he admits the pilot is "subject to controversy and litigation", he is confident the SEC will get it done as a means to asses fee structure, noting "no one should be about power via excessive fees on data/access."

- Consolidated Audit Trail (CAT) – One of the industry's main concerns with the CAT continues to be the protection of personally identifiable information (PII). At our conference, SEC Commissioner Jackson acknowledged, "there were legitimate concerns on PII, but I believe the industry can figure it out." We also held a regulatory panel (FINRA, SEC, Fed, an asset manager) which seconded that PII protection is crucial. Another main concern is around timing (please see updated timeline below). FINRA CAT began their work building out the CAT technology in February, with its first delivery in April (the final technical specifications). Since they are using cloud technology, FINRA believe it is "massively" scalable, continuous mark-to-market capable and "very" secure. As we head to the December 2019 testing phase for equities and options, market participants remain concerned that the timeline will not work. Not all firms are ready, with only around 400 out of 1,700 broker-dealers (BD) registered to date (with an end-June deadline).



Regulatory Recap

After adopting an unprecedented volume of new regulations since the financial crisis, various policymakers acknowledge some changes may have gone too far, adversely impacting market efficiency and liquidity at the expense of economic growth potential. As such, we highlight key regulatory topics heard at the conference:

- Regulation Best Interest (Reg BI) – While the industry continues to be generally supportive of Reg BI, it still needs some tweaks. A bigger concern is that the states are beginning to propose their own separate regulations. This would create a patchwork of rules which would confuse clients and burden and disrupt firms' ability to seamlessly serve those clients. The industry views a national standard as a better way to protect and serve clients. SEC Commissioner Jackson noted every client has different needs and will require different services. The main obligation should remain putting the client's interest first. He also commented that any new required disclosures should be tested as to how they work in the real world. He further suggested essentially a cost-return analysis – What do we get with the new rule? At what cost?

- FINRA Getting Into Fintech – While the next section of this note focuses on current and potential fintech use cases for financial institutions, FINRA Executive Vice President and Chief Information Officer Steven Randich shared with us how FINRA as a SRO is adopting fintech into its everyday operations. FINRA's goal is to rebuild technology to improve market participants' digital experience and make it easier for firms to navigate through FINRA's many divisions and systems, i.e. decrease costs and burden for firms. As a large data processor for surveillance – monitoring 100% of the equities markets and 70% of the options markets – FINRA processes 135 billion events per day, with trillions of nodes recreating market events. Some of the fintech capabilities they are now incorporating include:
    - Data Storage – With the migration from data centers to cloud starting in 2013, the vast majority of data has moved as FINRA continues to increase the amount of automation for clients. Cloud increases capacity 10x and enables continuous tech refreshment, which should decrease costs to users and increase availability of data.
    - Registration System – FINRA replaced its web-based CRD with a cloud-based platform, which should decrease duplicative tasks, increase automation and, therefore, reduce industry compliance burden and costs. (5,500+ individual, 50% of firms registered)
    - Digital Experience – FINRA continues its digital experience transformation. This should end fragmentation across FINRA divisions and increase the amount of self service, which should be faster than waiting on the phone to speak with a human. The estimated benefit is >$100 million in savings per annum for the industry.
    - Innovation – FINRA Createathon, which begin three years ago. is an annual two- and one-half day event where cross-disciplinary teams generate ideas and present solutions (NLP, ML, AI, etc.). In 2018, 57 teams and 500 participants across 6 categories led to 12+ ideas advanced to the R&D stage. Idea stats: 57 feed ideas, 29 initiated, 12 developed, 9 presented for rating, 6 selected for funding and 1 completed and to be presented for business case funding.

Fintech's Future

The industry continues to analyze how fintech solutions can increase efficiencies in the back office, serve clients, manage risk or meet regulatory reporting requirements. While much of a firm's technology spend is on ways to increase operational efficiencies and decrease costs (for the firms but also their customers), many firms also sponsor investments for fintech innovations. As such, we highlight key fintech topics heard at the conference:

- The Pecking Order – Capital markets exist to serve the needs of corporations, governments, investors and the economy. It is a complex ecosystem which needs multiple components to work in tandem. And while changes surrounding this ecosystem continue to be faster, faster, faster, the bedrock of financial services remains trust. As financial institutions are responsible to regulators and must maintain the trust/confidence of their clients, their approach differs from some fintechs which do not have these obligations and take a fail fast and often approach to innovation. Financial institutions can work to develop their own fintech capabilities or partner with fintech firms, i.e. build, partner or buy strategies. The challenge is how to transform legacy systems to modern ones, keeping the economics in place and not disrupting client services. When looking at fintech capabilities, the question becomes how do we use this to run the business and gain efficiencies? Modernization of operations can be end-to-end updating of systems/processes or developing individual tools (not end-to-end, ex: RPA for automation of specific tasks). In the financial services fintech maturity ladder, not all technologies are on the same rung: most firms are digitizing (RPA, robotics); some are using cloud technology; AI to scale is further out; and DLT is even further out in time to large-scale implementation.

- Robotics, Robotic Process Automation (RPA) – Robotics and RPA have a shorter time frame to implementation. Automation via these fintech capabilities benefits employees and employers, by decreasing time it takes to perform tasks, and clients, by improving straight through processing and other procedures, while increasing transparency and reducing operational risk. While RPA continues to gain maturity and is implemented in multiple areas, a presentation from PwC and UIPath indicated the current automation scope is only 3-7%, out of a 40%+ potential to automate. Opportunities reside in robotics as well –one panelist indicated there are >1 thousand bots in production, with 4 million bots expected by 2021.

- Cloud – Cloud architecture can come in several forms: internal (private), public or hybrids. Initial use cases were to gain raw computing power. Now, firms use clouds to access and utilize data in real time in a flexible and efficient manner. Firms can use multiple cloud sources together while controlling how they interact, with many financial institutions using 3-4 private and public clouds. Yet, a panelist indicated only 20% of workloads in financial services have moved to cloud technology. What will the modern cloud architecture look like – secure, fast, real-time access – when firms ramp up for a world requiring more and more data be pulled in? How does cloud technology play into firms' commitment to resiliency and risk management?

- AI – AI has been in use at financial institutions for many years, for example: using it for credit scoring in retail banking; using it in CCAR/stress testing to forecast and view changes in results under different macro variables; using it in call centers, where evidence has shown query resolution increases "massively"; and other, more "simple" processes. To continue to grow usage, firms are exploring how to embed AI into the workflow/decision process, for example: KYC/AML monitoring to automate the closing out of cases; or trader conduct surveillance to predict behavior before it happens. Since AI is the technology in the raw, firms need to consider where the data came from and how the model operates, understand how to supervise it and ensure AI is working with professional decision making, not replacing it.

- Cyber[1] – Financial institutions use and store extremely sensitive client data, and there are people (criminals, bad actors, nation states) constantly trying to exfiltrate or compromise this data. As crucial players in capital markets, financial institutions cannot risk operational disruptions due to a cyber attack. Firms continuously test their systems' resiliency, both on an individual-firm and an industry-wide basis. They continue to spend billions on information security and data protection, with teams solely focused on cyber security. It becomes a 24-hours-a-day, 7-days-a-week, 365-days-a-year war firms wage to protect client data and their systems.
- Data – Data, or the new oil, is key but often needs cleaned up to be useful. Dirty data can drive bad outcomes, and if there is no data to "feed the beast", then you will not find solutions. More data is becoming available than ever before and can solve problems it could never solve before. Firms can now standardize data, with opportunities to join disparate data sets across business units. Often ~75-80% of the problem is solved by moving data around (data wrangling), yet other data sets need cleansed. Speakers indicated there is no silver bullet – onboard data, make use of it, entitle people internally to use data, etc. What is important is the ability to turn unstructured data (data that is usually not as easily searchable) into structured data (clearly defined data types whose pattern makes them easily searchable) to leverage the power of data. Panelists and speakers further note that data governance is essentially the "table stakes" in financial services today, i.e. data protection is key.
- The Changing Operations Workforce – Firms can unleash tomorrow's business opportunities by transforming the operations business team into a strategic, efficient, agile, scalable and digitally-capable group. The new ops team is no longer solely a back office function. The org chart has been flipped upside down with the client on top, and all groups in the firm must work together to serve clients. Ops has been reorganized around this customer journey concept, and this includes training and hiring ops professionals. Let's bust a common myth: AI kills jobs. Fact: Leaders need to make sure that does not happen by bridging today's skillsets with tomorrow's needs via retooling and understanding how employees can take advantage of the new productivity and potential services unlocked by AI. Firms may also need to expand the hiring pie – one speaker indicated there will be 1.5M unfilled cyber jobs by 2020; another noted ~1/2 the leading tech jobs in the U.S. cannot be filled. Firms will need product managers, data scientists, coders, etc., but people may have the skills and not know it.

  There is a skills gap in operations today, and firms will need to look outside of traditional hiring means to fill ever evolving operations roles. While some niche jobs may require very deep knowledge, in general, tech is a learned fluency. One speaker told a story about an excellent coder with a non-traditional background. This person was a French major in college. One could look at this resume and say they are not qualified to be a tech employee. However, coding is a language, with the mindset to learn it similar to learning French. If the firm was not thinking out-of-the-box, this person would not have been hired. Hiring today blends today's skills and tomorrow's tech opportunities to develop the new ops workforce.

[1] Please see SIFMA Insights "Spotlight: Building Resilience with a Culture of Cyber Awareness", published prior to the SIFMA Operations Conference

Appendix: Terms to Know

Fintech	Financial Technology
AI	Artificial Intelligence
AR	Augmented Reality
BCP	Business Continuity Planning
Bot	Computer programs that speak like humans
Chatbot	Software engaging in natural language dialogues with users
Cloud	Internet-based computing (servers, storage, applications, etc.)
CTO	Chief Technology Officer
DLT	Distributed Ledger Technology*
Fintech	Financial Technology
IT	Information Technology
ICO	Initial Coin Offering
IoT	Internet of Things
ML	Machine Learning; computer algorithms learn from data without being programmed
NLG	Natural Language Generation
NLP	Natural Language Processing
OCR	Optical Character Recognition
PII	Personally Identifiable Information
Regtech	Regulatory Technology
RPA	Robotic Process Automation
Robotics	Use of robots to substitute for humans or replicate human actions
VR	Virtual Reality

*Blockchain is one type of DLT

AML	Anti-Money Laundering
BD	Broker-Dealer
CAT	Consolidated Audit Trail
CCAR	Comprehensive Capital Analysis and Review
CCP	Central Counterparties
CRD	Central Registration Depository
EMS	Equity Market Structure
KYC	Know Your Customer (Client)
R&D	Research & Development
Reg BI	Regulation Best Interest
TMPG	Treasury Market Practices Group
UST	U.S. Treasury

Fed	Federal Reserve System
FINRA	Financial Industry Regulatory Authority
SEC	Securities and Exchange Commission
SRO	Self-Regulatory Organization

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