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2019's Top 11 Issues in Operations and Technology

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2019's Top 11 Issues in Operations and Technology

Despite the fact that end-of-year lists always risk being arbitrary, over-simplified, opinionated, and exclusionary, we've compiled yet another for "What We Were Talking about in 2019" in Operations and Technology. These areas are in no particular order and include issues and trends because of economic and business changes, regulatory requirements, and changes in how technology is deployed.

Some of the top 2019 business and regulatory issues include:

1. Phase 5 implementation of UMR Initial Margin requirements for OTC derivatives;
2. Transitioning away from LIBOR to the use of Risk-Free Rates (RFR) such as the Secured Overnight Financing Rate (SOFR) in the U.S.;
3. Implementation of the Consolidated Audit Trail (CAT);
4. Searching for liquidity in the Corporate Bond Market;
5. Collateral optimization;
6. The E.U.'s Securities Financing Transactions Regulation (SFTR) for securities lending and repo;
7. and Central Securities Depository Regulation (CSDR) in the European markets and their impact on US participants.

And what other topics have we devoted significant time, resources, and grey hairs?

8. Blockchain (also called Distributed Ledger Technology or DLT)

In our *Lifecycle of a Trade* programs, we explore the front-to-back connections from the inception of an order through functions such as trade execution and capture, figuration, confirmation, clearing and settlement. Each process flow diagram is painstakingly drawn to show critical interfaces. Those of us who have been in the industry awhile lovingly refer to it as "The Plumbing" and, for good measure, add in "We've always done it this way!".

More often than not, the response from the participants is often, "doesn't all of this go away with blockchain?". And the answer is ... "Maybe, but not all of it, and we're not sure when." Of course, Blockchain is the underlying technology behind Bitcoin and all of the other cryptocurrencies that have followed in its wake over the past 10 years. Blockchain is here to stay, but there are just as many questions about what a distributed ledger will look like, how we address the multiple

security issues which have to be considered, its scalability and efficiency, regulation, privacy, policy and other issues that have been the topic of many policy discussions and debates in 2019.

Many financial market participants are already innovating processes such as payments with blockchain technology. According to the *Worldwide Semiannual Blockchain Spending Guide*, published by the IDC (International Data Corporation <https://www.idc.com>) in March 2019, “Worldwide spending on blockchain solutions is forecasted to be nearly \$2.9 billion in 2019, an increase of 88.7% from the \$1.5 billion spent in 2018. IDC expects blockchain spending to grow at a robust pace over the 2018-2022 forecast period with a five-year compound annual growth rate (CAGR) of 76.0% and total spending of \$12.4 billion in 2022.”

9. Adoption of Artificial Intelligence (AI) and Machine Learning (ML)

Not only does AI and ML continue to disrupt business models in the financial industry, its deployment in Operations functions continues to expand as well. We are seeing its use in everything from client onboarding, to confirmations, settlements, reconciliations, and failed trade management. It uses “bots”, which are software applications created to automate specific tasks.

Examples include JP Morgan’s AI Technology project known as COiN (Contract Intelligence), that extracts data from documents that it quickly reviews. “COiN can review approximately 12,000 documents in a matter of seconds, whereas a human would spend more than 360,000 hours of work on the same documents” (Brummer, C., & Yadav, Y., 2019. “The Fintech Trilemma”, *Georgetown Law Journal*).

In the realm of consumer finance, customers of Bank of America’s online banking application are by now acquainted with BofA’s virtual assistant chatbot, Erica. Using a myriad of analytics and algorithms, Erica can not only help you with mundane tasks such as looking up all of your transactions, let’s say in Amazon, but will also cheerfully provide friendly personal finance advice on the topics of improving your credit score and managing a budget.

A balanced view from an August 11, 2019 article by Alfredo Garcia Sanchez in UPenn Wharton’s *Public Policy Initiative* entitled “Is AI the future of Financial Services?” (<https://publicpolicy.wharton.upenn.edu/live/news/3094-is-artificial-intelligence-the-future-of-financial>), “Artificial intelligence, or technology that enables near-human levels of cognition, shows great promise for the financial services industry. Within capital markets, AI can be a means to produce better, faster, and more accurate predictions. But as a human-designed technology, it still ultimately suffers from some vulnerabilities: privacy concerns, biased or otherwise poor-quality input data sets, and unwarranted overreliance on the technology— to name a few.”

10. Robotics

The financial industry continues to witness a seemingly never-ending series of projects to automate processes using robotics. Unlike Will Robinson’s robot in “Lost in Space”, waving its arms and

yelling, “It does not compute!”, or the Jetsons family’s often-authoritarian Rosie the Robot, these are actually software applications that can be used for high-volume processes such as updating account journals, reconciliations, maintaining account master data, and so on.

Robotic Process Automation (RPA) is a cost-efficient way to automate processes that are clerical, repetitive, and data-intensive in nature. It can also reduce the reliance of financial firms on specific and often expensive physical locations and reduce operational risk, minimizing the potential for human error. This frees up the humans to do more sophisticated and complex tasks, that require higher-level thinking and skill sets, such as providing more individualized customer service and making judgement calls.

The market for software robots, including those that incorporate artificial intelligence, is expected to grow to \$2.9 billion by 2021, up from \$250 million in 2016, according to Forrester Research Inc. (<https://go.forrester.com/blogs/category/robotic-process-automation-rpa>).

In one of many examples from the world of financial services, at BNY Mellon, the software bots are performing tasks, such as the daily reconciliation of customer assets held in custody, pro-actively identifying trades that have a high degree of likelihood to fail, resolving failed trades, and performing funds transfers.

11. Cybersecurity

Not surprisingly, Cybersecurity in the financial services industry continues to be a major concern and its news stories like this, as reported by multiple news outlets and here summarized by the Carnegie Endowment’s Cyber Policy Initiative, that keep us up at night:

“On July 29, 2019, Capital One announced that it had suffered a data breach compromising the credit card applications of around 100 million individuals after a software engineer hacked into a cloud-based server. The applications contained names, dates of birth, credit scores, contact information, and some American and Canadian social security numbers. The hacker exploited a misconfigured firewall to gain access to a database of personal information hosted by Amazon Web Services. Upon gaining access, the hacker posted about it on GitHub... Authorities arrested one individual in connection with the data theft”.

(<https://carnegieendowment.org/specialprojects/protectingfinancialstability/timeline>)

Cybersecurity for financial services participants treats as the number one priority the safety of customer assets, transaction, and personal information. Industry and government leaders are working hand-in-hand to provide this protection. Both the SEC and FINRA have published cybersecurity guidance for the entities, including investment advisers and broker/dealers, that it oversees. This guidance includes the provision of effective planning for a firm’s response if a cyber incident, such as malware, ransomware, phishing, etc., should occur.

Among industry efforts and initiatives, the Securities Industry Financial Markets Association (SIFMA) has collaborated with its members and regulatory agencies to sponsor global cyberattack simulations, most recent of those, Quantum Dawn V on November 7, 2019. As explained by SIFMA (www.sifma.org): “Quantum Dawn V... enabled key public and private bodies around the globe to practice coordination and exercise incident response protocols, both internally and externally, to maintain smooth functioning of the financial markets when faced with a series of sector-wide global cyberattacks. The exercise simulated a low probability ‘extreme scenario’ with a significant global impact across the financial sector. This helped identify the roles and responsibilities of key participants in managing global crises with cross-border impacts. The exercise scenario emphasized cross-jurisdiction communication and coordination between member firms and regulatory agencies in North America, Europe, and Asia.”

Without any doubt, 2019 was an incredibly interesting year all around in the financial markets and the global economy. What will be new and different and the topic of many conversations in 2020 remains to be seen, but doubtful it will be any less interesting!

About the Author: Charlotte Scott

Charlotte Scott is a broadly accomplished financial services executive with over 25 years of comprehensive experience in delivering innovative and cost-effective operations and technology solutions for equities, derivatives and fixed income product lines. Her industry experience as a senior-level manager at Drexel Burnham Lambert, Credit Suisse, Paine Webber, and Bankers Trust provides the industry expertise and background that have made her a recognized subject matter expert in middle- and back-office operations for financial services firms.



Besides delivering industry training seminars, Ms. Scott maintains a flourishing management consulting practice providing advisory services for both buy-side and sell-side firms. These services include new business development and analysis, and strategic process re-engineering, focused on Middle and Back Office Operations for derivatives, equities, and fixed income. Her project experience spans business process re-engineering, policy and procedure development, and third-party vendor identification, assessment, selection and customization.

A resident of New York City, Ms. Scott is a graduate of the College of the Holy Cross in Worcester, Massachusetts and the recipient of a Masters in Teaching (MAT) from Rutgers University in New Brunswick, New Jersey.



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