

Change the Landscape, Change the Trade

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Since the global economic crisis of 2008, the financial services industry has experienced a new found and overwhelming degree of regulation, primarily in the over-the-counter derivatives market. Regulatory compliance has cost the industry billions of dollars in everything from hiring and training compliance teams, the implementation of electronic platforms geared towards real time processing of all necessary due diligence, clearing, and reporting required under today's rules and finally, heightened capital and margin obligations on the larger financial institutions within the industry.

Blockchain has gained considerable popularity in recent years because smart contracts and digital technology provide a "real time" solution for the bottlenecks created by today's regulation. Moreover, blockchain platforms provide a plausible solution geared towards inevitably replacing costly compliance practices which are heavily based on the use of human teams and constant checks and balances. While this sounds great in theory, regulators are concerned about fraud, cyber breaches, tax evasion, and a fundamental lack of transparency.

Digital technology and corresponding cyber security protective software are advancing with an eye towards facilitating regulatory supervision. If blockchain innovation can join forces with regulation, the financial industry as we know it will materially change once again.

THE GLOBAL ECONOMIC CRISIS OF 2008

The global economic crisis of 2008 materially impacted the financial services industry and, in particular, the derivatives market. For years, the over-the-counter derivatives industry operated essentially unregulated until the mortgage crisis, which resulted in countless defaults and bankruptcies. Funds and major institutions which used derivatives for a large part of their investment strategies, including without limitation, hedging, are now seemingly overwhelmed by the recovery process which is primarily having to comply with heavy handed regulation. In the United States, complying with the Dodd-Frank Wall Street Reform and Consumer Protection Act (Pub.L. 111-203) ("Dodd-Frank") has cost market participants an enormous amount which can be

attributed to global compliance back office personnel, heightened margin, prices and legal fees. The same is true in Europe with the European Market Infrastructure Regulation ("EMIR").

Dodd-Frank, as is the case with EMIR, is the product of the "Four Commitments" created by the 2009 G-20 Pittsburgh Summit. To date, the United States has led the international community in developing and enacting regulation in furtherance of the G-20 initiative to minimize systemic risk. The Four Commitments are based on the following regulatory mandates:

- a) All over-the-counter derivative transactions must be cleared;
- b) All over-the-counter derivative transactions that cannot be cleared, should be subject to higher margin requirements;
- c) All over-the-counter derivatives must be reported to a swap data repository;
- d) All over-the-counter derivatives that can be traded on an exchange or swap execution facility (a "SEF"), must be traded accordingly.

Several regulatory challenges and unexpected consequences have resulted from the implementation of the Four Commitments. The most meaningful regulatory challenge is that the international community has struggled to streamline regulation and the implementation of universal timelines and parameters which have resulted in chaotic trading environments plagued with cross border risk. For example, consider the lack of a worldwide standard on eligible collateral and default waterfall terms across derivative clearing organizations. Also, what are the restrictions from one jurisdiction to the next with which a bank or broker dealer may own derivative clearing organizations and to what degree must a clearing member fund capital contributions? It is the lack of transparency and real-time processing across the globe that is affecting access to one of the most important products in our industry, the over-the-counter derivative. One unexpected consequence is the prevalence of nonperiodic payments that must be made between parties to a cleared swap whose strike price is off-market. Although pre-existing Treasury Regulations provided

rules regarding correct tax accounting for these payments, it was unclear how these rules should be applied in certain contexts. As payment and receipt of nonperiodic payments became more common in the wake of Dodd-Frank reform, the Treasury Department revised its regulations to clarify this issue.

Derivatives are essential to hedging unforeseen market conditions which can lead to significant losses. Derivatives are also used as a leverage vehicle which, like any capital market's structure, stimulates economic growth. Global inconsistencies in regulation, time zones, and delayed processing all result in more costs to the investor. Ultimately, losses caused by regulatory inconsistencies are born by the investor which at the core, are linked to the obligatory segregating of capital, clearing of over-the-counter derivative transactions, the need for market participants to create operational teams and systems to comply with Dodd-Frank on a day to day basis and the cost of hiring third party agents to facilitate the reporting of over-the-counter derivative transactions. Dodd-Frank, EMIR and the remaining G-20 rules are geared towards protecting the taxpayer but are the protections afforded under the Four Commitments creating unfair costs and burdens? Can smart technology, approved by regulators, minimize the costs and streamline global rules and processing?

FINTECH AND REGULATORY COMPLIANCE

Since the global economic crisis of 2008, the fastest growing industry is FinTech and, in particular, blockchain which many are claiming to be a solution to reducing the need for sizable back office personnel, reducing settlement and credit risk by virtue of real time processing and finally, minimizing the layers of networks and platforms currently used to complete a transaction and related due diligence. Blockchain has become a foundational technology and over-the-counter derivative participants are looking to this technology to protect the over \$600 trillion industry.

Blockchain technology is a digital innovation whose purpose is to expedite and efficiently facilitate computing activities in an environment that is free of cybersecurity concerns. In the finance world, tracking risk and monitoring compliance with laws and regulations within an increasingly complex cybersecurity environment requires considerable time and resources. The financial services industry, especially in light of the Dodd-Frank and related regulation's requirement for transparency, reporting and best execution are targeting blockchain technology, in particular, smart technologies.

Smart technology is essentially automated software used for recording and processing of cryptographically-secure data which provides real time credit checks and verification modeling and produces immediate settlement opportunities. The beauty behind blockchain and smart technology in the now heavily regulated over-the-counter derivatives industry is the ability to create a platform where buy-side entities can now face one another without the need for lengthy due diligence or limiting its potential counterparties to the larger banks and broker dealers, which are the most heavily regulated in terms of capital and margin requirements under G-20 rules. Since 2008, buy-side entities have sought structured leverage opportunities from other buy-side entities considering the heightened capital requirements imposed on the larger banks on Wall Street.

Dodd Frank requires the clearing of all over-the-counter derivatives that can in fact be cleared. For buy-side entities this means that they may be posting double margin such as "house margin" to their immediate counterparty who serves as the clearing broker (the "FCM") and the clearing house itself which runs stress testing models throughout the day in light of the overall positions across all FCMs which are driven by human feeds and are less than a real time process. With blockchain, while not currently approved or available, smart technology will arguable afford parties the opportunity to trade, settle and clear with one another without relying on third parties. Smart technology is not simply an opportunity to store data; there remains the opportunity to create algorithms and other automated feeds and computations to the extent approved by regulators and which can be tracked by auditors. These safeguards are programmable and in the most ideal situation would provide real time fees, instead of an ongoing one, to any stress testing and credit formula minimizing the need for excess collateral posting by any one buy side entity.

In terms of money laundering concerns, regulators should note that blockchain users can easily provide access to the data necessary to address money sources and trade terms which must be reported especially in terms of mark to market valuations as smart technology can recreate any transaction and store all order based communication indefinitely. Smart technology is multidimensional, in which case an endless degree of solutions are available simply upon configuring and managing multiple identifiers for an individual's various identities and trading needs. These systems protect data and, to the extent required by regulators, this data can be automatically distributed to multiple repositories real time as an ongoing resource. Even the largest Wall Street banks

are currently unable to provide this level of transparency real time, although efforts are underway to address this.

Blockchain will afford financial service participants three simple benefits:

- a) Streamline the KYC and credit due diligence process with all new counterparties as all information, including trading history and financial statements will be available upon demand and stored indefinitely;
- b) Create a competitive environment where participants can choose their counterparty from a larger pool and immediately transact and report all positions to regulators; and
- c) Fraud and price manipulation may be reduced through digital signatures and secure coding, which further allows the transfer of assets, margin and payments real time.

Regulators Continue to Criticize Blockchain

Potential unforeseen consequences of the expansion of blockchain technology in the financial markets are difficult to predict because they are, well, unforeseen. However, our prognostications regarding potential epiphenomena include the following:

- a) Because blockchain technology eliminates the need for a trusted intermediary in many transactions, the distinction between buy-side actors and sell-side actors may be broken down. This may be reflected in federal income tax law by an extension of the mark-to-market rule of Code section 475 to certain types of buy-side entities, or by a revision of the definition of a "dealer" for purposes of determining whether a foreign entity is engaged in a United States trade or business; and
- b) The definition of "stock" and "commodity" may be extended to blockchain tokens for purposes of Code section 1032; alternatively, this issuance of blockchain tokens might be treated as tax-free to the issuer on the analogy of certain privately-issued guidance.

Blockchain is a new technology which is very much in its infancy stage and regulators are concerned that the technology will disrupt their industries and make it impossible to track and supervise systemic risk far less than before 2008. Blockchain technology has been criticized by regulators primarily because:

- a) Blockchain technology is primarily private which creates a lack of control and security especially when used for

global trading and in riskier industries like the over-the-counter derivatives market;

- b) The lack of full transparency for regulators associated with blockchain based business, particularly when used for trading and more so, if settled in bitcoin or other virtual tokens, creates tax, audit and compliance challenges, not to mention, the risk of money laundering since the trade may be visible to others but can the regulators fully back track the identity of the cash flow source;
- c) The financial services industry will need to adopt an entirely new culture which in many ways will affect job security and separately, a large development cost given the need to construct new systems.

FINTECH DEVELOPMENT IN LIGHT OF REGULATORY CRITICISM

The Securities and Exchange Commission ("SEC") and Commodity Futures Trading Commission ("CFTC"), amongst other regulatory agencies, have targeted the need for transparency and identity protection as a key issue with blockchain and smart contracts. Smart technology will not replace our current financial services processes, primarily, Anti-Money Laundering ("AML") and Know Your Customer ("KYC") compliance standards which can be preserved digitally. While blockchain alleviates many concerns about data readiness, real time clearing and settlements, the facilitation of direct trading can also be digitally programmed to comply with current regulation, especially Dodd-Frank and related G-20 rules.

Identity protection is an important element in blockchain design considering that the digital ledger technology will eliminate third party facilitators or lengthy due diligence processing. Identity management, for starters, is based on the use of private keys which secures all transactions. Each user will create their own code and will control who receives this information and where it is secured. Historically, the AML and KYC process involved the need for passports, birth certificates, etc. which would be liberally shared across back offices providing a heightened risk for fraud and loss, not to mention the delay in processing such information across multiple departmental programs. With private keys, the information is entered into the blockchain which is a superior form of identity protection. This code will have all of its financial and trading history recorded indefinitely allowing regulators access to the code's full history unlike today's records which are lost or the retention of which is capped at about five years under Dodd-Frank reporting rules.

The financial services industry, specifically with respect to back office and overall operations, is slow to implement blockchain in any material way other than trading and clearing but this will surely change as blockchain platforms like Hyperledger, which targets the advancement of cross-industry/global business, and Ethereum, which is a decentralized platform which runs smart contracts that operate real time without much third-party reliance, continue to advance. Sectors leading the way include consumer products and healthcare, each of which requires identity protection in light of the sensitive information being stored and shared. In terms of the financial services market, there is a growing demand for smart platforms geared towards relieving the market's bottlenecks. While a large percentage of the industry recognizes that these digital platforms are disruptive, at least initially, they are crucial to the long-term success and competitive advantage of the user.

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