ISDA Reveals Framework for Smart Derivatives Contracts

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The International Swaps and Derivatives Association, Inc. (ISDA) recently published a whitepaper, *Smart Derivatives Contracts: From Concept to Construction*, that sets out a practical approach to the use of smart contracts for derivatives trading. These contracts have the potential to create significant efficiencies in the derivatives market by automating the performance of events, actions and obligations under a derivatives contract. To achieve this, smart contracts must first overcome a number of legal, regulatory, commercial and technological challenges.

A Framework for Developing Smart Derivatives Contracts

A smart contract is a legally binding agreement that is automated using computer code. The structure of smart contracts can vary. ISDA's white paper focuses on those that allow a computer to automatically perform certain terms of a derivatives contract, aptly named ‘smart derivatives contracts’ (SDCs).

The ISDA whitepaper provides a practical framework for developing SDCs, which includes:

- Determining which parts of a contract are appropriate for automation;
- Changing the expression of legal terms to be compatible with technological requirements;
- Allowing legal terms to be represented as computer functions;
- Developing templates that can be used with particular derivatives products; and
- Validating the templates to ensure the legal effect of contract provisions has not changed.

Regulatory, Commercial and Technological Standards

SDCs must adhere to existing regulatory requirements that govern the activities of derivatives markets and market participants. Although regulations are typically developed collaboratively at the international level, national implementation varies,

creating regulatory inconsistencies. In addition, international regulatory standards for smart contracts have not yet been developed.

From a commercial perspective, SDCs will have to adhere to practices that are common to the industry. Commercial standards, developed through common and continued practice in a market, will guide how SDCs should be structured.

SDCs must also comply with technological standards to ensure that they are sound, secure, compatible and consistent. It is crucial that SDCs comply with these requirements to ensure functionality, consistency and efficiency.

Legal Considerations

SDCs seek to give a legally binding effect to the execution of computer code. This may pose a number of difficulties, as the contracts must straddle both legal and technological requirements.

One of the main challenges will be determining which contract terms can, and should, be automated based on complexity and other relevant factors. One approach is to automate ‘operational’ clauses that require action upon the occurrence of a particular event. Another approach is to rewrite contracts in a more formal expression based on a logical framework that can easily be converted into a programming language.

Drafting legal terms in a manner that can be converted to programming language will necessitate legal practitioners working closely with technology specialists. Validating these terms to ensure the legal meaning of a clause has not changed, will also be necessary.

Finally, changes to the law or the actions of the parties to a contract can create complications for SDCs in operation. ISDA recommends that parties build in a right to suspend the automatic performance features of a SDCs to address such concerns.

Contact Us

If you have any questions about SDCs, please contact one of the authors of this bulletin or any other member of BLG’s Derivatives Group. BLG is ranked as the Number One Law firm in Canada for Derivatives by Derivatives Weekly and has been named Canada Law Firm of the Year — Regulatory and Transactions — at Global Capital's Americas Derivatives Awards every year since the inception of these awards.

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