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Blockchains and Derivatives Markets

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The Science of Finance

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- "Blockchain technology": what's important
- Implications for derivatives markets
- Path to adoption

Blockchains: Three Key Components

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Blockchains and the peer-to-peer networks that create them provide financial markets with an alternative model for securing and maintaining derivatives contracts

Natively digital assets

Digital assets, like bitcoin, are not representations of paper assets; they <u>are</u> the asset. Digitization establishes a single record of custody, traceable over time

True smart contracts

The aggregate processing power of every network participant allows contract governance to rely on a shared protocol, not a third party

Shared data repositories

A network's ability to maintain contract terms and the obligations that underlie those terms yields a selfservice data warehouse **Implications for Derivatives Markets**

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Blockchain technology addresses risks and their associated costs

Step 1: Operational Risk

Digitization of assets & agreements

- Digital representations of paper assets
- Natively digital assets
- Digital contracts

Step 2: Balance Sheet Risk

Optimization of collateral

- Minimize cost to transact assets
- Minimize cost to maintain obligations
- Minimize cost to secure networks

Step 3: Market Risk

Securitization of financial products

- Deliver cross-asset market transparency
- Change risk profile of complex financial products
- Promote market liquidity

Path to Adoption

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Next steps to adoption – Collaboration is key

Network Costs	Identity Management	Regulation and Compliance
Explicit costs: are blockchains always and everywhere more cost effective than third parties?	<u>Identify</u> : market participants must be fully compliant and easily located in a peer-to-peer network	Objectives-focused regulation: regulation can guide and promote industry-wide blockchain adoption
Implicit costs: how do blockchains decrease costs in other areas, such a operations and reporting?	<u>Verify</u> : market participants must be able to demonstrate legal standing with other peers	Role of TAC: industry leadership and consensus- building specifically around derivatives
Cost of Trust: can blockchains price trust amongst market participants?	<u>Authorize</u> : market participants should be entitled to transact based on their ability to perform the above	FCA Regulatory Sandbox: a blueprint for a supportive and collaborative approach to fintech regulation

Markit's work to date

Smart derivatives contracts · Syndicated loans · FX · Digital assets · KYC/AML

markit mines data pools intelligence surfaces information enables transparency builds platforms provides access scales volume extends networks & transforms business.

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