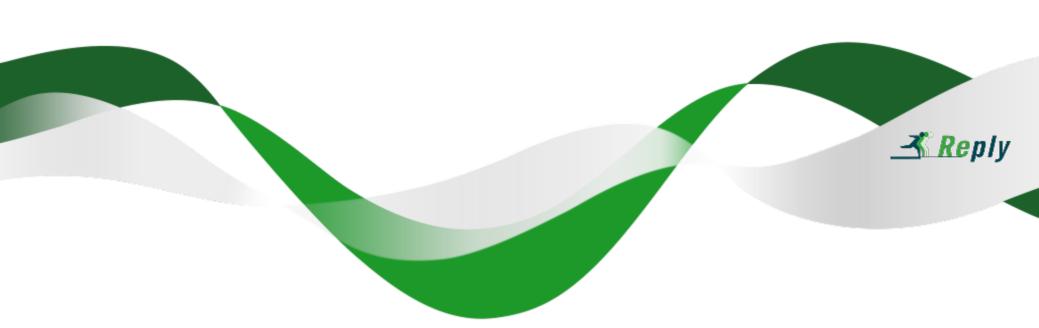
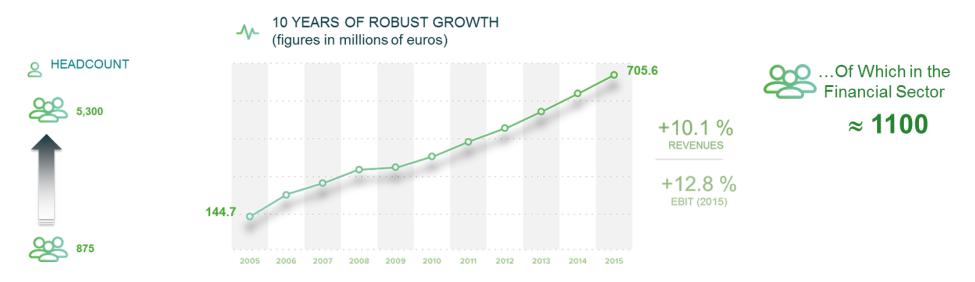


Post-Trading: what's brewing?

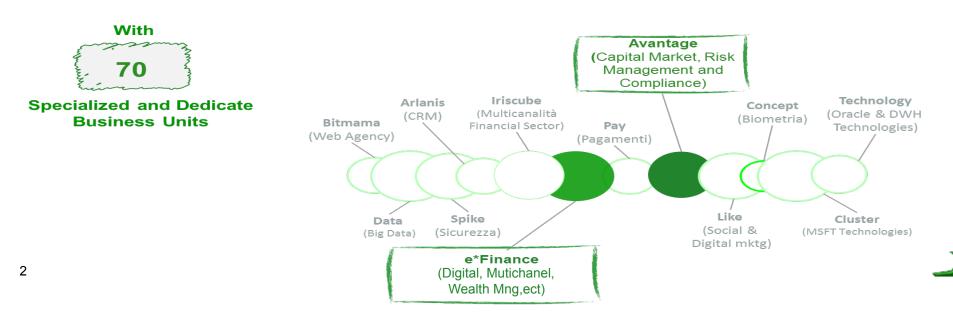
12 Dec 2016



Reply in a nutshell...



Patecipation and Speciatization in the Banking Value Chain



Reply Blockchain Competence Center

Key facts



Created at End 2014

- Goal: supporting Reply companies in Blockchain proposition towards clients
- Over 50 replyers involved
 - **Cross-Country** (ITA, UK, GER)
 - Cross-Industry (Banks, Insurance, Telco, Retail, Energy, etc.)

Main Activities



Research & Analysis

Study and through analysis of the Blockchain paradigm and related opportunities, leveraging **vertical competencies** already present in **Reply** (es. Security, Risk Mgmt, IT Architectures, Business, etc.)

Market Observatory



Continuous monitoring and quarterly publishing of an observatory about the main blockchain initiatives worldwide, including the most important start-up.



Design & Implementation

Implementation of **9 blockchain-based accelerators** (End-to End working applications), ready to customization according to client requests

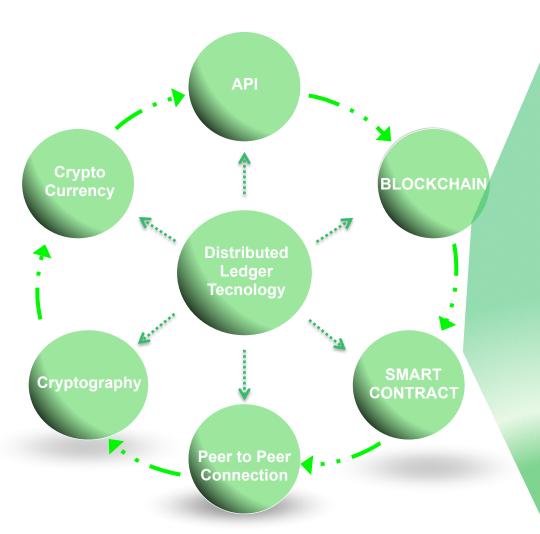
Partnership & Collaborations



- Collaboration with ABILAB
- Partnership with legal firm "Orrick International"
- Collaboration with Politecnico di Milano observatories



DLT A disruptive ecosystem



What the Industries think ..

..''existing financial intermediaries may adopt a few of the key components of DLT as an enhancement to their existing technical platforms. This type of incremental adoption may not change any underlying business, operational, or behavioral practices supporting the PCS process.

At the other extreme, a comprehensive DLT arrangement might be implemented to replace entire functions traditionally managed by existing financial intermediaries (that is, entire PCS processes).

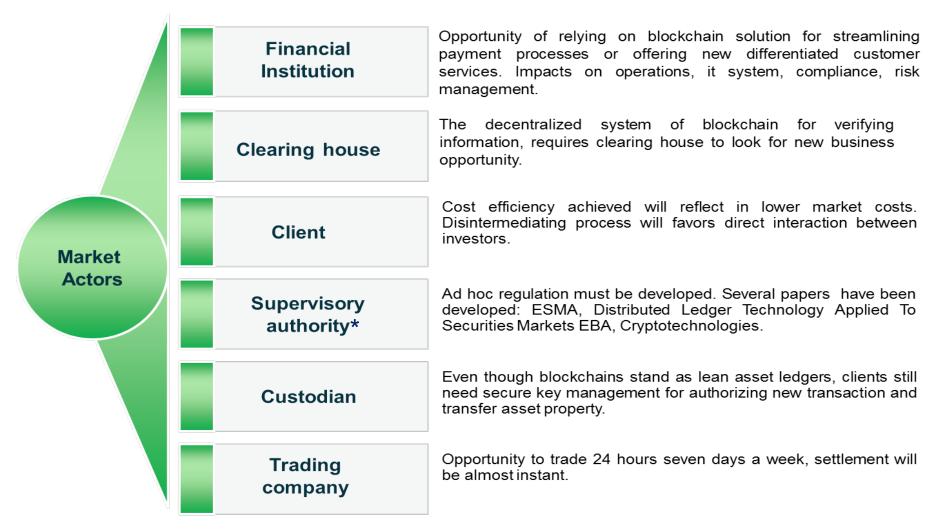
This type of comprehensive approach might result in very significant changes to the architecture of the financial system for conducting payments, clearing, and settlement.

For example, in very extreme but unlikely scenarios, the use of banks to conduct payments could become obsolete. In between these extremes lie a number of potential future states for the financial architecture*"

⁴ *Source: "Distributed ledger technology in payments, clearing, and settlement" - Finance and Economics Discussion Series Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board, Washington, D.C.



DLT Who are the actors in the financial sectors...



^{*&}quot;We are on a journey which could radically alter the financial ecosystem as we know it. The ECB is committed to be part of this journey" - **Distributed Ledger Technology: role and relevance of the ECB-** https://www.ecb.europa.eu/press/key/date/2016/html/sp161206.en.html

DLT Which regulations...

Following the EMIR regulation, is required to market participants to report to ACER (Agency of the Cooperation of Energy Regulators) the details of their transactions and orders in relation to all energy related products

A US level all the issues addressed in the various European regulations (EMIR, MIFID2, MiFIR, SIMM, etc.) Are described in a single law: the Dodd Frank Act

Regulation together with EMIR and MIFID 2, it will form a framework in which systemically important securities infrastructures (trading venues, central counterparties, trade repositories and central securities depositories) are subject to common rules on a European level.

MIFID/MIFIR introduced the obligation of using trading platform (MR,MTF, OTF)

The regulation introduce also the

The regulation introduce also the clearing obligation as defined in EMIR and the negotiation in at least one trading platform without impeding competition

MIFID2 will strengthen governance and transparency requirements (i.e. on additional instrument such as bond and derivatives)

MIFID2 MIFIR

EMIR

DFA and Settlement...

REMIT

CSDR SIMM

The EMIR introduce the obligation to:

- carry out the clearing of all standardized derivatives through Clearing House
- providing to a Trade Repository of ESMA (European Securities and Markets Authority) at least 85 fields of demographic information of all derivatives entered into (including OTC); this information must be provided within the day following their signing, modification or cancellation

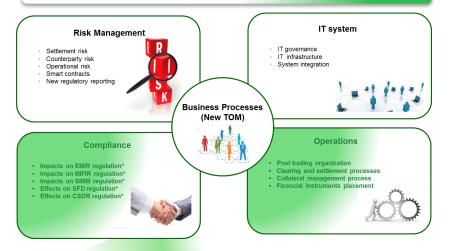
It introduces the obligation for all counterparties that have concluded not cleared OTC derivatives by Clearing House, to exchange initial margin and variation Margin



DLT

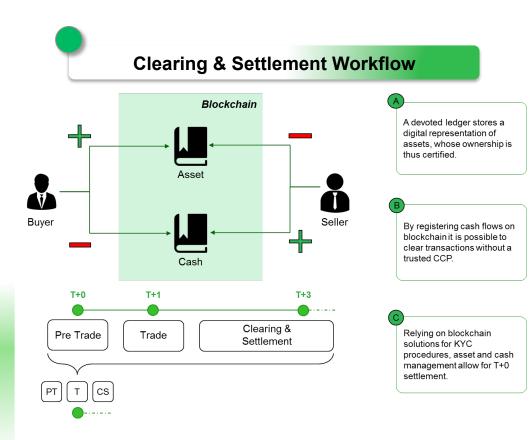
Where are the impacts, the real benefit and an hypothetical workflow

Impacts on Financial Institution



Benefit on Clearing & Settlement

- Reduced complexity (especially in multiparty, cross-border transactions)
- Improved end-to-end processing speed and availability of assets and funds
- Decreased need for reconciliation across multiple recordkeeping infrastructures
- Increased transparency and immutability in transaction recordkeeping
- Improved network resiliency through distributed data management
- Reduced operational and financial risks





Possible roadmap to adoption*

Initial capital markets start-ups, limited test cases

- Investment in developing next generation technology
- Identifying initial use cases
- · Efforts to build industry consensus/ traction

Initial 'seeds'/proposals for market standards

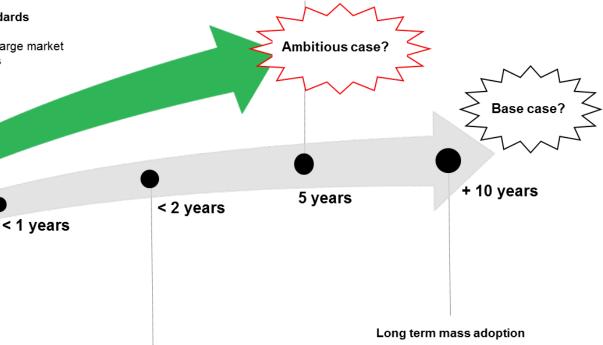
 Select industry consortia/ groups, public bodies, large market infrastructures outlining/proposing some standards

Today

Thin applications gaining wide industry traction

Initial adoption of distributed ledgers in thin parts of industry-wide value chain

- Overall agreement on standards
- Mutualisation of technology/ replacement of existing systems



Bitcoin/cryptocurrency

Disruptive innovations in niche applications

Next generation of applications in

estimates that it will be five to ten years until DLT achieves "mainstream adoption." See Gartner (2016), "."

- · bold transformations of small markets
- narrow applications in large markets
- ... define new markets that do not exist today

- Major industry-wide disruptions
- · Lessons learned from numerous iterations
- · Industry-wide familiarity and confidence in technology

Bitcoin a v1 application with current developers actively addressing perceived flaws...

- throughput restrictions
- inflexible code architecture
- ... and preliminary regulatory scrutiny

*Source: Hype Cycle for Emerging Technologies - technology research firm Gartner, which monitors emerging technologies,



Thank You for your attention

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