

HSM BLOCKCHAIN

BEEFING UP BLOCKCHAIN SECURITY



WHAT IS IT?

Blockchain technology has the potential to **redefine the operations and economics** of the financial services industry. However, many banks are concerned around the **scalability and security** surrounding a blockchain implementation, as the cryptographic functions that take place on software are subject to cyber attacks.

Patent pending, this Proof of Concept centralises blockchain's cryptographic functions onto a hardware security module (HSM). These hardware devices are regulatory approved and can be stored on premises, providing increased security. Furthermore, this enables firms to scale the solution easily, simply by increasing the hardware count.

The software enables the roll-out of blockchain technology in order to realise its vast benefits, including efficiency increases, reduced costs and near-perfect audit capacity in a **secure and scalable** manner.

KEY FACTS



\$1.7tn

Charges to bank customers in 2014 for payment processing. [1]



\$120bn

Potential savings to banks in capital requirements if blockchain is adopted. [2]



\$2.5bn

Venture capital investments in blockchain-related start-ups in 2016. [3]

BENEFITS

- 1. Improves security and scalability** through the use of HSMs for cryptographic processing, key protection, key management and storage.
- 2. Accelerates the time taken** to process payments while significantly **cutting operational and settlement costs**.
- 3. Enhances audit capacity** by providing **immutable, timestamped audit trails** and records.

[1] http://www.economist.com/news/finance-and-economics/21694531-all-money-spent-technology-banking-not-efficient-high-tech-homes-low/21694531-all-money-spent-technology-banking-not-efficient-high-tech-homes-low?sr=crs&tw_ec=high_tech_mets_low_finance

[2] <http://arstechnica.com/business/2016/04/incentives-blockchain-brings-transparency-to-notorious-credit-default-swaps/>

[3] <http://www.coindesk.com/slate-to-fbi-blockchain-1-2016/>