Transaction Banking by D Sign

Blog

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"If You Have No Trust I Shall Take It Away"

The ship registry skit – part 1: Identifying. Shady Shipper: "I'd like to register my vessel. Here's a photo I took on the island this morning of my supertanker berthed at the port terminal". Scrupulous Registrar: "We need a bit more than that to go on, your purchase certificate, IMO ship registration number, tonnage certificate, load line certificate, …" Shady Shipper: "Here's $10,000". Scrupulous Registrar: "That will do nicely, Sir".

The ship registry skit – part 2: Transacting. Shady Shipper: "I'd like to sell my vessel once to Otto and once to Maria". Sanctimonious Registrar: "But that's not possible." Shady Shipper: "Here's $10,000". Sanctimonious Registrar: "That will do nicely, Sir".

The ship registry skit – part 3: Recording. Shady Shipper: "I have to go court and need you to change your historical records for me such that only Maria is shown to own the ship". Shady Registrar: "That could cost you…" Shady Shipper: "Here's $10,000". Shady Registrar: "That will do nicely, Sir".

Trusted Third Parties

A Zen koan opens, "When Banzan was walking through a market he overheard a conversation between a butcher and his customer. 'Give me the best piece of meat you have,' said the customer. 'Everything in my shop is the best,' replied the butcher. 'You cannot find here any piece of meat that is not the best.' At these words Banzan became enlightened."

Trust is when we leverage on a history of relationships to extend credit and benefit-of-the-doubt to someone. Trust is about much more than just money; it's about human relationships, obligations, experiences, and about anticipating what other people will do. In risky environments trust enables cooperation and permits voluntary participation in mutually beneficial transactions which are otherwise costly to enforce or cannot be enforced by third parties. By taking a risk on trust, we increase the amount of cooperation throughout society while simultaneously reducing the costs, unless we are wronged. Trust is not a simple concept, nor is it necessarily an unmitigated good, but trust is the stock-in-trade of transaction banking.

Technology is transforming trust. There are reputational ranking systems from point scores on Amazon, to supplier rating on eBay, to collaborative filtering on many sites, to "I hate" websites, to social networks with referral or testimonial systems. We have fictional reputational currencies, such as the Whuffie, being realised in novel real ones such as Ripple with its Trustlines. As a means of transacting business over space, never before has

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there been a time when it's been easier to start a distant geographical relationship. With a credible website and reasonable links, you're prepared to learn about companies half a world away and entertain the idea of conducting commerce with them. Society is changing radically when you find yourself trusting on first encounters people with whom you have no experience, e.g. on Ebay or Facebook, more than a first encounter with a local corner store.

Blocking Mistrust

People use trusted third parties in many roles in finance, as custodians, as payment providers, as poolers of risk, i.e. insurers. The opening 'ship registry' skit illustrates three core functions that trusted third parties peform:
♦ identifying - validating the existence of something to be traded;
♦ transacting –preventing duplicate transactions, i.e. someone selling the same thing twice or 'double-spending';
♦ recording – holding the record of transactions in the event of dispute.

In January 2009 blockchain technology was first used publicly to help create Bitcoin, a cryptocurrency-based protocol. While Bitcoin is problematic both socially and economically, and there have been technical glitches with Bitcoin wallets, the blockchain technology has proven robust. In fact, as an experiment in proving blockchain technology's robustness, Bitcoin has been superb, showing the technology to be proof against a wide range of attacks, from criminals to national security agencies.

Blockchain technology provides an electronic public transaction record of integrity without central authority. The transaction record is a ledger of all transactions that have taken place within a set protocol, recorded in a sophisticated, distributed data structure. The data structure is decentralised and shared by all nodes, i.e. computers, within the participating system or network. Cryptographic and problem-solving block validation prevents duplicate transactions, double-spending, and ensures ledger integrity. The blockchain does not require a central authority or trusted third party to coordinate interactions, validate transactions, or oversee behaviour. The blockchain can contain sets of documents and record assets. In short, a blockchain is a secure peer-to-peer ledger with storage analogous to peer-to-peer music sharing systems such as Napster.

Blockchain technology has wider applications than just Bitcoin or the other hundreds of cryptocurrencies using it. Blockchain technology can be applied in financial areas where a central, trusted third party has traditionally been used, trade reporting, depository receipts, escrow, trade finance, etc. Since 2009, blockchain applications which extend beyond currencies, such as smart contracts and decentralised autonomous organisations, have been developed and tested. A Long Finance report, "Chain Of A Lifetime: What Might Blockchain Technology Mean For Personal Insurance" (December 2014) - http://www.longfinance.net/publications.html?id=903 – explored the potential for one sector, but what about transaction banking?

Believe In Transaction Technology But Keep The Faith In Identity

Blockchain technology promotes speculation. What if … any group of companies could elect to create their own pooling system on the spot? What if … a group of shippers decided to establish a shared carriage system for containers? What if … a property

developer elected to mandate participation amongst all their suppliers. Each supplier might buy all materials and goods such as cement or cabling from a central store under a sophisticated averaged pricing algorithm incentivising each to buy cheaply and share fairly. We can easily imagine instant mini-insurers creating a shared economy approach to special purpose vehicles.

If faith in the technology's integrity continues to grow, then blockchain technology might substitute for two roles of a trusted third party, preventing duplicate transactions and providing a verifiable public record of all transactions. Trust moves from the third-party to the technology. Emerging techniques, such as, smart contracts and decentralised autonomous organisations, might in future also permit blockchains to act as automated agents. The consequence may be that the first role of a trusted third party, authenticating identification, becomes the most important. Transaction banks must experiment with blockchains in order to begin designing new support systems for clients. Some firms are experimenting with documentation ledgers and identity systems. More will join the fray. Soon, self-organising templates for the earlier 'what if' speculations may allow groups of a transaction's banks' clients to create their own trust networks. Transaction banks may lose a bit from the reduction in their two roles, but they stand to gain much much more through both a more vital role in establishing identity and greatly increased transaction numbers.

While blockchain technology may well substitute for transacting and recording, technology will never be sufficient on its own. Concepts of trust arise in many philosophical puzzles that range from Epimenides the Cretan's paradox of "all Cretans are liars" through to Kurt Gödel's Incompleteness Theorem. A paraphrase of Gödel's Incompleteness Theorem applied to trust might read, "We can never find an all-encompassing axiomatic system of trust, without recourse to systems outside it." Let's conclude with Long Finance's Zen koan – "If you have some trust, I shall give you trust. If you have no trust, I shall take it away."

 [1,221 words]

Professor Michael Mainelli is Executive Chairman of Z/Yen Group and Principal Advisor to Long Finance. His latest book, **The Price of Fish: A New Approach to Wicked Economics and Better Decisions**, *written with Ian Harris, won the 2012 Independent Publisher Book Awards Finance, Investment & Economics Gold Prize.*