Transaction Banking by D Sign

Blog

Professor Michael Mainelli
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Sell It To The Machine

Welcome my son, welcome to the machine.
Where have you been? It's alright we know where you've been.
You've been in the pipeline, filling in time,
provided with toys and Scouting for Boys.

[Pink Floyd, *"Welcome To The Machine"*, from the album "Wish You Were Here" (1975)]

Machine Markets

This past summer a North American energy insurer raised an interesting problem with us. They were looking at insuring US energy companies about to offer reduced electricity rates to clients who allowed them to turn appliances on-and-off, for example a freezer. Now freezers in America can hold substantial and valuable quantities of foodstuffs, often several thousand dollars. Obviously, the insurer was worried about correctly pricing a policy for the electricity firm in case there was some enormous cyber-attack or network disturbance. The control systems are now as important as the power supply.
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Take for example coming home to find your freezer off and several thousands of dollars worth of defrosted mush in your freezer. You ring your home & contents insurer who notes that you have one of those new-fangled electricity contracts. It was probably the electricity company. Go claim from them. You ring the electricity company. In a fit of customer service, they deny they had anything to do with turning off your machine, but, if anything, it was probably the freezer manufacturer who is at fault. The freezer manufacturer knows for a fact that there is nothing wrong except that you and the electricity company must have installed things improperly. Of course, you may not be all you seem to be. Perhaps you unplugged the freezer to vacuum your house and forgot to reconnect things. Or perhaps you were a bit tight on funds and thought you could turn mush into instant cash.

In future, machines will make decisions and send buy-and-sell signals to each other that have large financial consequences. We pointed out to our North American friends that they, the insurer, should perhaps tell the electricity company which freezers to shut off first, starting with the ones with the cheapest contents. With billions of people on the planet, we may need several tens of billions or even low trillions of ledgers recording all these transactions in case of dispute. My freezer-electricity-control-ledger, my entertainment system, home security system, heating-and-cooling systems, telephone, autonomous automobile, local area network, telephone recording, etc.

Perhaps the most significant announcement of 2015 was in January from IBM and Samsung. They announced their intention to work together on mutual distributed ledgers

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(aka blockchain technology) for the Internet-of-Things. ADEPT (Autonomous Decentralized Peer-to-Peer Telemetry) is a system jointly developed by IBM and Samsung for distributed networks of devices. They foresee a future of ten billion people with hundreds of networks, a trillion distributed ledgers.

Meet The New Boss

Many forecasters are predicting rapid and extreme traditional job losses due to automation. Carl Benedikt Frey and Michael Osborne at Oxford caused a stir in 2013 when they published a paper containing detailed research estimating that 47% of US jobs were at risk over the next decade. Of course this means two roles that are often contained within human jobs move, at least partially, to the machine. Those two roles are that of 'customer' or 'buyer', and that of 'boss'.

The new machine bosses won't be quite the same as the old bosses. Human nature evolves slowly; machines evolve quickly. Only other machines are likely to keep up with the day-today evolution of choice other 'bots' will create. Thinking about artificial intelligence ('The AI') as customer can be mind-bending. We have to create the AI salespeople this implies. AI salespeople need to operate in machine time, much faster than human time. There are some inklings of what this might look like in the world of high-frequency trading, but with trillions of networks this will be much more competitive, dangerous, and potentially lucrative.

Correspondent and transaction banks have either a great role or no role. Great if they can up their game to sell to the machine. No role if they can't respond quickly. It's interesting to contrast the CPMI Working Group on Correspondent Banking's recent report with the idea of selling to trillions of machines. Banks are cutting down banking relationships just as their need may be about to explode. Banks are restricting international network access just as IBM, Samsung, Apple, Google, and others seek global reach.

Know Your Customer & Anti Money Laundering (KYC/AML) strictures are being bolstered by Know Your Customers' Customers (KYCC), perhaps leaving global firms to make their own payment arrangements without their banks, a role that cryptocurrencies are all too happy to assume. Heck, that's what they were designed for. Another implication is that KYC utilities will arise to displace part of the role of banks due to their own inefficiency and creativity. The major accounting firms, and some governments, e.g. Estonia, seem to be moving into these spaces.

Information sharing is too costly and expensive. Mutual distributed ledgers have a huge role in information-sharing initiatives, such as legal entity identifiers (LEI) or International Bank Account Numbers (IBAN) or Bank Identifier Codes (BIC). Further, much messaging is expensive and error-prone. MT 103 and MT 202 payment messages are expensive, and the structure has been used to obscure clarity of ultimate beneficial transactor. Again, mutual distributed ledgers may have a role here. Further, I am aware of at least two global banks who are implementing internal mutual distributed ledgers to cut out internal SWIFT transfers.

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A World Bank survey commissioned by the FSB [http://www.fsb.org/wp-content/uploads/Correspondent-banking-report-to-G20-Summit.pdf] concludes that correspondent banking services are declining in roughly half of the emerging market and developing economy jurisdictions surveyed. This decline is in addition to the decline in retail cross-border payments and remittances. Regulation may be restricting financial services at just the time when multitudes of cross-border micro payments may be taking off.

The level of skills in current transaction banking are pitiful when contrasted with the challenges ahead. Who has deployed, not deplayed with, artificial intelligence, support vector machines, mutual distributed ledgers, predictive analytics, agnostic broadcasting of timestamps, evolutionary user interfaces, etc. Yet this is what transaction banks face today, let alone what they'll face when the machines begin to evolve. The 'technological singularity' is a hypothetical event when artificial intelligence ("strong AI") takes control. Some call it 'technology rapture' when the gods of AI come down to take command of all of us.

Well, some of us, and too often in transaction banking, might quote Douglas Adams, "technology is stuff that doesn't work yet". But sadly, that is not enough in today's world, so I'll leave you with this terrifying, and humorous, international tidbit. Le Royal Tour Restaurant by the Eiffel Tower in Paris has a menu that I read in 2004. It translated one entry thus:

Viande de boeuf fraîchement hachée avec machine réfrigérée à la commande

Beef codly chopped has the order with cooled machine

(a chilling view of the future as slave human chefs subjugated by cryogenically-refrigerated computers wield frozen fish carcasses to splinter beef)

Transaction banks are going to have to get serious about selling to the machines, or become slaves to the machines.

[1,197 words]

About the author

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.*

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