# Putting the shareholding registry on a blockchain

PRIVATE capital platform CapBridge recently announced that its stock exchange for privately held companies, 1exchange, will make use of the Ethereum blockchain platform to record transactions. *The Business Times* finds out how the technology works, and how it is different from traditional trading protocols.
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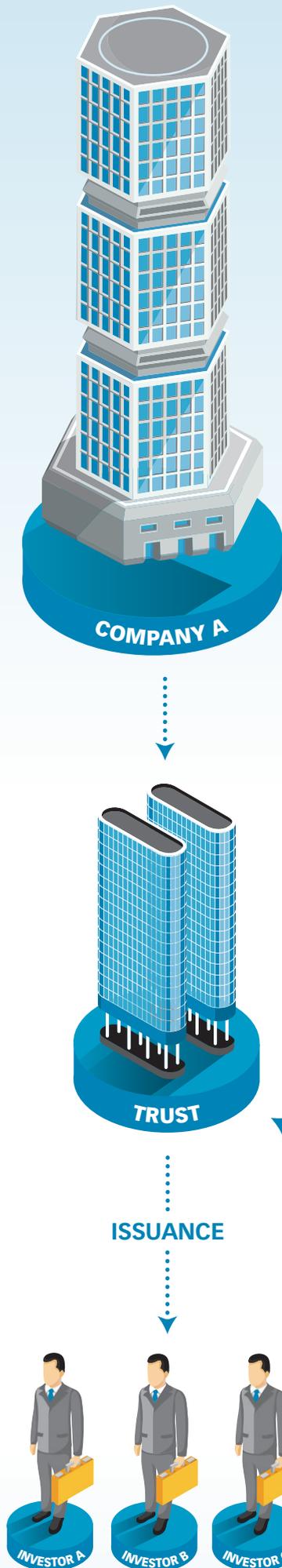
COMPANY A

1 To list shares on 1exchange, Company A sells new or existing shares to a special-purpose vehicle (SPV) governed under a trust. If different share classes are involved, the different classes are "flattened" into a single class using swap ratios.
   As part of the listing process, shares of the SPV are marketed to accredited investors with the help of a placement agent or advisory firm. The agent also helps to gauge demand from the investors and determine pricing for the shares. The shares are then issued to the investors.

2 The shareholdings of this initial set of investors are recorded on the Ethereum ledger.
   Any 1exchange participant can view the contents of the ledger at all times. When a trade occurs, that ledger is updated to reflect changes in shareholdings.

········ **UPDATE LEDGER** ··········▶

ETHEREUM

TRUST

4 When the escrow agent receives the cash from the buyer, the trust confirms it and updates the shareholdings on the ledger. The escrow agent then releases the cash to the seller.

ISSUANCE

CONFIRMATION

3 After the shares are listed, investors who want to sell shares can post offers on a bulletin board maintained by 1exchange. When a buyer and seller agree on a trade, the buyer transfers the cash for the trade to an escrow account.

◀········ **CASH** ········▶

INVESTOR A **INVESTOR B** **INVESTOR C**

ESCROW

Why distributed ledgers?

The key difference between 1exchange's blockchain protocol and traditional systems lies in the share registry. In a traditional exchange, a centralised share registrar maintains the database of shareholdings. On 1exchange, the database is replicated and accessible across the network.
   A distributed ledger is therefore less vulnerable to single-point failures. If there is a business disruption at CapBridge, for example, investors will still be able to determine their shareholdings as long as other participants in the network are still operational.
   Being on the Ethereum platform also leaves the door open to future innovations, CapBridge says. Future applications could include using smart contracts to carry out corporate actions such as dividend distribution, share splits and governance and voting mechanisms, as well as potential integration with other market platforms.