

# 10 points ...

## on Ethereum

This KWM BriefSheet sets out 10 points on the what, how and why of Ethereum

- **Ethereum uses blockchain technology ...** Ethereum relies on a [blockchain](#) — a transaction record that is independently verified by others and held on a distributed ledger. The same technology underpins Bitcoin. However, the Bitcoin blockchain is predominantly designed to do one thing: facilitate Bitcoin transactions. Ethereum, on the other hand, is designed to act as programmable infrastructure. This means that Ethereum is a more adaptable and flexible development platform.
- **... to hold smart contracts ...** A [smart contract](#) is simply any agreement that can execute certain functions without human intervention. Ethereum smart contracts live on the blockchain and execute a specific piece of code when “poked” by a message or transaction. For example, a smart contract for crop insurance could automatically pay out to farmers based on a data feed showing that a drought had occurred.
- **... that enable decentralised applications (“dapps”) ...** A traditional app comprises a user interface that connects to a centralised server. For example, when we interact with the WhatsApp app on our phones, the app in turn communicates with WhatsApp’s servers located around the world. A dapp can feature the same user interface as a traditional app, but replaces the centralised server with smart contracts that run on the Ethereum network. It is early days for dapps, but many varied projects are currently under development, aiming to provide services from decentralised file storage to distributed computing.
- **... and decentralised autonomous organisations (“DAOs”) ...** A [DAO](#) is a re-imagined form of organisation that can, for example, replace articles of association and shareholder agreements with smart contracts.
- **... that often have their own digital tokens.** These tokens can serve a variety of functions within a dapp or DAO, such as providing access to services on a network or operating as a form of internal currency. The development of dapps and DAOs is often funded by selling these tokens in what is known as a token sale, a token-generating event or (loosely) an [Initial Coin Offering \(“ICO”\)](#).
- **Ethereum has its own token called Ether ...** It provides a primary liquidity layer to allow for exchange across the Ethereum network. Ether also provides the mechanism for paying and earning transaction fees that arise from supporting and using the network.
- **... that has been the subject of massive speculation.** Like Bitcoin, the price of Ether has fluctuated widely. In the past year, the price per Ether ranged from US\$10 to over US\$400. Clearly, Ether demonstrates significant speculative characteristics.
- **Large organisations are getting on board ...** Through the Enterprise Ethereum Alliance, Fortune 500 companies, start-ups and universities are collaborating to work on enterprise use of Ethereum and blockchain technology. As familiarity and experience increases, we may see an increase in the number of corporates trialling projects on the platform. Governments have also shown interest. For example, the Monetary Authority of Singapore used Ethereum to test a tokenised version of the Singaporean Dollar. Of course, other significant blockchain and smart contract platforms and protocols are also being used.
- **... but scalability remains an issue ...** Like Bitcoin, Ethereum requires every single transaction and smart contract on the network to be independently processed by all nodes on the network. This is necessary to ensure that the network as a whole remains decentralised. But this is far less efficient than a centralised computer. The trade-off between efficiency and decentralisation will limit Ethereum use cases for the foreseeable future. There are, however, other Ethereum-like platforms being developed that prioritise scalability over decentralisation.
- **... and regulation is still taking shape.** Before diving in, it is important to think through the legal and regulatory impacts of particular projects. In particular, businesses operating in regulated industries, such as financial institutions, should consider seeking guidance from their regulator - especially before integrating critical, customer-facing or data-handling processes with a blockchain platform like Ethereum. Regulation of blockchain platforms is still taking shape — and how current laws and regulations apply to these platforms is largely untested.

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**SCOTT FARRELL**  
Partner

T: +61 2 9296 2142  
M: +61 409 042 883  
scott.farrell  
@au.kwm.com



**URSZULA  
McCORMACK**  
Partner

T: +852 3443 1168  
M: +852 6796 6130  
urszula.mccormack  
@hk.kwm.com



**STANLEY ZHOU**  
Partner

T: +86 21 2412 6056  
M: +86 139 1691 2182  
stanley.zhou  
@cn.kwm.com



**ELI HAN**  
Partner

T: +1 212 319 4755  
M: +1 718 915 7231  
eli.han@us.kwm.com