Advantages of a blockchain built for securities

Transaction Settlement

Challenge with general purpose blockchains

Three years ago, Accenture conducted a study finding that blockchain technology stood to reduce settlement costs by 50% and in theory, 95% of trade processing and settlement can be automated through blockchain. As it stands today, there is still a large gap between what is possible and what is practical.

There are a number of challenges on general purpose blockchains, including:

Delivery failure
The DTCC ranks delivery failure as one of the main three reasons why settlements fail. On general-purpose blockchains, this is because users are able to agree to a transfer without delivering the assets, or agree to multiple transfers with the same set of assets.

Pre-funding
Participants in a blockchain transfer are required to part with cash or assets in advance by pre-funding their transaction to mitigate counterparty credit and liquidity risks.

Settlement finality
General purpose blockchains, like Ethereum, depend on probabilistic finality and never entirely finalize transactions.

Unwanted transfers
These transfers (often referred to as airdrops) present regulatory and operational concerns and have associated AML and taxation implications.

> *Trade failures are surprisingly costly when all factors are taken into account. The stock may have been borrowed, incurring additional interest costs and the fail may have to be funded in cash. If it's near the month's end, it could impact the balance sheet with commensurate effects on regulatory requirements. On top of all this is the time spent by staff addressing the claims, penalties, cancel and correct fees and manual verification. Global Custodian reports that a global failure rate of just 2% is estimated to result in costs and losses up to $3 billion.*
>
> The Depository Trust & Clearing Corporation
>
> Source.

How Polymesh overcomes it

Polymesh provides a simplified approach to transfers that relies on efficient workflows and blockchain automation.

In so doing, it narrows the gap to blockchain settlement in three key ways:

Reduces delivery failures without pre-funding

The Polymesh Settlement Engine immediately commits assets once a settlement instruction is affirmed so that they cannot be spent in other transactions. Because this is done at the protocol layer, assets do not need to be sent away in advance of the transaction and asset transfer can happen on an atomic basis without requiring a smart contract to hold custody of both assets.

Provides deterministic transaction finality

Polymesh can provide the needed deterministic transaction finality through the GRANDPA finality gadget, an industry-led governance model, forkless upgrade process, and a comprehensive compliance validation framework.

Prevents airdrops and unwanted transfers

Polymesh's approach to asset transfers eliminates airdrops (tokens appearing in user wallets unprompted). Because users are required to affirm settlement instructions before tokens appear in wallets, they can be confident they aren't holding unaccounted for assets.

95%

of trade processing and settlement can be automated through blockchain.

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