Fidelity DIGITAL ASSETS℠

COIN REPORT:

Litecoin (LTC)

An overview of Litecoin and its potential use cases

By **Fidelity Digital Assets®**

Asset Type:	Digital Currency
Consensus Mechanism:	Proof-of-Work
Launch Date:	October 9, 2011
Max Supply:	84 Million

Key Takeaways

Facts

- Litecoin is an early fork of the Bitcoin code and was first launched in 2011.
- Litecoin's block time is four times quicker than Bitcoin, making transactions faster.
- Litecoin's total supply is 84 million versus Bitcoin's 21 million.

Strengths

- Litecoin offers a faster settlement system as blocks occur roughly every 2.5 minutes compared to every 10 minutes for Bitcoin.
- Litecoin provides a cheaper alternative to transact with and onboard new users to Layer 2 solutions like the Lightning Network.
- Litecoin can be used as a testing ground for potential Bitcoin upgrades.

Weaknesses

- Litecoin trades speed for reliability—more frequent blocks lead to more orphaned blocks, decreasing settlement assurances.
- Litecoin faces steep competition in the payment space from stablecoins as well as from other blockchains in terms of a faster or cheaper medium of exchange.
- Based on its current state, it appears unlikely that Litecoin will become a threat to bitcoin as a store of value.

Fundamental Analysis

What Is Litecoin and Its Value Proposition?

Litecoin was created in 2011 from a fork of Bitcoin's code and was presented by its founder Charlie Lee as a "light version of Bitcoin." Litecoin's aim is to make it easier to mine, faster to transact with, and less costly to use than Bitcoin.

One of the major changes Litecoin implemented to enhance its efficiency as a digitally native payment system was reducing block times to roughly every 2.5 minutes. This made Litecoin essentially four times faster than Bitcoin. Along with this adjustment, Lee also increased total supply to 84 million and increased halving events to every 840,000 blocks to remain on a four-year halving cadence like Bitcoin. One drawback of this faster transaction speed is that 2.5-minute average block times inevitably lead to an increase in orphaned blocks, impacting settlement assurances.

Litecoin can be viewed as an alternative transaction method to Bitcoin, much like how silver was used to transact in smaller denominations rather than gold throughout various times in history. BitPay, one of the largest digital asset payment operators in the world, showcased Litecoin's use as a payment mechanism, as 30% of all transactions on BitPay were done using litecoin.

Litecoin's Ability to Help Onboard Lightning Network Users

Another potential use case for Litecoin—which is still in the early stages—is its ability to provide a cheaper way to onboard users onto the Bitcoin Lightning Network. Users can bridge Litecoin onto the Lightning Network for nearly one thousandth the cost on average compared to converting directly with Bitcoin. This is due to Litecoin's smaller network size and higher transaction throughput. Once on the Lightning Network, litecoin can be converted to bitcoin through a process called an Atomic Swap. However, it is important to note that this long-term use case for litecoin has not seen very high use levels or adoption yet.

Litecoin as a Store of Value

One of the main claims for litecoin is as a store of value. However, as of July 2025, litecoin's price is down 75% from its 2021 high. Previously, we have discussed how we view bitcoin as an aspirational store of value and as a potential emerging monetary good. We believe it is likely that one primary digital asset will serve as store of value due to the strong network effects. This may already be occurring as litecoin hit a new all-time low in 2025 when priced in bitcoin. At the time of writing, it is down approximately 98% from its all-time high.

LTC/BTC Price History

Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Brief History of Litecoin

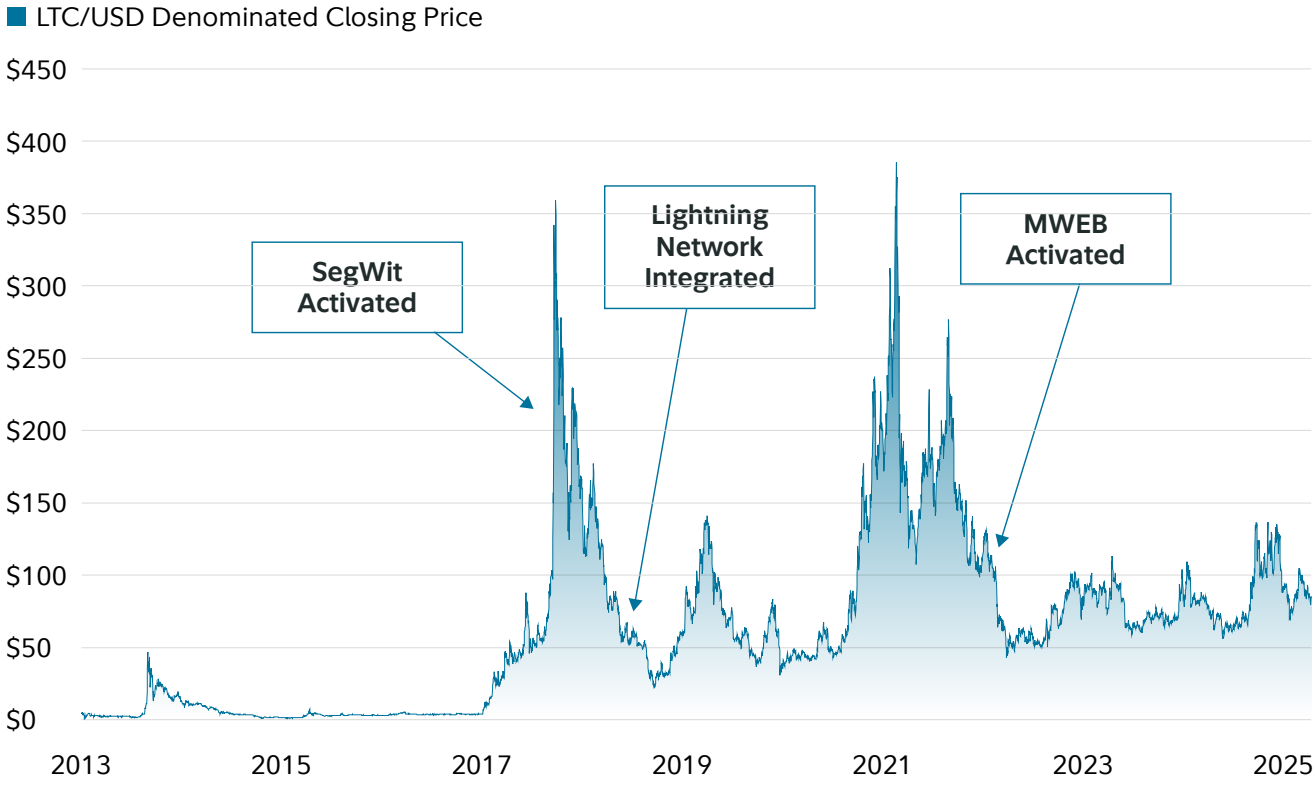
Litecoin was founded as a fork of the Bitcoin code on October 9, 2011 (a fork occurs when the rules of a blockchain are changed). Although Litecoin is considered a fork in the development sense, it is important to note that its blockchain is not a fork of Bitcoin. Litecoin has its own genesis block and did not retain Bitcoin's history.

Its founder shared at the 2014 Bitcoin Miami Conference that its development only required "one week of planning and four hours of coding." In the years since its inception, Litecoin has undergone multiple network changes.

In 2017, Litecoin became the first major cryptocurrency to activate Segregated Witness (SegWit), a protocol upgrade with the goal of optimizing block space and lowering transaction fees.[1] In 2018, the Lightning Network was introduced as a Layer 2 scaling solution on top of the Litecoin network (a Layer 2 refers to a secondary framework built on top of a blockchain to improve scalability and transaction speed without altering the base protocol). The first Litecoin Lightning Network transaction happened a full seven months before the first Bitcoin Lightning Network transaction.

Lastly, in 2019, Litecoin began exploring the integration of the Mimblewimble Extension Blocks (MWEB) privacy protocol and successfully activated the upgrade in 2022. This allows users to make more private transactions where only the sender and receiver can see the amount transacted.

Litecoin History



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Litecoin Trade-Offs

Litecoin's founder is heavily involved in the decision-making process through the Litecoin Foundation, meaning that Litecoin can add new features more often and faster than Bitcoin. Litecoin essentially trades a level of decentralization for efficiency. This can be seen as a positive for a digital asset that is aiming to be a leader in digital payments.

Additionally, Litecoin can serve as a testing ground for innovative blockchain enhancements. However, with added speed of implementation comes exposure to unknown risks. Litecoin trades a level of security for speed. It is important to note that this trade-off is not necessarily a negative for a coin that aims to transact and store small amounts of value. Litecoin does not require the same level of security as a competitor transacting and storing larger amounts.

Competitor Analysis

Litecoin has various competitors depending on the use case of the network. As a store of value, its main competitor is Bitcoin. Litecoin fairs poorly in this area, down 98% from its all-time high priced in bitcoin as of July 17, 2025.[2]

As a medium of exchange, litecoin's main competitors are stablecoins such as Circle's USDC and Tether (USDT). Litecoin's volatility is its main drawback as a medium of exchange—comparing the market cap of these three assets shows litecoin trailing by a wide margin. Users tend to prefer transacting with a more stable digital asset.

Medium of Exchange Market Caps Compared		
Tether	**Circle**	**Litecoin**
$156 Billion	$40.96 Billion	$6.08 Billion

Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

As a utility token, Litecoin uses the OmniLite platform to support smart contracts (self-executing code on the blockchain), NFTs (unique digital assets that represent ownership of items like collectibles or virtual goods), and decentralized tokens (user-created assets that operate independently of centralized control). It also enables ordinals, inscriptions, and recently added runes—all methods of embedding or creating data and assets directly on the blockchain. Litecoin's main competitors in this area are Ethereum, Solana, and—to a lesser extent—Bitcoin. However, Litecoin is behind in this category as well.

Utility Token Market Caps Compared		
Ethereum	**Solana**	**Litecoin**
$268.89 Billion	$70.03 Billion	$6.08 Billion

Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Where Litecoin does show promise is in its ability to provide a more efficient option for Bitcoin-adjacent upgrades such as the Lightning Network. Litecoin's similarity to Bitcoin's code and smaller network size give it the unique ability to piggyback off innovations that Bitcoin creates and provide a cheaper, faster on-ramp to these new services. One potential competitor in this space is Bitcoin Cash. At a market cap of $9.04 billion, Bitcoin Cash is similar in size to Litecoin.

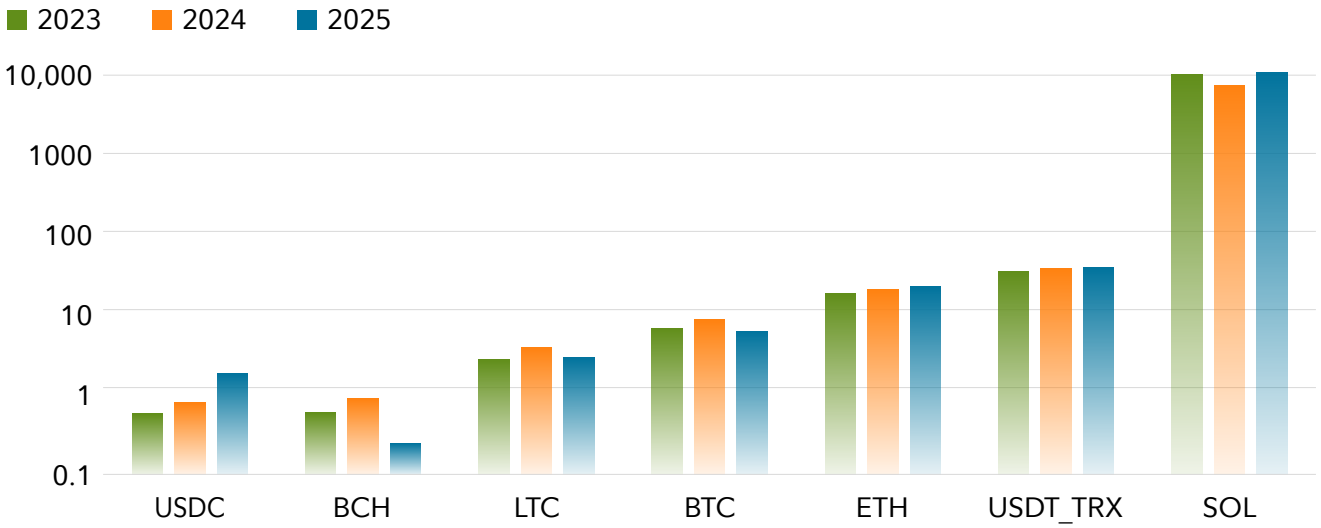
Another area where Litecoin proves useful is as a testing ground for potential Bitcoin upgrades. For instance, Litecoin was utilized by its founder to prove that Segwit is safe to use. In 2017, Lee added $1 million in Litecoin to a wallet using Segwit and challenged the community to attempt to steal it—no one succeeded. This public challenge not only demonstrated Segwit's security, but also played a large role in Bitcoin adopting it. With a head start on Segwit implementation, Litecoin developers were also able to implement the Lightning Network a full seven months before Bitcoin.

Based on our competitor analysis, we believe Litecoin could have a niche opportunity as both an onboarding option and testing ground for future Bitcoin upgrades. It also demonstrates limited potential as a cheaper or faster payment network when compared directly to Bitcoin. However, it appears unlikely that Litecoin will significantly—if at all—challenge use cases such as serving as a store of value, a medium of exchange, other utilities, or for NFTs.

Litecoin vs. Competitor Metrics

Depending on the use case, Litecoin's potential competitors are Bitcoin, Ethereum, Solana, Circle, Tether, and Bitcoin Cash. The following sections compare each against Litecoin across a variety of metrics.

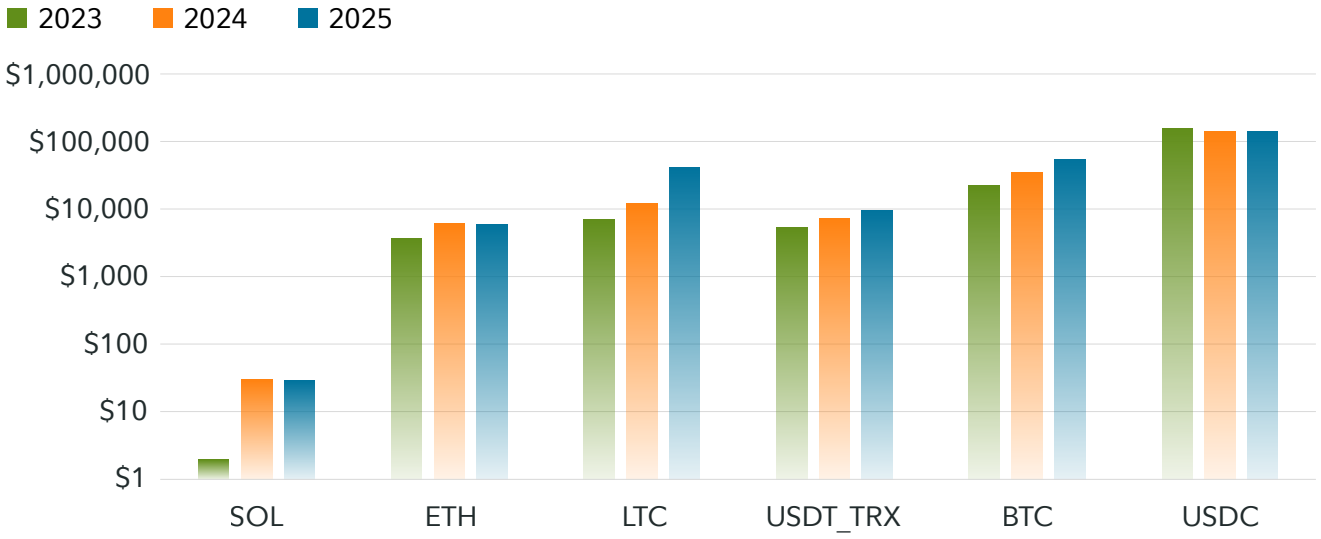
Average Transactions Per Second



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Litecoin averaged fewer average transactions per second than Bitcoin, Ethereum, Tether on Tron (USDT_TRX), and Solana since 2023. Bitcoin's performance is particularly noteworthy in this scenario, as one of the main reasons for creating Litecoin was to provide a faster blockchain. Although Litecoin can produce more transactions per second than Bitcoin, the reality is that the network does not have enough traffic for this advantage to be meaningful.

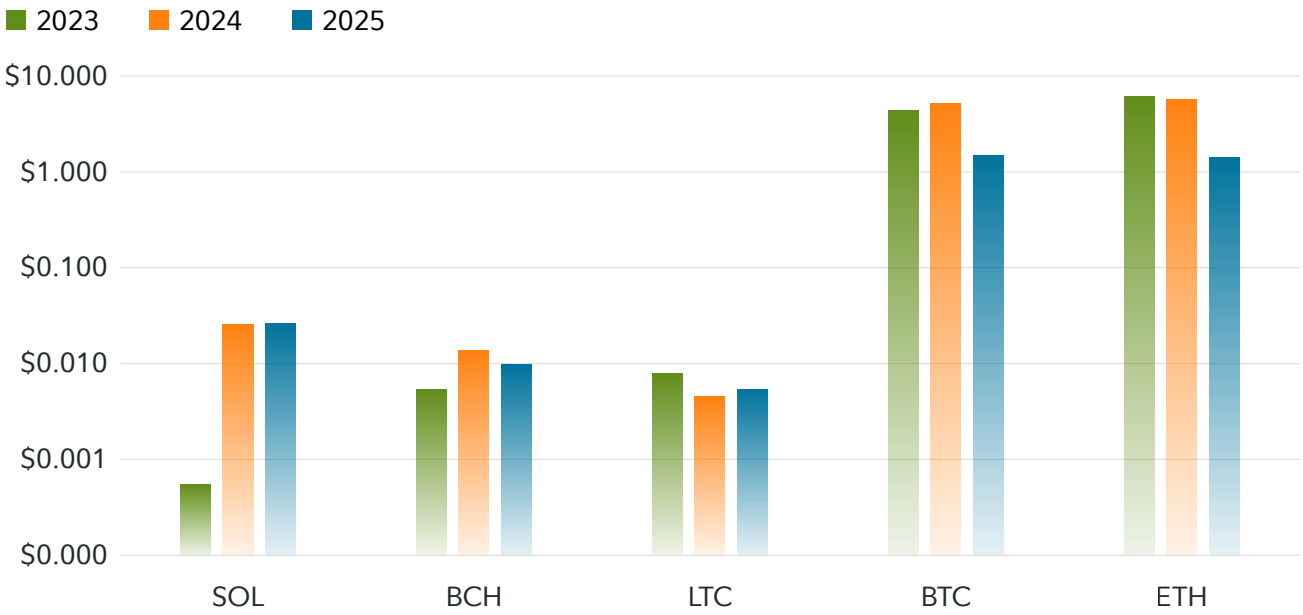
Average Value Per Transaction



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Litecoin places fourth in average value per transaction behind Bitcoin and protocols that support USDT or USDC. This highlights the dominance of Bitcoin as a store of value versus Litecoin and the dominance of Tether as a stablecoin. Digital asset users send more transactions and larger dollar amounts over the Bitcoin network and via Tether on the Tron and Ethereum blockchains than they do via Litecoin.

Average Fees Per Transaction



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

This leaves one potential utility use case for Litecoin: average fees per transaction. Although Litecoin performs extremely well versus both Bitcoin and Ethereum, Solana appears to be the real winner. Solana's fees reached a high of $0.38 on January 19, 2025, however, one could justify this increase by looking at the added network effects a user gains by transacting on a blockchain that has a market cap 11.5 times larger than Litecoin's. Additionally, Solana's fees have largely subsided and are sitting near $0.006 compared to Litecoin's mean fee of $0.0048.

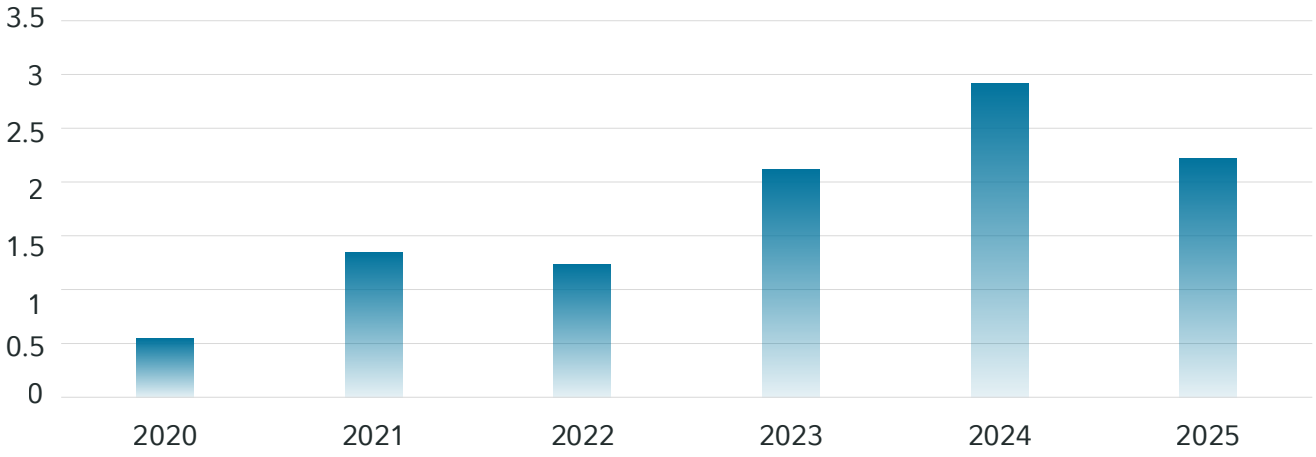
As of June 23, 2025, Solana's 30-day mean fee is $0.00898 compared to Litecoin's $0.00465. Bitcoin Cash and Litecoin perform very similarly.

Historical Litecoin Metrics

Transaction Metrics

Litecoin's average transactions per second has demonstrated an upward trajectory since 2020, pointing toward a growing use of the network.

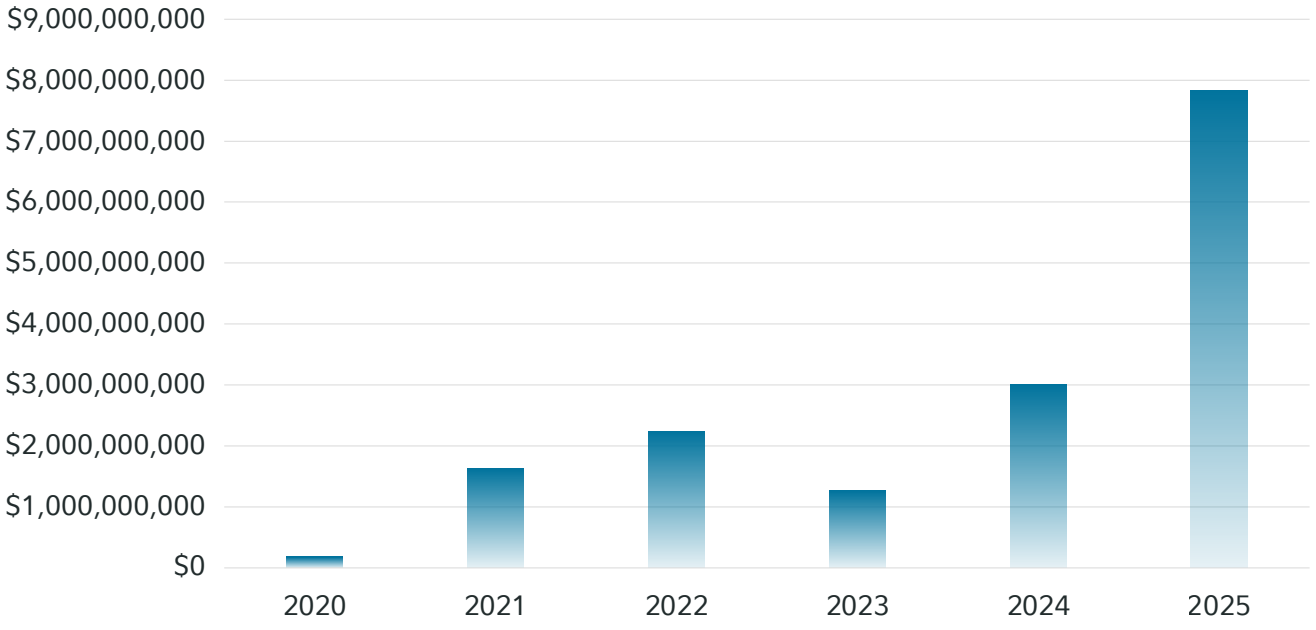
Litecoin Transactions Per Second



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

The average transaction value has continued to rise since 2024, climbing above $10.5 billion in early 2025. However, high value transactions have not sustained and the average transaction value has fallen back to roughly $8 billion.

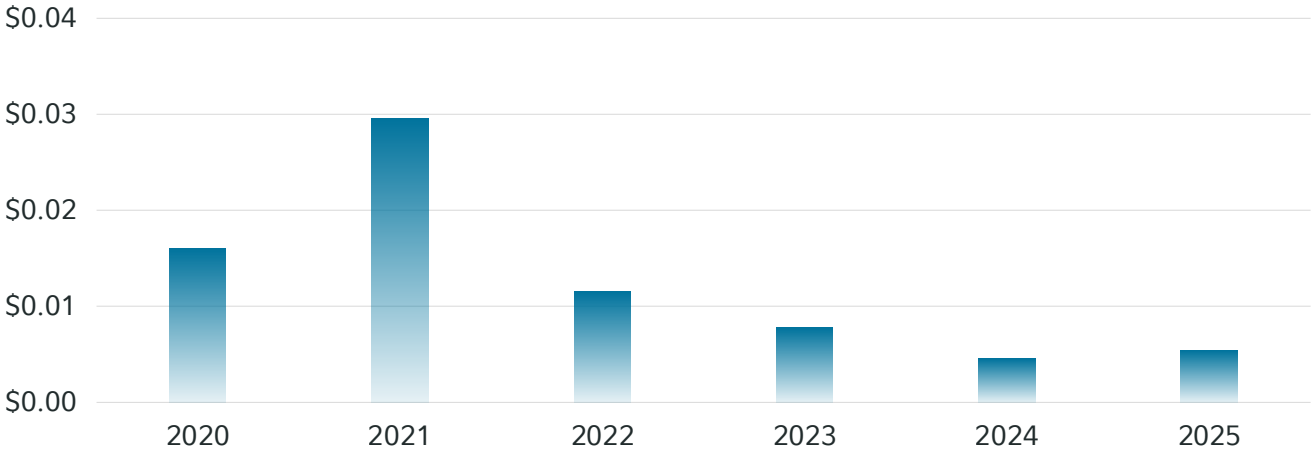
Litecoin Average Transaction Value Per Day



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Lastly, the average fee per transaction has been in a downward trend, pointing toward a more efficient network due to upgrades such as Segwit and Taproot.

Litecoin Average Fees Per Transaction



Source: Fidelity Digital Assets Research via Coin Metrics, 06/23/25.

Hash Rate

While raw hash rate numbers may make it appear Bitcoin has roughly 600,000 times more hashing power than Litecoin as of 2025, it is not an apples-to-apples comparison despite both Bitcoin and Litecoin being based on proof-of-work consensus mechanisms in which miners solve complex computational problems to validate transactions and secure the network. This is because each uses a different hashing algorithm. *(Note: Hash rate refers to the total computational power used to mine and secure a blockchain network.)*

However, what can be observed is the amount of capital that has poured into the Bitcoin mining industry through both private and public miners. Note that there are no multi-billion-dollar public Litecoin mining companies due to the relatively smaller network, market cap, and token price, therefore resulting in smaller rewards.

Technology

How Does Litecoin Work?

Litecoin operates as a decentralized public ledger using blockchain technology. The integrity and order of the blockchain is enforced using the proof-of-work consensus mechanism. Pending transactions are verified through the act of "mining," with verified blocks being added to the blockchain by miners in chronological order.

Litecoin is a proof-of-work token that is a recreation of bitcoin with changes intended on making the network faster and cheaper. The creator of Litecoin took Bitcoin's code and made slight changes,

a common practice known as “forking” the code. With these changes came trade-offs such as increased transaction speed at the cost of lower security.

To put this fork process and the simplicity of the code changes into context, when Litecoin’s creator adjusted the average block time of Litecoin to every 2.5 minutes, the code automatically updated the total supply to 84 million. He also changed the wallet addresses to begin with the letter “L” versus the number “1,” as commonly seen with legacy Bitcoin addresses. The actual coding time required was very minimal.

There is no white paper for Litecoin. Instead, Litecoin’s source code was released on GitHub on October 9, 2011, and was followed by the creator’s announcement in a Bitcoin talk forum. Here is a portion of the GitHub commit for Litecoin, last updated in July 2012 before moving to a new repository location:

```
-  Litecoin - a lite version of Bitcoin optimized for CPU mining using scrypt as a proof of work scheme.
-    - 2.5 minute block targets
-    - subsidy halves in 840k blocks (~4 years)
-    - ~84 million total coins
-  The rest is the same as bitcoin.
-    - 50 coins per block
-    - 2016 blocks to retarget difficulty
```

One material difference between Litecoin and Bitcoin is the use of Scrypt in Litecoin’s proof-of-work algorithm instead of SHA-256. This change enabled Bitcoin miners to also mine Litecoin, removing the need for a miner to choose between the two and leading to a larger hash rate for Litecoin at launch.

This change was also made to increase transaction speed and deter miners from using ASIC machines, with hopes of further decentralization through CPU mining. Scrypt adds an element of memory usage to mining, which requires a significant amount of money to be deployed to create the ASIC hardware necessary. This strategy worked early on, preventing ASIC mining and ultimately making mining much more accessible and affordable. However, newer ASIC versions have become more cost effective and capable of outperforming CPU mining, ultimately making them obsolete.

Mimblewimble (MWEB)

The Mimblewimble extension block (MWEB) protocol is the most prominent example of Litecoin testing and implementing a new feature irrespective of Bitcoin. Added as a soft fork, MWEB acts as a parallel blockchain to Litecoin that is added alongside each Litecoin block. Coins can be moved between the two chains, which results in the doubling of the theoretical block size. The MWEB protocol offers a layer of privacy through confidential transactions that are not found on Litecoin’s base chain. Usage of MWEB has been minimal thus far.

Roadmap

The Litecoin Foundation is a group dedicated to improving the Litecoin network and supporting projects on the Litecoin blockchain. In 2022, under the direction of the Litecoin Foundation, developers built an open-source platform named OmniLite that facilitates the creation of decentralized tokens and smart contracts. This layered protocol enables digital assets such as NFTs to be created on top of Litecoin's blockchain, similar to Bitcoin's ordinals and inscriptions. On April 28, 2024, runes became the latest addition to Litecoin roughly a week after the protocol went live with Bitcoin, highlighting how quickly a Bitcoin innovation can be launched on Litecoin.

Mimblewimble also continues to be a primary focus for the Litecoin Foundation. In 2024, the focus shifted to scaling MWEB through the onboarding of Litecoin mobile wallet providers and Litecoin exchanges. This would allow users who do not run Litecoin core to utilize MWEB.

Financials and Investment Thesis

Tokenomics

Litecoin began with 150 litecoin, which included the genesis block and two blocks afterward to confirm the genesis block. This was likely for initial testing of the network before its public release and thus did not allocate a large portion of the supply to any subset of users. A 50 litecoin reward per block was open to miners starting at block four. That reward is reduced by half roughly every four years.

Litecoin accrues value through new participants' adoption of the network and their buying and holding of the token. The supply issuance is set to be halved in July 2027 from 6.25 litecoin to 3.125 litecoin. The Litecoin protocol enforces its issuance on a fixed schedule. This schedule is written directly into the code and upheld by the network.

As of July 2025, litecoin miners generate an average of $878.72 per day in fees. ASIC mining equipment is necessary to profitably mine litecoin. These units cost $3,000 on the low end and can cost more than $10,000 on the higher end. One block is currently worth roughly $552.24, not including user transaction fees.

Valuation Scenarios

Litecoin may currently be experiencing an identity crisis. Developers continue to build out utility by adding capabilities for ordinals, inscriptions, and—most recently—runes, copying what is being done on Bitcoin but not innovating. With transaction fees comparable to Solana and network effects much smaller than both Ethereum and Solana, the Litecoin network faces an uphill battle to compete.

Moreover, litecoin has not shown an ability to store value over long periods of time and the volatility has made investors look toward stablecoins like Tether and Circle as a medium of exchange.

This makes it difficult to value Litecoin as there is currently no clear use case. However, Litecoin could find its footing as Bitcoin's Layer 2 environment becomes more robust. This is an area to watch as the digital asset space continues to progress.

Ultimately, Litecoin has the potential to be a leading Bitcoin adjacent token, but whether it capitalizes on this opportunity or not remains to be seen.

Bull Case: Litecoin finds its niche as a Bitcoin-adjacent token that provides a low cost on-ramp to a highly scalable Layer 2 use case on Bitcoin. This could drive new users to the network and help legitimize Litecoin over the long-term.

Base Case: Litecoin continues to experiment with new protocols like MimbleWimble and add copycat versions of Bitcoin innovations such as ordinals, inscriptions, and runes. This would keep Litecoin up to date on the latest advances in digital assets, but not necessarily set the blockchain apart in any meaningful way.

Bear Case: Litecoin is outcompeted as a Bitcoin-adjacent token and loses the opportunity to be the premier token building alongside Bitcoin. Or conversely, more building takes place on Bitcoin itself, making a "Bitcoin-adjacent token" less necessary and invalidating the use case for Litecoin.

Risks and Uncertainty

General Risks

Litecoin faces competition risk from a variety of blockchains. This risk can continue to come from existing blockchains or newly created blockchains, as was the case in 2021 with the emergence of Solana. As blockchain technology becomes more mainstream, competition increases and the risk of becoming obsolete increases.

Too much of a focus on becoming a payment network could be a risk as well. Tether and Circle currently lead this category by a sizeable margin.

Vulnerabilities

Litecoin could be vulnerable to a potential 51% attack, but this has never been carried out. While the cost to attack the Litecoin network is difficult to estimate, we can assume it would be a fraction of the cost to attack the Bitcoin network. It has been estimated that an attack on the Bitcoin network would cost between $5–20 billion per hour.

In 2023, cybersecurity firm Halborn discovered multiple vulnerabilities in Dogecoin code that were also prevalent in Litecoin and over 250 other blockchains. The main vulnerability found was named Rab13s. Per Halborn, "an attacker can crawl the network peers using getaddr message and attack unpatched nodes" taking them offline and making a 51% attack more feasible. Halborn worked with various blockchains to patch this vulnerability and others. However, this example highlights the potential threats that may lie in blockchain code. Vulnerabilities like Rab13s become even more glaring for a lower hash rate blockchain such as Litecoin.

Governance: The Litecoin Foundation

The Litecoin Foundation is a group of individuals led by Litecoin's creator with a mission to "advance Litecoin for the good of society, by developing and promoting state-of-the-art blockchain technologies." The group is registered in Singapore and can be contacted directly via Litecoin.net. Comprised of 11 core members as well as a combination of 25 ambassadors and volunteers, the Litecoin Foundation plays a large role in Litecoin's road map. However, Litecoin is relatively decentralized and as it grows the Litecoin Foundation may have less of an influence. Ultimately, Litecoin is governed by the miners and users who run Litecoin core nodes.

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[1] Coin Desk, Litecoin Successfully Activates SegWit, May 2017.

[2] Coin Metrics, July 17, 2025.