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BANK

Economic Situation and Strategy

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Understanding Ethereum (Part II/II): Tokens, DeFi, and the Future of the Financial System

While Bitcoin is being talked about as digital gold, a much deeper decentralized ecosystem is growing in the background: Ethereum. This platform acts as the operating system of a new financial world, in which money, assets, contracts, and even entire business models are digitally mapped, traded, and automated. Following our technical introduction in the last article, the second part focuses on the specific applications and their significance for the financial system.

The Token Revolution: How Digital Assets Are Created

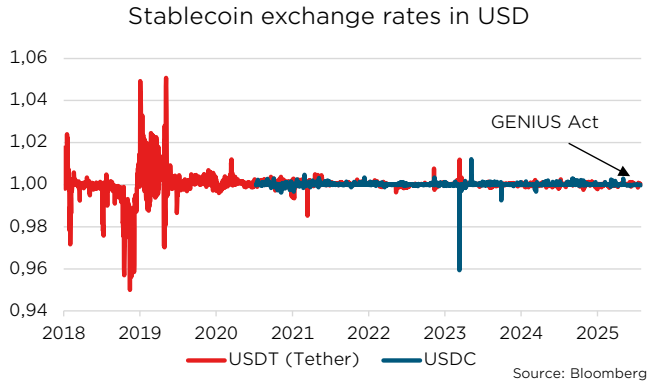
In the traditional financial system, securities, assets, or shares are managed by banks, depositories, or central registries. Ethereum replaces these central authorities with a digital, decentralized network. A key building block is "tokens": digital representations of assets stored on the Ethereum blockchain. A token functions like a digital proof of ownership, except that this proof is not stored in a register but on the blockchain. Whoever holds the private key to a digital address can dispose of the token – without the need for confirmation by a bank or authority. These tokens can represent anything, for example, a new cryptocurrency, a share in real estate, a corporate bond, or a dollar amount as a "stablecoin." What's special about them: anyone can program and issue their own tokens on the platform. Ethereum is the platform on which the vast majority of all tokens worldwide are created and traded today.

Stablecoins: The bridge to the traditional financial world

Stablecoins are tokens whose value is firmly pegged to traditional currencies such as the US dollar. They form the stable link between the volatile crypto world and traditional financial systems. Almost all major stablecoins – such as USDT ("Tether") and USDC ("USD Coin") – circulate to a significant extent as tokens on Ethereum. Their market volume currently stands at around USD 270 billion, corresponding to approximately seven percent of the total capitalization of the cryptocurrency market. Even more impressive is their role in daily trading: on centralized crypto exchanges, more than three-quarters of all trades are now conducted via stablecoins. The on-chain transaction volume in 2024 amounted to over USD 27 trillion – a sum that underscores the importance of these digital dollar substitutes for the global financial infrastructure. Companies issue these stablecoins, deposit real dollar reserves for each issued stablecoin, and use Ethereum as their technical infrastructure: this is where it is documented who owns how many stablecoins, how they are transferred, and what conditions apply. Without Ethereum as a flexible, programmable foundation, stablecoins would simply be technically inconceivable.

For a long time, however, it was unclear how solid this structure truly is. Stablecoins are issued by private companies that deliberately operate outside of traditional banking regulations. For years, these issuers were extremely opaque regarding the actual backing of their tokens with reserves. Investors and regulators did not know whether a real dollar was actually deposited in secure investments for each issued stablecoin – or whether the companies were conducting risky

transactions with customer funds. The regulatory landscape for stablecoins is evolving rapidly. The GENIUS Act (Guidance for Electronic Transactions and Digital Assets), recently passed in the US, stipulates that stablecoin issuers must hold their reserves entirely in secure, liquid assets and conduct regular audits. This regulation ends years of opacity and establishes clear standards for reserve holding. This significantly strengthens trust in stablecoins and makes them truly attractive to institutional investors. Ethereum benefits directly from this, as most regulated stablecoins are built on its infrastructure.



DeFi: New financial services are emerging

Decentralized financial services, or DeFi for short, are emerging on this stable basis, which have the potential to fundamentally change the traditional banking system. This is particularly evident in the example of Aave. The principle is reminiscent of peer-to-peer lending, but operates completely automatically. Users who don't want to simply leave their cryptocurrencies lying around can deposit them into a so-called liquidity pool. These tokens are then available to other users as loans. Anyone who wants to take out a loan pays a variable interest rate and must deposit their own tokens as collateral. Loan repayment and management are handled completely automatically through smart contracts. There is no direct contact between lender and borrower, no bank, no credit check – everything runs through the pool and is governed by mathematical rules. Interest rates and conditions continuously adjust to supply and demand.

Uniswap uses a similar pool principle for exchanging cryptocurrencies. Uniswap is a decentralized exchange where users can exchange different cryptocurrencies directly with each other, without a central platform acting as an intermediary. Instead, many users make their tokens available in liquidity pools. For example, anyone who wants to exchange Ether for USDC deposits Ether into the pool and receives USDC from the same pool. The exchange rate is automatically determined by the ratio of the two tokens in the pool. Pool participants receive a share of the fees for providing liquidity. Here, too, everything runs around the clock, without a central authority, and the rules are open and clearly defined in the code. This makes trading efficient, transparent, and globally accessible.

But DeFi on Ethereum is not limited to trading and lending. Insurance is also implemented in a decentralized and automated manner. A particularly vivid example is weather insurance, such as that offered by the dApp Arbol. Farmers or companies can use it to protect themselves against weather risks such as drought, heavy rain, or frost. The premiums are paid into a shared pool, and payouts are made automatically as soon as the weather data from independent stations reaches a predetermined threshold. This eliminates the need for an appraiser, lengthy damage assessment, or traditional insurance companies – everything runs transparently, efficiently, and fully automatically via smart contracts on Ethereum. Over $73 billion is currently invested in such DeFi protocols on Ethereum.

Traditional financial products on the blockchain

The next major example shows how Ethereum is also transforming traditional financial products: Slovenia's digital government bond. In 2024, Slovenia became one of the first countries in the Eurozone to launch a national bond entirely digitally, using Ethereum as its technical infrastructure. The Republic of Slovenia issued a €30 million bond via the Ethereum-based "Neobonds" platform. Instead of traditional securities certificates, investors received digital tokens. Each token corresponded to a fraction of the bond and represented exactly the same rights and obligations as its paper counterpart. The entire allocation, custody, and subsequent transfer were documented on the Ethereum blockchain and processed automatically. The result: real-time settlement, no long clearing times, lower costs – and public, verifiable documentation of all ownership.

But government bonds are just the beginning. Real estate companies are beginning to tokenize buildings and enable investors to acquire fractions of real estate. An office building can thus be divided into one million tokens, each representing one millionth of the property and rental income. Commodity traders are experimenting

with gold tokens that represent physical gold in vaults but are digitally tradable.

From Pokemon cards to CryptoKitties: Collecting in the digital age

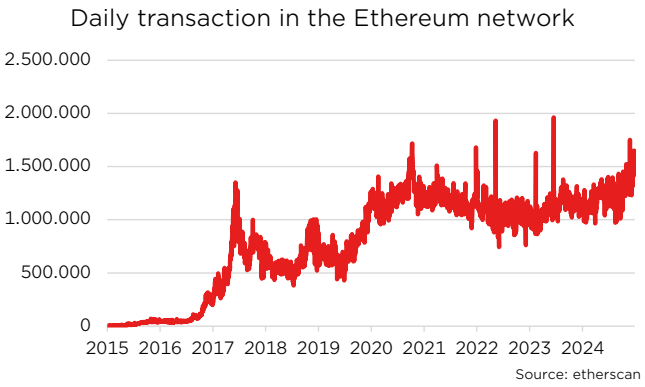
Ethereum is not only rethinking traditional financial services, but is also impacting the world of digital collectibles and property rights. Here, too, Ethereum has created entirely new possibilities with token technology – and this was first impressively demonstrated to a broad audience by the CryptoKitties project. The principle is strongly reminiscent of Pokemon trading cards: just as each Pokemon card has unique characteristics, rarity levels, and a clear owner, people could suddenly collect, breed, and trade digital kittens as unique tokens. The crucial difference: while physical trading cards are susceptible to counterfeiting and proof of ownership can be lost, with CryptoKitties, ownership is mathematically provable and immutably documented via the blockchain. The revolutionary aspect: for the first time, it was demonstrated that Ethereum could not only store digital currencies but also create unique, programmable digital objects.

CryptoKitties utilized Ethereum's full programmability: each token followed fixed rules in the code. Anyone who owns them can trade, swap, gift, or even combine them with other kittens to breed new ones. The game impressively demonstrated that the ownership, trading, and uniqueness of digital assets can be technically secured and transparently mapped in the Ethereum system – without the need for a neutral third party. The popularity of CryptoKitties led to such high transaction volumes that the Ethereum network reached its limits: transactions were delayed, fees rose. This episode was a wake-up call for Ethereum developers – it demonstrated not only the potential but also the acute need for solutions to increase capacity and lower fees.

Today, CryptoKitties has become almost meaningless – not because the concept failed, but because countless new applications have adopted the principle and expanded it into a wide variety of areas. Universities issue diplomas as counterfeit-proof tokens that employers can instantly verify. Concert promoters sell tickets as tokens that prevent fraud and enable controlled resale. Artists and authors use tokens to digitally manage their copyrights and receive automated royalties.

Ethereum Grows Up: Scaling and Technical Milestones

As usage grew, Ethereum repeatedly encountered limitations: too many transactions, too slow speed, too high costs. The answers to these challenges emerged gradually and demonstrate the dynamic nature of the network's development.



The most elegant solution to the scaling problem is Layer 2 networks. The basic idea is best explained using a supermarket analogy: imagine if all customers had to go to the main checkout individually. This would lead to long queues. Layer 2 solutions function like express checkouts: They collect many small purchases, bundle them, and then settle the total amount with the main checkout. This relieves the burden on the main checkout while still accurately documenting all transactions. With Ethereum, this means that many transactions are first collected and processed on a separate, faster layer. Only the bundled final result is then stored on the Ethereum main chain. This makes transactions many times faster and cheaper, while fully maintaining the security of the Ethereum main chain.

In parallel, the Ethereum main chain is continuously evolving. We already covered "The Merge" in 2022, the transition from "Proof of Work" to "Proof of Stake," in the first part. For Layer 2 solutions, the Dencun upgrade in 2024 was the decisive breakthrough. This update optimized the way Layer 2 networks store their data on the Ethereum main chain. The result was dramatic: transaction fees on Layer 2 networks fell by more than 90 percent. What was previously too expensive for small amounts suddenly became economically feasible – from micropayments to tokenized securities.

The Shanghai/Shapella upgrade in 2023 allowed investors to withdraw their staked Ether for the first time, strengthening trust and enabling more flexible handling

of staked funds. The most recent Pectra upgrade went live in May 2025 and introduced "Account Abstraction": user accounts become more flexible, secure, and modern. Passwords can be made more flexible, transactions can be bundled, or fees can be paid by third parties. All of this is now possible, making Ethereum even more attractive to the mass market. In addition, validators can now stake up to 2,048 ETH instead of just 32 ETH, which is particularly interesting for institutional investors. With a current Ethereum price of around €3,280, the equivalent of 32 ETH is approximately €105,000, and 2,048 ETH is approximately €6.7 million.

All of these changes are not driven by a board of directors, but by an open, collective system: each change is proposed, discussed, tested, and adopted by consensus in so-called EIPs (Ethereum Improvement Proposals). This is how Ethereum is constantly evolving at a rapid pace – and as a technological infrastructure, it always remains at the cutting edge.

Conclusion

Ethereum is developing into the central infrastructure of a new financial world in which traditional assets are digitally represented and traded. From stablecoins to automated financial services to tokenized government bonds, the platform demonstrates how the financial system is evolving through programmable contracts and digital assets. Perhaps the clearest evidence of Ethereum's breakthrough in the traditional financial world comes from JPMorgan Chase: the largest US bank plans to offer loans against Bitcoin and Ether as collateral starting in 2026. What CEO Jamie Dimon called a "fraud" for years is now becoming the foundation of his own bank's business. New opportunities are emerging for traditional financial institutions, while continuous technical development ensures that Ethereum remains viable even as usage grows.

Saskia Maini and Jan Mooren

Market data

Stock marktes	As of 08.08.2025 09:40	Change versus 01.08.2025 -1 week	07.07.2025 -1 month	07.05.2025 -3 months	07.08.2024 -1 year	31.12.2024 YTD
Dow Jones	43969	0,9%	-1,0%	6,9%	13,4%	3,3%
S&P 500	6380	2,3%	2,4%	13,3%	22,7%	8,5%
Nasdaq	21243	2,9%	4,1%	19,8%	31,2%	10,0%
DAX	24123	3,0%	0,2%	4,4%	36,9%	21,2%
MDAX	31441	3,7%	2,3%	7,8%	29,7%	22,9%
TecDAX	3778	0,5%	-3,1%	2,7%	16,7%	10,6%
EuroStoxx 50	5332	3,2%	-0,2%	1,9%	14,2%	8,9%
Stoxx 50	4472	2,2%	-0,2%	0,8%	3,8%	3,8%
SMI (Swiss Market Index)	11880	0,4%	-0,6%	-1,9%	0,3%	2,4%
Nikkei 225	41820	2,5%	5,6%	13,7%	19,2%	4,8%
Brasilien BOVESPA	136528	3,1%	-2,1%	2,3%	7,1%	13,5%
Indien BSE 30	80208	-0,5%	-3,9%	-0,7%	0,9%	2,6%
China CSI 300	4105	1,2%	3,5%	7,1%	22,8%	4,3%
MSCI Welt	4098	1,9%	1,6%	10,8%	21,5%	10,5%
MSCI Emerging Markets	1260	2,8%	2,8%	10,8%	20,0%	17,2%
Bond markets						
Bund-Future	130,23	43	17	-128	-389	-321
Bobl-Future	117,48	6	-20	-199	-36	-38
Schatz-Future	107,09	-3	-19	-42	81	11
3 Monats Euribor	1,98	-1	4	-17	-159	-73
3M Euribor Future, Dec 2025	1,90	2	12	25	-33	1
3 Monats $ Libor	4,32	-3	-10	-2	-102	-5
10 year US Treasuries	4,25	4	-13	-2	30	-32
10 year Bunds	2,65	1	4	17	43	28
10 year JGB	1,49	-4	6	19	60	41
10 year Swiss Government	0,26	-9	-18	4	-19	-2
US Treas 10Y Performance	624,21	-0,1%	1,6%	1,5%	2,1%	5,5%
Bund 10Y Performance	562,36	0,4%	0,3%	-0,4%	-0,3%	-0,4%
REX Performance Index	459,37	0,4%	0,0%	0,1%	2,2%	1,5%
IBOXX AA, €	3,07	-3	1	4	-15	3
IBOXX BBB, €	3,36	-4	-3	-14	-38	-10
Commodities						
MG Base Metal Index	428,59	1,9%	0,2%	4,5%	9,7%	5,7%
Crude oil Brent	66,28	-4,9%	-4,8%	8,3%	-15,9%	-11,3%
Gold	3394,07	1,3%	2,3%	0,2%	41,4%	29,3%
Silver	32,54	0,0%	0,0%	-0,3%	20,6%	9,6%
Aluminium	2609,35	1,8%	1,5%	10,8%	17,0%	3,3%
Copper	9618,87	0,4%	-2,9%	1,9%	11,3%	11,2%
Iron ore	101,21	1,6%	6,3%	1,9%	-0,5%	-2,3%
Freight rates Baltic Dry Index	2008	-0,5%	39,8%	46,1%	18,3%	101,4%
Currencies						
EUR/ USD	1,1663	2,3%	-0,6%	2,7%	6,8%	12,3%
EUR/ GBP	0,8672	-0,5%	0,7%	2,0%	0,9%	4,9%
EUR/ JPY	171,70	0,1%	0,6%	5,4%	6,9%	5,3%
EUR/ CHF	0,9406	1,0%	0,6%	0,5%	0,0%	-0,1%
USD/ CNY	7,1820	-0,2%	0,1%	-0,6%	0,0%	-1,7%
USD/ JPY	147,13	-0,2%	0,7%	2,3%	0,3%	-6,4%
USD/ GBP	0,74	-1,4%	1,4%	-0,6%	-5,4%	-6,9%

Source: LSEG Datastream

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