

NEO

Market Report

Summary

NEO, frequently nicknamed within the cryptocurrency community as The One, Chinese **Ethereum** or **Ethereum** “killer”, is a blockchain platform that implements digital assets, dApps and smart contracts, and tries to solve some scalability and regulatory issues of its competitors. With strong partnerships and support from the Asian cryptocurrency community, **NEO** is one of the most promising currencies in the crypto-assets space, with the ambitious goal of becoming the main “smart economy” of the world during the next few years.

“A word to the wise. All cryptocurrencies, including **NEO**, are still largely considered to be in the experimental stage and as such should be treated as high risk assets. In any investment account, high risk assets should only represent a small portion of your overall portfolio. That said, we hope you enjoy this market analysis. Feel free to contact us with any questions or feedback.”

History

NEO was introduced in 2014 under the name Antshares by China-based company Onchain, a blockchain-specialized company founded in 2014 by Da Hongfei and Erik Zhang. Two crowdsales in late 2015 provided the founding for the project. On these crowdsales, 17.5 million and 22.5 million **NEO** were sold for \$550,000 and \$4.5 million, respectively.

On 22nd June 2017, in an event at the Microsoft Headquarters in Beijing, the re-branding process from Antshares to **NEO** took place, what vastly increased the renown of the project that was soon to become one of the most prominent projects in the whole cryptocurrency sphere.

Basic Stats

- **Crypto-asset type:** Utility
- **Maximum supply:** 100,000,000 NEO
- **Circulating supply:** 65,000,000 NEO
- **Market Capitalization:** \$3.1 bn
- **Inflationary** cryptocurrency
 - Non-circulating supply periodically released until max supply is reached.
- **Protocol:** Delegated Byzantine Fault Tolerance (dBTF)

Technical Description

Ethereum changed the whole cryptocurrency sphere by introducing a new layer when compared to **Bitcoin** by developing a platform where smart contracts and other tokens and ICOs can be developed. On **Ethereum**, smart contracts are written using special programming languages like Solidity. **NEO**, on the other hand, allows programmers to use a variety of already established languages, like C# and Java, making software development much more approachable.

A **smart contract** is analogous to a traditional contract between two parties, with the difference that the enforcement of the contract is guaranteed by the underlying blockchain and therefore there is no need for a central authority or legal system to enforce it. Smart contracts were first proposed in 1994 by Nick Szabo and found their first large-scale implementation on the **Ethereum** network.

An **Initial Coin Offering (ICO)** is the equivalent in the crypto-sphere of securities' IPOs. Unlike IPOs, which are harshly regulated, ICOs are still lacking significant regulation and allow average Joe investors to support their favourite projects from a very early stage. Some ICOs have been extremely successful, raising hundreds of millions of dollars.

The goal of **NEO** is to establish itself as the main smart economy of the world. A smart economy implements digitized physical assets whose ownership is stored and guaranteed by the blockchain. The **NEO** environment, and the different dApps built on top of it, allows users to identify themselves on the blockchain, store and trade digital assets or create decentralized organizations, among many other things.

NEO implements a modified Proof-of-Stake model named Delegated Byzantine Fault Tolerance (dBFT), as opposed to the more classical Proof-of-Work model used by **Bitcoin** and **Ethereum**.

In the **Proof-of-Work** consensus protocol, computers in the network compete to solve mathematical problems in order to obtain rewards in the form of coins, while securing the network. A downside of this is the high costs in terms of energy associated with this protocol.

Meanwhile, in the **Proof-of-Stake** protocol, token holders are the ones in charge of validating transactions and securing the network, by staking (locking up) their coins temporarily in exchange of a reward similar to a dividend. Many people believe this new protocol will become the new standard for cryptocurrencies. **Ethereum** is actually scheduled to transition from Proof-of-Work to Proof-of-Stake in the future.

The **NEO** network can be thought of as a two-tier system. All token holders are able to vote on the consensus nodes that will validate the network. These consensus nodes will then be the ones that validate each block in the blockchain. These consensus nodes are identifiable and can even be contacted if necessary. This makes the system different from the majority of the most popular blockchains, and especially attractive for regulation.

Even though the design of the system is delegated, an important criticism of **NEO** is that its implementation is very centralized. All nodes are currently owned by the **NEO** Foundation, but they will soon start to be run by relevant foundations, organizations and communities. All consensus nodes will also go through rigorous identification that could hold the owners legally liable.

Many argue that this system goes against the decentralization principles of blockchain technology, but it will make it easier for regulators and institutions to interact with the network, undoubtedly one of **NEO's** main goals. However, the fact that in general only Chinese companies and institutions are holding the nodes make the network geographically very centralized and potentially less secure than a truly decentralized blockchain.

Use Cases

As stated before, smart contracts are a revolutionary concept that eliminates the need for a centralized third-party during the definition and enforcement of a contract. **NEO** in particular aims to make smart contracts more approachable, scalable and regulatory compliant.

The range of industries that can benefit from the implementation of smart contracts is vast. Some examples are:

- **Financial Services:** smart contracts can be used to automatically execute commercial transactions, payments and agreements, eliminating any delays and any needs for a middleman, while maintaining any compliance authority involved.
- **Real Estate:** in an industry with such a vast number of legal contracts and third-party agents, smart contracts could greatly simplify and reduce the costs of many operations. Property rental or transfer of ownership is a great example, with the possibility of automatic payments in a completely traceable way.
- **Government:** governments are studying the possibilities of blockchain technology for a huge variety of issues. A good example is voting, West Virginia is currently implementing a pilot for a blockchain-based online voting system. The African country Sierra Leone recently executed a successful democratic election in a country

where election results were frequently disputed and led to violence.

- **Supply Chain:** several companies are introducing projects to make tracking of goods during the supply chain automatized thanks to blockchain technology, with the goal of preventing fraud and theft.
- **Accounting:** Managing budgets and reconciliation of expenses.

All these applications and many others are made possible by the use of smart contracts and can be readily implemented on the **NEO** network. As stated before, **NEO** wants to focus on making the digitalization of assets efficient and compliant with regulatory institutions, with the goal of becoming the smart economy that will be trusted by institutions and organizations world-wide.

Development Team

The team behind the development of the cryptocurrency is one of the first things cryptoassets investors research before taking investments decisions. This Section shows a brief overview of the major faces behind **NEO**.



Da Hongfei is the most recognisable face behind the project and now one of the most respected experts in cryptocurrencies in the world, particularly in

China. His good relationships with the Chinese government can be a key factor for the upcoming development of **NEO**.

Erik Zhang is Co-Founder of **NEO** and CTO of the associated company OnChain. He is the mastermind behind the dBTF consensus algorithm, one of **NEO's** cornerstones.



Onchain is the main company behind NEO. Their Distributed Network Architecture (DNA) system aims to become the main blockchain contractor in East Asia and uses **NEO** as its foundation. They have strong partnerships with companies like Alibaba and Microsoft.

Investments Risks

Trading cryptocurrencies can potentially be very profitable as seen in the past, but it is also a very challenging activity that can carry a significant level of risk. Cryptocurrency markets are associated with high volatility, and **NEO** is no exception.

It is important to carefully assess your investment goals, methodology and level of experience before deciding to start investing in a new market. It is also extremely important to diversify and view cryptocurrency as an additional element of your portfolio. Given the high risk associated with this type of asset, it is recommended not to allocate more than 20% of your portfolio into cryptocurrencies. Given that the possibility to lose a part or even all the money invested exists, it is extremely important to invest only money that you can afford to lose.

In any case, all the information presented in this Market Report does not constitute financial advice and introduces no obligation or recommendations for action.

Current & Upcoming Projects

NEO is experiencing a surge in the number of dApps developed for the platform that could bring the possibilities of the network closer to or even surpass Ethereum. For instance, some extremely popular platforms that have already proven successful on **Ethereum** are now being supported by the NEO Global Capital fund and might find some integration on the **NEO** network.



- **Bluzelle** is a decentralized database service that allows people to rent their computer storage for dApps and developers to use.
- **Zilliqa** is a high-speed blockchain that uses a new technique called “sharding” to greatly increase the speed of the system.

Native ICOs and dApps on the system are also flourishing. Some of the best examples are:

- **Redpulse**, which can be thought of as “decentralized Bloomberg”, was the first ICO on the **NEO** network.
- **Switcho** is **NEO's** first decentralized exchange and has already become the fourth largest decentralized exchange by volume. It will provide easier access to **NEO**-based tokens in the future.

- **NEX** is another decentralized exchange built on the **NEO** network that is gaining a lot of traction with their upcoming ICO.
- **Thor** provides a blockchain-based market for contractors and freelancers.
- **Thekey** is an identification verification service that will provide a means to verify government-issued personal identity online.



These and many other projects, which implement their own **NEO**-compliant tokens, will give further utility to the blockchain and will likely bring more adoption and value to the **NEO** network

Despite this extensive number of ICOs and community support, only 32 smart contracts have been deployed on the **NEO** main net most of which are inactive.

Future Developments

The number of ICOs and projects described on the previous Section show the great potential of **NEO** in the future.

On January 2018, during the NEO DevCon, CEO Da Hongfei presented “NEO’s New Vision” and set up the objective to further scale up the platform and become the most important blockchain by 2020. If these ambitions are to become true, the room of growth for **NEO** is certainly huge.

Token Metrics Analysis

The equation of exchange can be used to estimate the actual valuation of a crypto asset when considering its use as a means of exchange. This equation is as follows:

$$MV = PQ$$

where:

- **M** is the total supply of the cryptocurrency.
- **V** is the velocity of money, which measures how many times a unit of the currency is used in a certain period.
- **P** and **Q** are the price and quantity of the digital service or resource and can be thought of as the transaction volume of the blockchain (the economic value transacted in a certain period).

A possible way to assess the transaction volume of the blockchain is to analyze the target market of the cryptoasset. In the case of **NEO**, ICOs and dApps are arguably the

main addressable market. Although dApps will likely be the primary market in the future when cryptocurrencies are more stable, right now they are relatively small compared to ICOs.

ICOs raised 5 billion dollars in 2017 and this figure will likely increase in 2018. We will assume a total market of 10 billion dollars during 2018 and a 20% market share for the **NEO** blockchain. This would yield a transaction volume of 2 billion dollars.

Assuming a value of velocity of 2 (an approximate value for similar blockchains like **Ethereum**), the value of the NEO network would be:

$$M = \frac{PQ}{V} = \frac{\$2 \text{ billion}}{2} = \$1 \text{ billion}$$

And, considering the total token supply of 100 million, this would yield a value per coin of approximately 10 dollars, considerably inferior to the actual market value. However, this simple model does not take into account the growth of the ICO and dApps markets in the future, as well as the transaction volume of other possible applications of **NEO**.

For more information regarding cryptoasset valuation models, please visit:

[Cryptoasset Valuations, by Chris Burniske](#)

[Network Value to Transaction Value, by Coin Metrics](#)

[On Medium-of-Exchange Token Valuations, by Vitalik Buterin](#)

Market Analysis

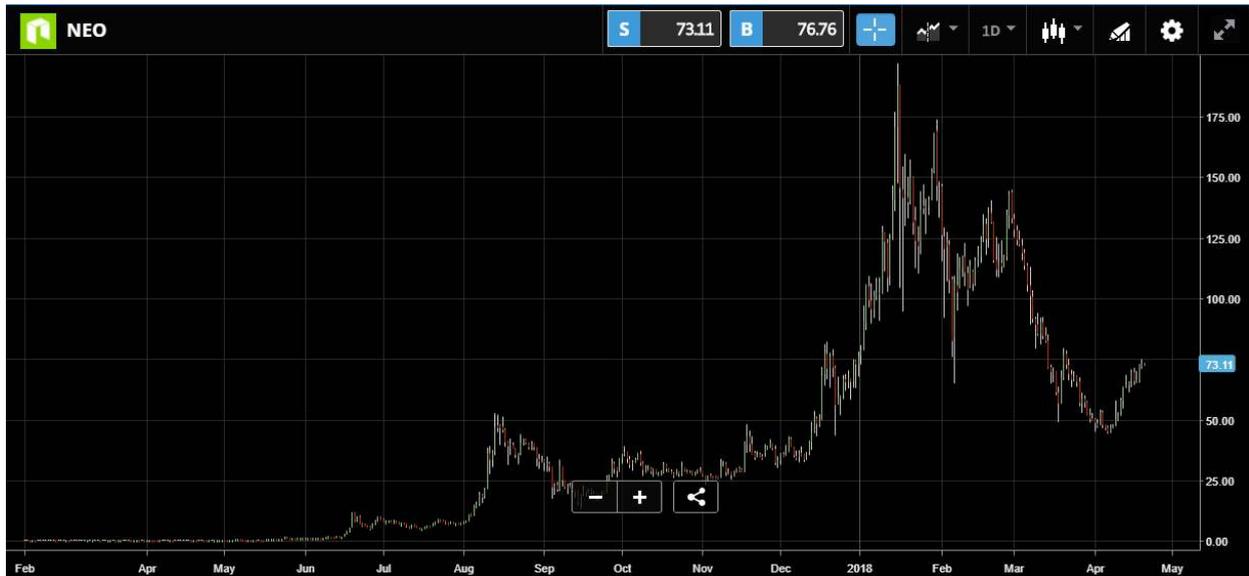


Exhibit 1: Historical Evolution of **NEO/USD** price.

Exhibit 1 shows the historical evolution of the **NEO** price since February 2017 (at around \$0.12) until April 2018 (currently trading just short around \$73). During the great cryptocurrency bull run of late 2017 and early 2018, **NEO** achieved an all time high price of \$197. The subsequent bear market has brought the price down 76%, with the last few days bringing a bounce from the bottom.

NEO's price follows quite closely the trends of **Bitcoin**, still the clear dominant asset in the space, although to a somewhat lesser extent than other cryptocurrencies. **NEO** has also shown a clear correlation with the price of **Ethereum**, which makes sense considering they are offering two quite similar products and are competing for the same sector within the cryptomarket. The correlations with **Ethereum** and especially **Bitcoin** become more acute during bear markets.

Exhibit 2: Historical major trends (bull and bear markets) of **NEO/USD** price.

Start Date	Price	End Date	Price	Days	Change
13/Feb/2017	\$0.12	19/Jun/2017	\$11.81	127	9741%
19/Jun/2017	\$11.81	29/Jul/2017	\$6.79	40	-42.5%
29/Jul/2017	\$6.79	13/Aug/2017	\$52.63	15	675%
13/Aug/2017	\$52.63	10/Dec/2017	\$32.52	119	-38.2%
10/Dec/2017	\$32.52	15/Jan/2018	\$196.85	36	505%
15/Jan/2018	\$196.85	06/Apr/2018	\$44.21	81	-77.5%

Exhibit 2 shows the major bull and bear markets experienced by **NEO** since February 2017. With the exception of the initial bull run that raised the price almost a hundred times from the initial \$0.12, the two subsequent bull markets raised the price between 6 and 7 times in a very short period of time, between 2 and 5 weeks. These sudden and extremely rapid increases in value are a pattern very typical

in cryptocurrencies that is generally not seen in other types of assets.

By comparison, bear markets have been significantly slower, following a more “bleeding out” pattern, though also fast when compared to major corrections in the stock market for example. The current bear market since the All-Time High prices in January has been particularly devastating, with **NEO** falling back to the prices of January.

The last few days have shown a relief of this correction, although as seen on **Exhibit 3** the high values of the Relative Strength Index (RSI) indicator could suggest that **NEO** is slightly overbought right now. The whole cryptocurrency market is currently longing for a bull-run driven by **Bitcoin**, but any fundamental developments on the space (whether positive or negative) could drive the trend of the following month.



Exhibit 3: Evolution of **NEO/USD** price since December and 7-day RSI indicator.

Resources

- [Crypto Trader Video](#)
- [NEO vs Ethereum](#)
- [Smart Contracts in Banking](#)
- [RSI Definition](#)
- [Switchco](#)

Disclaimer

Cryptocurrencies can fluctuate widely in prices and are therefore not appropriate for all investors. Trading cryptocurrencies is not supervised by any EU regulatory framework. The content is intended for educational purposes only and should not be considered as an investment advice. Your capital is at risk.

Credits

- **Yoni Assia** - Founder and CEO of eToro, a leader in the blockchain community for kickstarting this in-depth analysis project.
- **Iqbal Gandham** - eToro's UK Managing Director for overseeing and distribution of the content.
- **Orit Mutznik** - For her support.
- [CryptoAnalyst.co](#) - For their research and writing.
- **Paz Diamant** - For his blockchain expertise