



QUANTLER

Quantler Whitepaper

Blockchain for structured investment
products, such as ETFs

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Summary

As we see the number and diversity of new cryptocurrencies and tokens increase in a rapid pace, the availability of structured products, such as ETFs, is lacking behind significantly. Structured products have a long time to market and are rigid once launched. By leveraging blockchain technology Quantler is able to launch and execute similar products in minutes, rather than years (not only for cryptocurrencies, also regular stocks, notes, REITs etc.). These structured products, in Quantler's network called Quant Funds, act and operate the same way as regular structured products (ETFs). Different is that they run in a decentralized environment. Quantler will offer investors a low-cost and customisable way when investing in combinations of assets and themes they believe in, much similar to regular structured products.

At Quantler:

- We allow everyone to create, adapt and host Quant Funds, regardless of geographical location. Create a theme which only includes cryptocurrencies or stocks that are related to for example Internet Of Things, Payments, Financial Inclusion, Gaming, Art or any other theme you can come up with.
- Only users have access to their invested capital. Quantler has no access to its users invested capital or influence on how its users invest their capital.
- Fees are low and invoicing is transparent, with no strings attached (no performance related fees, no hidden costs, such as affiliation fees or kick back fees) and end-users can stop any time they want (no entry/exit-fee and no lock-ins).

Quantler is different from its competitors in several ways:

- Unlike most competitors, Quantler will not only be suited for cryptocurrencies, it is also compatible with traditional assets, regular stocks and ETFs, traded through regulated exchanges. This enables Quantler to capture a larger audience, where its competitors are limited to cryptocurrencies.
- Quantler is open source and Quant Funds are decentralized. This means that Quant Funds can be executed and offered anywhere. This provides Quantler with maximum scalability. The business model of Quantler's network of miners operate much similar to a Blackrock or a Vanguard, but than decentralized.
- Programming is optional; this lowers the barriers for entry for anyone to create their own Quant Fund(s).

To achieve a low cost and a decentralized solution, Quantler has created the Quant token ('QUANT'). The QUANT is an ERC20 compliant token issued on the decentralized Ethereum blockchain. A publicly auditable smart contract will handle the exchange of ETH (Ether) for QUANT tokens during the token creation phase. Once Quantler's mainnet has been launched, the QUANT token will be migrated to its own network. A conversion from ETH to QUANT will be maintained.



The QUANT will be the sole method of payment to host and thus execute Quant Funds. For invested amounts below 5,000 USD in value, the investment to host Quant Funds will be 1 USD per month in token value equivalent. For allocated amounts from 5,000 USD in value and above Quantler will charge 0.25% (25 basis points) on a yearly basis over the total allocated amount. All fees will be paid in QUANT tokens only. These tokens will have to be bought in advance and should present in the owners wallet, which means that all users are effectively also holders of QUANT tokens.

After selecting or creating a Quant Fund to invest in, it is essential to host these Quant Funds in a high quality and highly available environment. Just like smart contracts, execution will still have to take place in Quantler's network of miners. Quantler defines mining as the process of offering computational resources for hosting Quant Funds for the investors of the network.

Quantler makes use of a hybrid form between PoS (Proof of Stake) as well as PoW (Proof of Work). Depending on the amount of computational resources provided and the total amount of assets under management by the network, an amount of QUANT tokens is rewarded to miners. The amount of QUANT staked by a miner, determines the probability of receiving a Quant Fund that requires mining. Depending on the amount of computational resources needed to calculate the state of this Quant Fund and the asset under management by the network, an amount of tokens is rewarded. This means that the more a miner stakes, the higher the probability of receiving mining requests compared to its peers. Staking too little, will result in not receiving enough mining requests to stay profitable in the network. The intrinsic value of 1 token, is directly linked with the amount of assets under management by the network as a whole.

Depending on the demand during the ICO a maximum of 180 million QUANT tokens can be created. Over the total amount created 30% is reserved for the ICO, 15% for the mining-pool, 3% for the bounty campaign, 2% for GitHub bounties (since Quantler is open source) and 50% for the company, for future expansions.

Tokens not minted during the crowd-sale will be destroyed. There is no minimum number of tokens an individual must buy during the ICO. There is, however, a limit of 10,000 USD in purchase value per identity, which can only be removed on request via: quant@quantler.com. Quantler will have a pre-sale for all whitelisted participants on a yet to be communicated date.

If any questions remain after reading this whitepaper, please send them to quant@quantler.com.

**Yours
sincerely,**

Menno Hamburg,
Founder and CEO of Quantler





Quantler Beta Live!

try out the beta today

[Try it out now](#)

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Problems with investment products



Quantler is a fintech company based in Amsterdam, Netherlands (Europe). Through innovation and automation, Quantler aims to significantly lower costs, lower the barriers for the creation and running of structured investment products (such as ETFs). Quantler leverages on blockchain technology to address some of the problems found in offering these kinds of products to investors today.

1. Low Transparency

It is difficult to know how an investment product operates and on which decision-making process positions are taken. Typically an overall picture is given in a document, known as a prospectus. The question is if an investor can verify that a fund manager complies with what has been stated in the prospectus? Investors must put trust in the investment fund manager and the fund's methodology.

Due to the decline in performance, in the aftermath of the financial crisis in 2008, it became apparent that some of the larger fund managers did not operate in the best interest of their clients. One well-known example is that of Madoff Investment Securities LLC. It defrauded many clients for roughly 50 billion USD and got exposed due to the sudden requests for withdrawal of invested capital that no longer existed. If Madoff's investment strategy was visible for everyone to see, misconduct would have been easier to spot. Yet Madoff would never expose his underlying mechanics, or did he have to.

Blockchain allows Quantler to redesign this industry by allowing for decentralized and closely audited solutions. Blockchain was created to allow for new businesses to emerge that can reduce or eliminate many of the pitfalls in the financial industry as we know it today (Kaal, 2017).

2. High Costs

Investment products can be very expensive. Not only is there a management fee, but additional performance fees can eat away as much as 40% of your ROI over time. While these incentive-based fees do not attribute to better performance (Brokers, van Oord, & Rijsbergen, 2017). Fees such as trading fees and slippage are not always visible and create additional costs for the investor without the realization that these costs even exist, as they occur behind the scenes.

3. Misaligned Incentives

The investment manager might be tempted to take higher risks. If performance fees for investment managers are high, higher risks can result in better rewards for an investment manager. Since the investment manager has no down-side risk and larger bets are rewarded with performance related fees, the question comes up: is this casino strategy any good for the investor's wallet? (Molenkamp, 2010)



4. Standardized

The current investment product industry revolves around the idea of creating standardized, one-size fits all products to lower costs. There is no investment product totally tailored to each investor's ideas and values, as this would be very expensive to perform. Should the investment product industry decide what an investor invests in, or should the investor be able to fit an investment product to their needs and values?

5. Supply does not meet demand

The demand for investment products is globally on the rise due to the all-time low interest rates and a very strong demand for alternative investments. To accommodate this demand, especially in the cryptocurrency space, a supply of investment products accessible to everyone is needed. However, creating these products and operating them can take a long time and can be very expensive. As the universe of tokens is increasing in size and diversity, the creation of structured products is very much lacking behind. Many have heard about bitcoin and blockchain and have never heard about the now over 1 900 other cryptocurrencies that are out there.

6. Inaccessible

Starting to invest in any type of investment product can have huge hurdles to overcome. Waiting for sector based ETFs to be released for cryptocurrencies can take years, due to regulatory hurdles. If an investment product contains hedging, much like a hedgefund, new barriers arise. In some countries, the minimum amount for entering an investment can be as high as 200 thousands of dollars. This barrier makes these products only accessible for wealthy individuals. In the U.S many wealthy individuals invest in hedge funds, where they can profit during market declines. For a U.S. citizen to participate in such an investment, he or she needs to be an accredited investor. Therefore these types of investment vehicles are only accessible to wealthy individuals. In 2008, 8.35% of households in the U.S. were legally qualified to invest in hedge funds because retail investors, that is, nonwealthy individuals were not permitted to invest in these funds (Shadab, 2008).



Introducing Quantler

Quantler offers everyone the ability to create and make use of structured and pre-packaged investment products. Together with the connection to their brokerage account, Quantler lets its users invest in any types of assets (Equities or Cryptocurrencies). The pre-packaged automation rules and assets to invest in are called Quant Funds. Quantler offers an all-in-one solution to create, share, manage and view an investment portfolio which can contain multiple Quant Funds of different asset types.

As these are decentralized investments, they can be run anywhere and independently. When users are done creating or selecting a Quant Fund, users will need to host them to start investing. Quantler is all about flexibility and transparency; all publicly available Quant Funds are open source and part of the public domain (as opposed to traditional investment products). Users host their Quant Fund at Quantler's network of miners. Quantler's technical infrastructure is optimized for hosting Quant Funds in a high quality, highly available and cost-effective way.

The Solution

The way Quantler's users create these structured products is very straight forward. The user decides in which assets he or she would like to invest, by creating or selecting a Theme. Then the user can define the automation rules that should apply to this portfolio. After a simulation on historical data and if necessary optimization, Quantler lets the user connect to the broker of their choice and performs its key function, hosting and executing a Quant Fund. In the catalog, users can get inspired by existing Quant Funds and themes that other users have made public and reuse them and adjust them to their liking. Users are free to design their own automation with existing modules. Though it is also possible to write code if needed. Quantler provides the service as is, without any investment advice or investment management service.

Customized

Every investor is unique, every Quant Fund (prepackaged investment) can be made unique as well. Quant Funds can be easily changed, as components can be added, swapped or removed without touching a single line of code. Programming is optional. The online and offline simulator allows for easy testing, analyzing and comparing different Quant Fund ideas. Quantler will also allow users to run these simulations from their mobile phone. If they have a new idea for a Quant Fund, or want to check an idea while on the road (For instance: "what if I added technology related stocks to my theme?"), they can simulate it on terabytes of data from their mobile phone using the computing power of the crowd.

Accessible

Quantler caters to the needs of both the "set it and forget it" users as well as the sophisticated Quants. Programming is optional. Users can either create a basic Quant Fund using existing components or create these components themselves. Users can check out the community for examples and incorporate new ideas, which might improve their own Quant Funds.

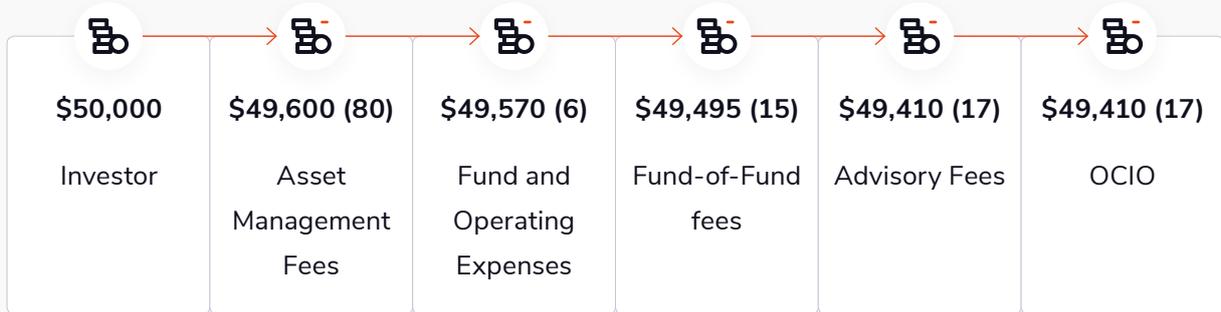


Cost Effective

For regular equities Quantler leverages on commission free brokers, as it allows all Quant Funds to compete with any other investment product when it comes to pricing.

Traditional investment solutions

Typically, traditional investment solutions have a long supply chain which increases costs. Research done by the Commonfund Institute has shown that investment management fees can be up to 128 basis points (equals 1.28% in management fees) on a yearly basis. These results are based on a U.S. based industry average; the average in Europe is known to be much higher (Commonfund Institute, 2017). This does not account for any incentive related fees (performance fees).



Example of an investment of 50,000 USD with 1.28% in total fees.

When using Quantler the supply chain is a lot shorter and contains different services, often resulting in significantly lower fees:



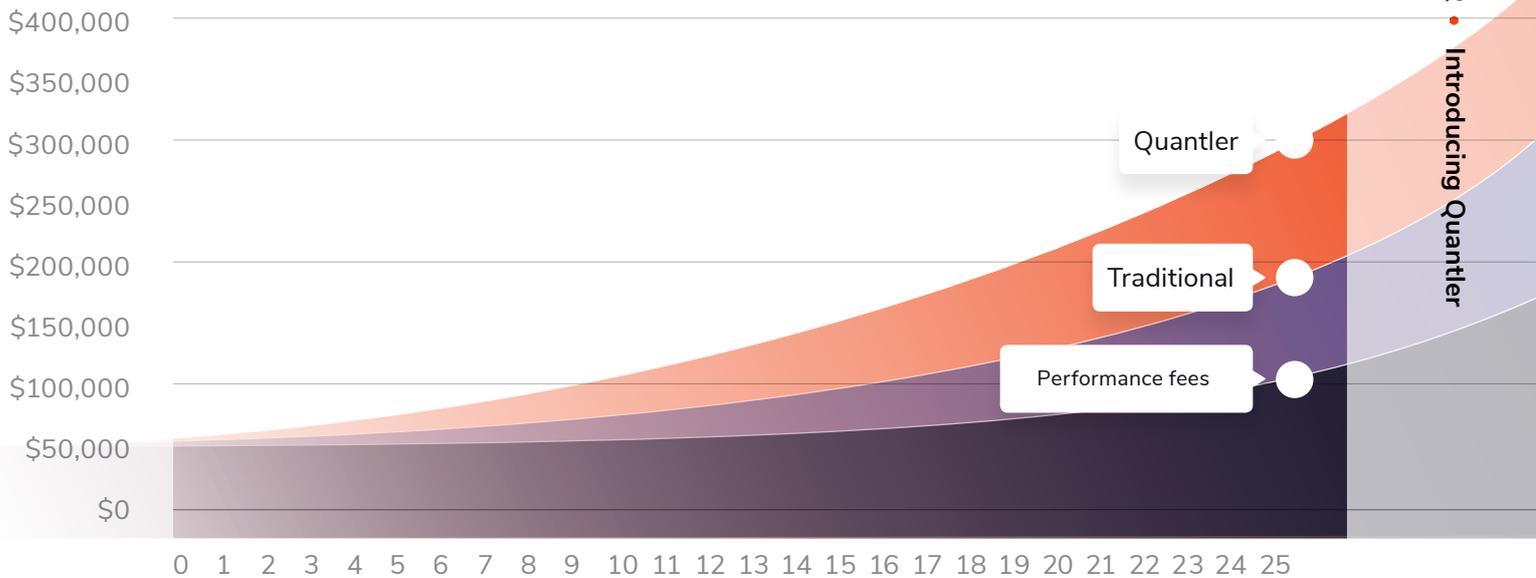
Example of an investment of 50,000 USD with 0.25% in total fees.

Quantler's network charges 25 basis points (equals 0.25% in fees) on a yearly basis. Since Quantler is not a financial institution, Quantler has a different fee structure with a different approach to costs. Notice here, that in the Quantler example the fund-of-fund costs have not been included, because with Quantler the user can mimic an existing ETF without incurring additional costs. If the user decides to include any investments in ETFs, regular fund-of-fund costs will apply. Also, notice that brokerage fees are left out in this example, as Quantler targets its offering in combination with commission free brokerages.



Cost Comparison

For more insight let's make a comparison and invest the 50,000 USD in a traditional investment product and compare this to a Quant Fund created and hosted on Quantler's infrastructure for the next 25 years. Both investment options have a fictional return on investment of 8.5% a year. Since the Quant Fund offers lower costs, this could increase a return on investment by 29.63% while investing in the same assets as a regular fund. If a 20% performance fee were to be included, the traditional investment route would have a 93.37% lower return on investment.



Global Solution

Quantler's solution is globally accessible and supports multiple languages. From the launch of the beta, Quantler will offer the following languages: German, English, Spanish, French, Italian, Japanese, Korean, Dutch, Portuguese, Russian and Chinese; covering over 90% of world's population. The translations are open source and accessible for every outsider, allowing all users to improve or add translations where needed. In return for contributions on Quantler's language files, QUANT are rewarded.

Since Quantler's network has no minimum investment of capital requirements, Quantler is also accessible to lower income groups.

Transparency

Invoicing at Quantler is transparent. Each payment contains a detailed overview of how the payment amount is derived. Quantler has no access to its client's funds whatsoever, so Quantler cannot deduct any payments automatically from the client's account, like traditional solutions. Quantler is able to invoice a clients wallet directly by using the QUANT running on Quantler's blockchain.

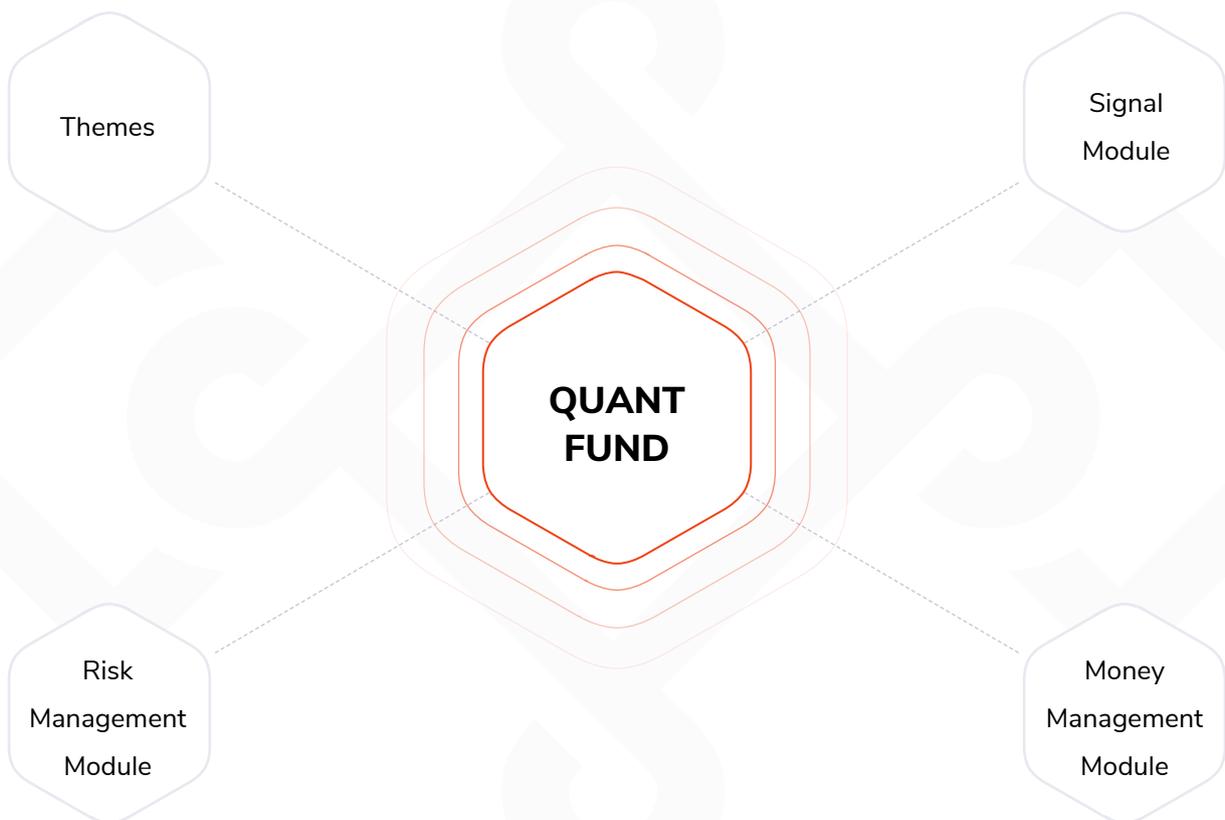


Regulatory Landscape

Quantler has had talks with the Dutch regulator (the AFM) via its fintech InnovationHub regarding the regulatory requirements of Quantler's offered services. The regulator has acknowledged the fact that Quantler is not an investment company (beleggingsonderneming), and therefore it does not require a license pursuant to European directive MiFID II and does as such not fall under the supervision of the AFM, nor that of ESMA (European Securities and Markets Authority). Compatible brokers and exchanges do fall under the supervision of their respective regulator (wherever they are located).

The Quantler Components

The following provides an overview of components within Quantler.



Themes

A theme is a selection of weighted assets grouped to represent a certain theme. Examples of a theme can be Self Driving Cars, Internet Of Things and for crypto: Residential Tokens (for tokenized mortgages in a certain geographical area) or tokenized Art (of which the tokens selected share a common style of art). Due to the increase of tokens, the diversity of themes that can be created increases as well. At Quantler, users can create, share, discuss, import and use themes to define on which assets a Quant Fund should be executed. In other words, the theme tells the Quant Fund on which assets it can use its automation rules. Themes can be created from scratch or imported from the catalog. If imported, alterations can be made to fit the user's taste.

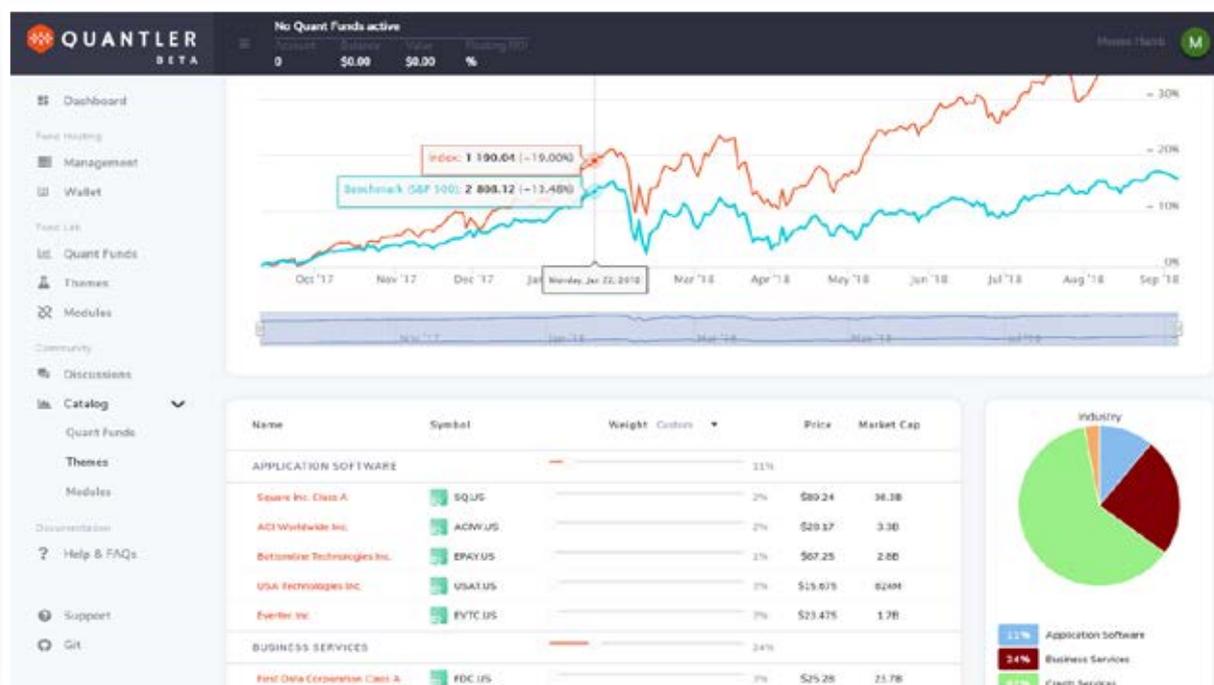


Figure 1. Creating and editing a theme online (BETA: [Quantler.com](https://www.quantler.com))

When creating or changing a theme, the underlying assets are automatically indexed on each alteration. You can compare this indexed performance with a given benchmark. For Equities and ETFs this is the S&P-500, and for Cryptocurrencies Quantler currently uses the Bitcoin as its benchmark. With time, users will be able to select their own benchmark from a list of options. Users can change the weight within a theme of either an individual asset or a group of assets that belong to a certain industry.

The pie chart in Figure 1 provides an overview of the associated industries by weight. This allows users to see which industry this theme is more focused on and thus exposed to. Users can, for instance, create a theme focusing on those Cryptocurrencies that have a common goal to change financial markets. By combining, for example, both finance tokens (payments, credit cards, wallets) as well as tokens that are focused on trading (Exchanges). Quantler's users can be the masters of their own theme, the options are endless.

Modules

A module is the combination of automation rules which define the behavior of a subset of a Quant Fund. Modules can contain parameters to allow for tweaking. Modules are the building blocks for creating the behavior of a Quant Fund. The behaviour of a module manipulates the state of a Quant Fund, much like smart contracts on the Ethereum network. Modules can be created, compiled, shared, discussed and used from the web application. By using modules to construct a Quant Fund, it allows for a loosely coupled environment. In computing and systems design, a loosely coupled system is one in which each of its components has, or makes use of, little or no knowledge of the definitions of other separate components. This means that users can combine modules to create the ultimate automation for their Quant Funds.

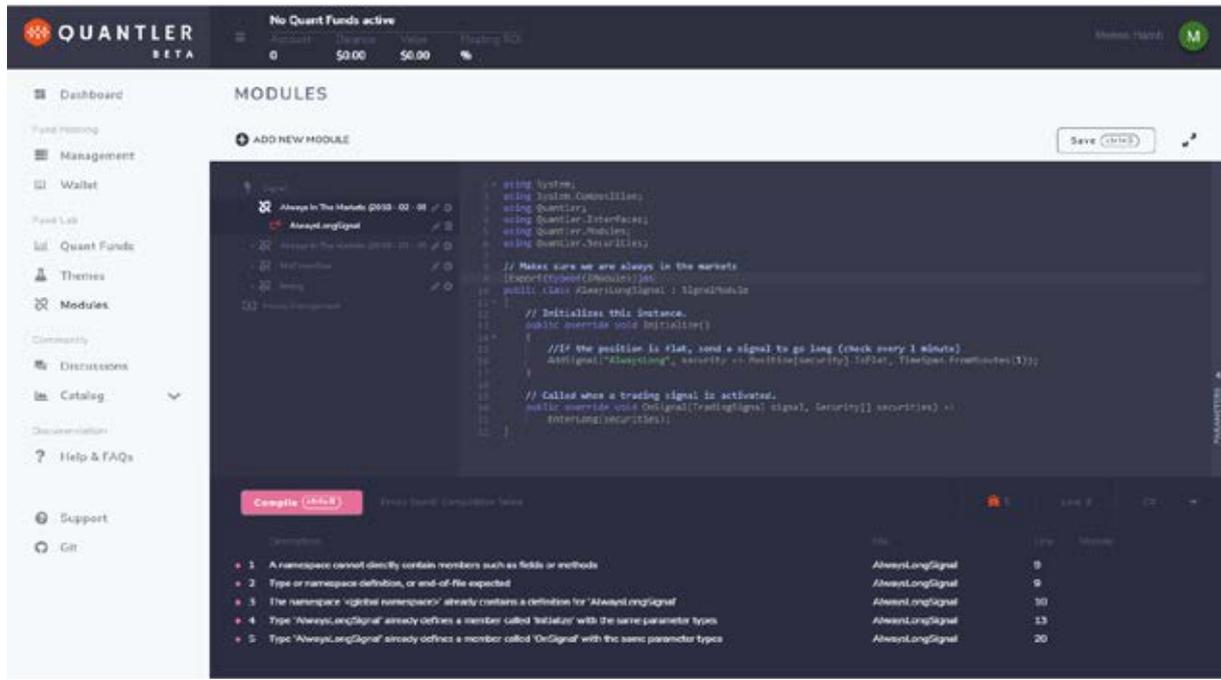


Figure 3. Creating and compiling a module online (BETA: [Quantler.com](https://www.quantler.com))

Modules created online can be used for running Quant Funds. The framework used for hosting Quant Funds at Quantler makes use of the same framework as a user would use locally.

Modules are programmed in C# either online or offline in Quantler's open source framework. Modules can make use of over 120 built-in technical indicators, event-driven functions, scheduled functions and data on securities, fundamentals, orders, positions, results, performance, exchange info, and account information.

Some logic users can apply to any type of module they create:

Parameters

Users can set parameter inputs which allow for fine-tuning of their Quant Fund. These parameters will also be used for optimizations later on.

Event-Based Signals

Set logic based on which event certain things need to happen, such as when to rebalance (for example: 3 hours after the start of the first trading day, every 3rd month in a year).

Signals can have any logic, can be turned on and off programmatically and can be applied to an entire active theme at once.

There are different types of modules, which form the building blocks for creating a Quant Fund.



Signal Module

Create a Signal Module to develop how, when and where to enter or exit the markets. A classic example of a signal module is the moving average crossover system. Some specific things users can do in a Signal Module which cannot be done in other modules:

Entry and Exit Signals

- Send entry and exit signals for a specific instrument or the entire active universe.

Risk Management Module

Create a Risk Management Module to specify how to manage risk. Is it allowed to trade a specific instrument and when is it time to exit certain markets if some predetermined threshold have been met? Some specific actions users can take in a Risk Management Module which cannot be performed in other modules:

Is Trading Allowed?

- Whenever an order is being sent which increases a position's risk, the user can determine if this action is allowed or not.

Risk Management Events

- During the cycle of creating an entry or exit order, the Risk Management Module can, for instance, determine whether to set a new order (stop order) or make changes to its internal risk management logic. This allows the Risk Management Module to keep track of order flows, trades and positions.

Money Management Module

Create a Money Management Module to specify position sizing and timing.

Set Order Quantity

- Whenever a new order is created, the Money Management module can change the size of an order to reflect the correct amount according to predetermined portfolio setting. Or it can cancel an order if there are no sufficient funds (based on an arbitrary calculation).

Quant Funds

Quant Funds are pre-packaged products which contain both a theme as well as logic to automatically manage this theme in a decentralized environment. As opposed to qualitative investments (where decisions are human based, which can include biases and emotions), Quant Funds are 100% machine based in a form similar to smart contracts. Quant Funds consist of multiple components which by themselves cannot perform any actions, but combined, are all that is needed to execute a Quant Fund. All Quant Funds have access to market data, provided by different exchanges.

The following components (called modules) are used for creating a Quant Fund:

- **Theme:** a basket of weighted financial assets or cryptocurrencies, can be static or dynamic.
- **Signal Module:** defines based on what logic a new buy, sell, hold or liquidate signal is sent.
- **Risk Management Module:** keeps track on limiting the risk when running the Quant Fund.
- **Money Management Module:** implements logic for determining position sizes on new orders and can rebalance current holdings.

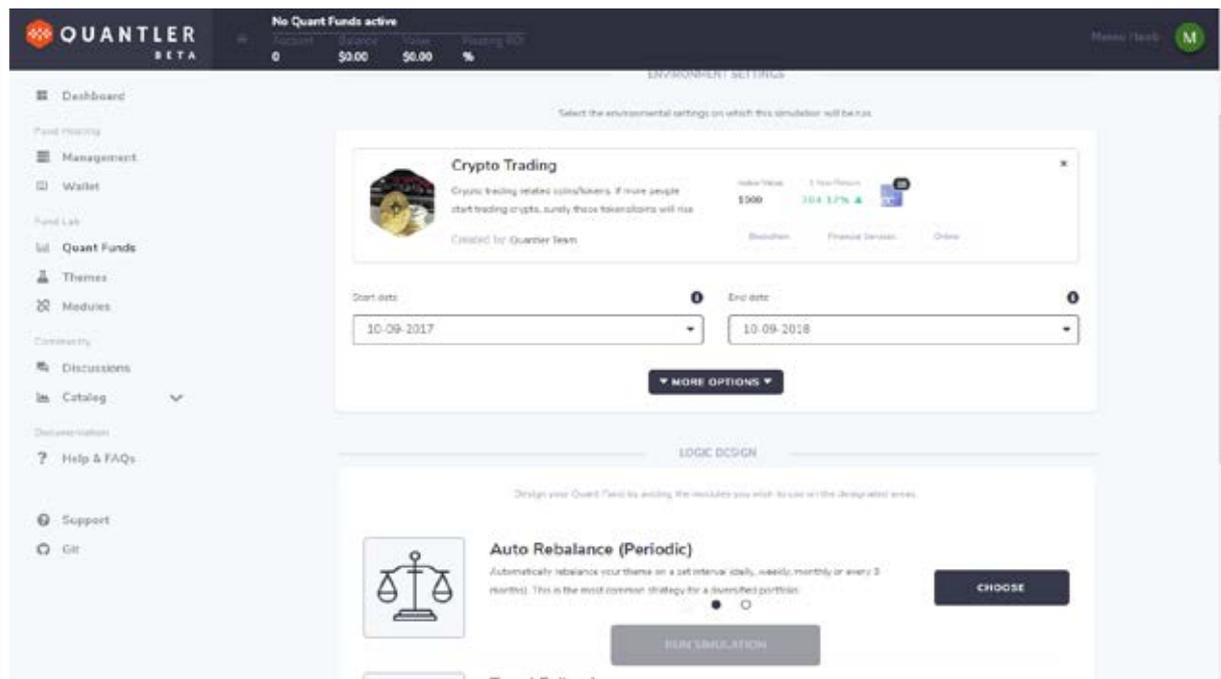


Figure 2. Creating a Quant Fund online (BETA: [Quantler.com](https://www.quantler.com))

Using modules and different libraries within the Quantler Framework, you can create a range of different kinds of Quant Funds:



Trend Following

Follow general trends by comparing historical performance with current prices. Profiting whether prices go up or down.



Mean Reversion

Pick stocks, or baskets of stocks that are linked to each other in any way. By using historical data an average price is calculated that one can trade on.



Arbitrage

Catch price differences between markets. If the price, for example, of Bitcoin goes up significantly in the US, others might follow suit.



News Updates

Scan many news sources and invest based on the latest news updates globally. New regulations can swing markets to the extremes.



Social Sentiments

Who says all markets are objective? Scan social networks and make decisions based on how people feel. What about the latest quote from Elon Musk?



Scalping

Take small profits on market volatility. Since the market is always moving, these strategies are always active. Remember, small gains can add up quickly.



Auto Rebalance

Automatically rebalance the portfolio under management. Calender based, event based or percentage based.



Features

Some of the key features offered:



Catalog

Use Quantler's online catalog to browse and select the Quant Funds that are created by the community and are made public. All items shown are 100% open source and part of the public domain. Users can import, alter and use whole Quant Funds, Themes and Modules, whichever fits their need.

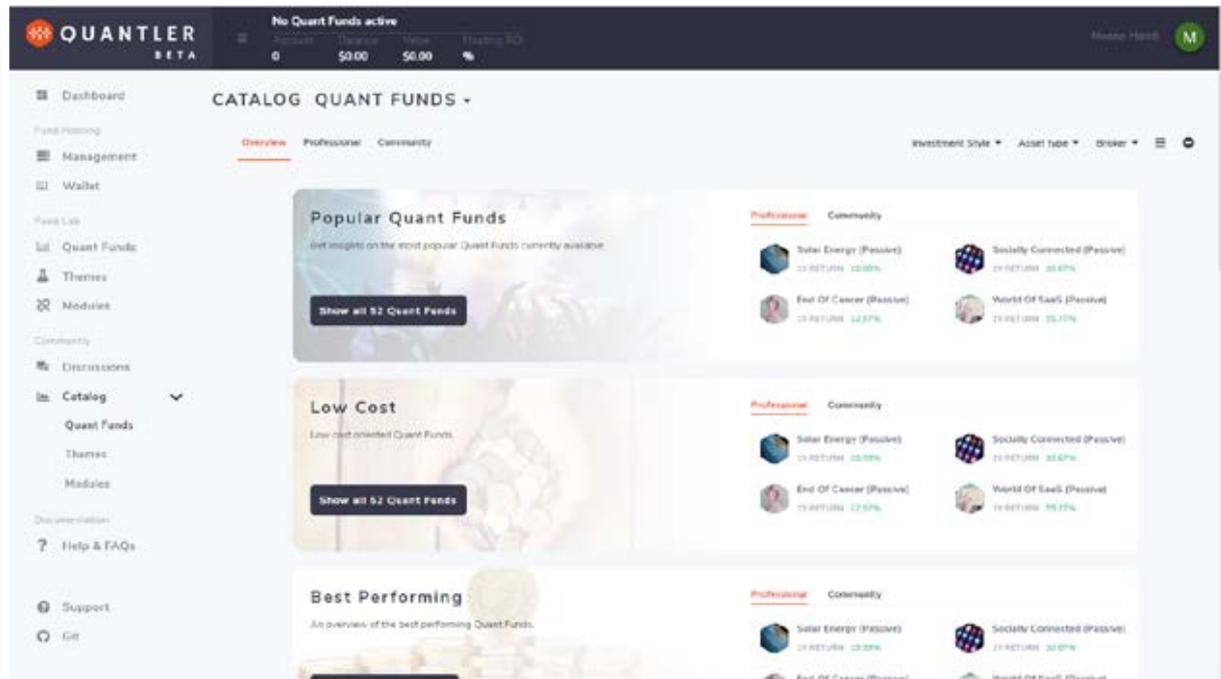


Figure 4. Quant Funds Catalog (BETA: [Quantler.com](https://www.quantler.com))



Device Coverage

Quantler will provide a cross-platform solution:

- Web-Based
- Android Client
- iOS Client
- REST API



Live Trading

Quantler makes executing these alternative investment products possible on exchanges with traditional assets or exchanges with Cryptocurrencies. Quantler will allow users to create and execute Quant Funds on:

- US Equities
- US ETFs
- Cryptocurrencies
- EU Equities (will be rolled out later)
- EU ETFs (will be rolled out later)

The QUANT

The QUANT is a hybrid token for the Quantler network. The number of QUANT available is determined by the number of QUANT minted during the initial sale. After the initial sale, the total amount of QUANT available is fixed, no new QUANT will be created.

Usage

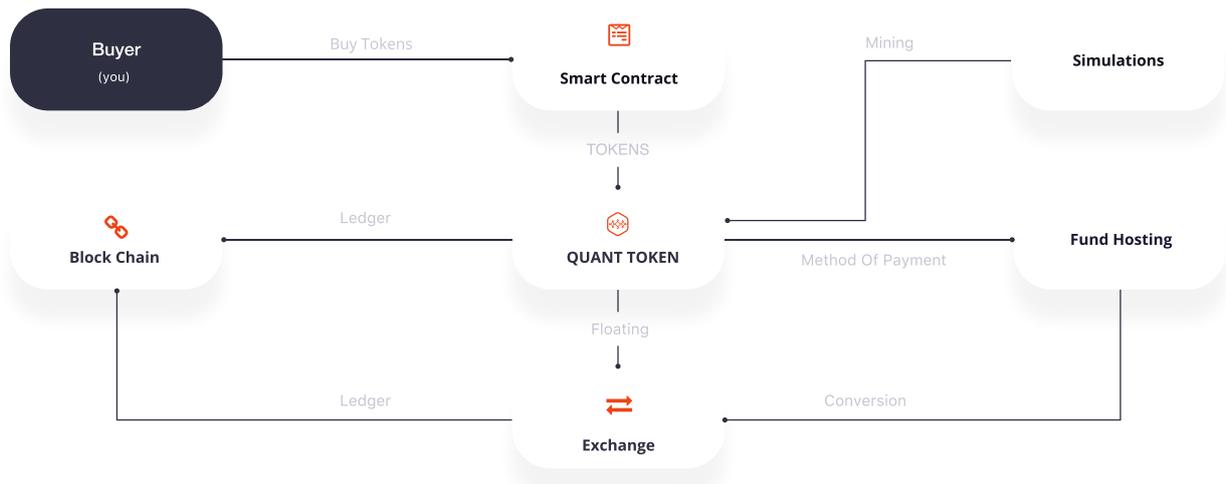


Figure 5. Quantler Ecosystem

Method of Payment

Hosting of Quant Funds at Quantler will have to be paid in QUANT. Quantler expects the amount needed for the hosting to remain active, to be present in the users wallet at the start of each monthly cycle. Investors can either deposit QUANT in their wallet themselves (pre-paid), or they can automatically refill their wallet via credit card. If there is an insufficient amount of QUANT in a users wallet, investments in all Quant Funds of this user will be suspended.

Mining

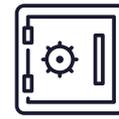
Instead of using smart contracts, at Quantler, Quant Funds are developed using modules. These modules are executed and hosted by the miners on Quantler's network. The execution of modules by miners, requires computational resources, which in turn should be reimbursed. The amount a miner is reimbursed depends on the amount of computational resources offered to the network and the amount of QUANT staked compared to other miners in the network. Depending on the amount of QUANT staked by a miner, the probability of

receiving a mining request increases compared to its peers. If all of the miner's computational resources are already taken, a different miner with a lower stake is chosen. The amount of staking a miner would deem economically viable is depended on the amount of assets under management by the network. This is due to the fact that the value of 1 QUANT, and thus the reward for mining, is depended on the assets under management by the network as a whole. If a node is deemed to be malicious, the node will lose all of its stake.



Proof of Work

Depending on the amount of computational resources required to host Quant Funds, an amount of QUANT is rewarded for calculating its current state. Many different Quant Funds require many different miners to continuously monitor state.



Proof of Stake

Depending on the number of QUANT the current miner has, the probability of receiving a new mining request increases compared to its peers. This ensures that long-term and therefore high-quality miners are rewarded more often.

Hosting

Quantler relies on its own blockchain for hosting Quant Funds in a fully decentralized environment. Here nodes audit each other through the use of distributed ledger technology.

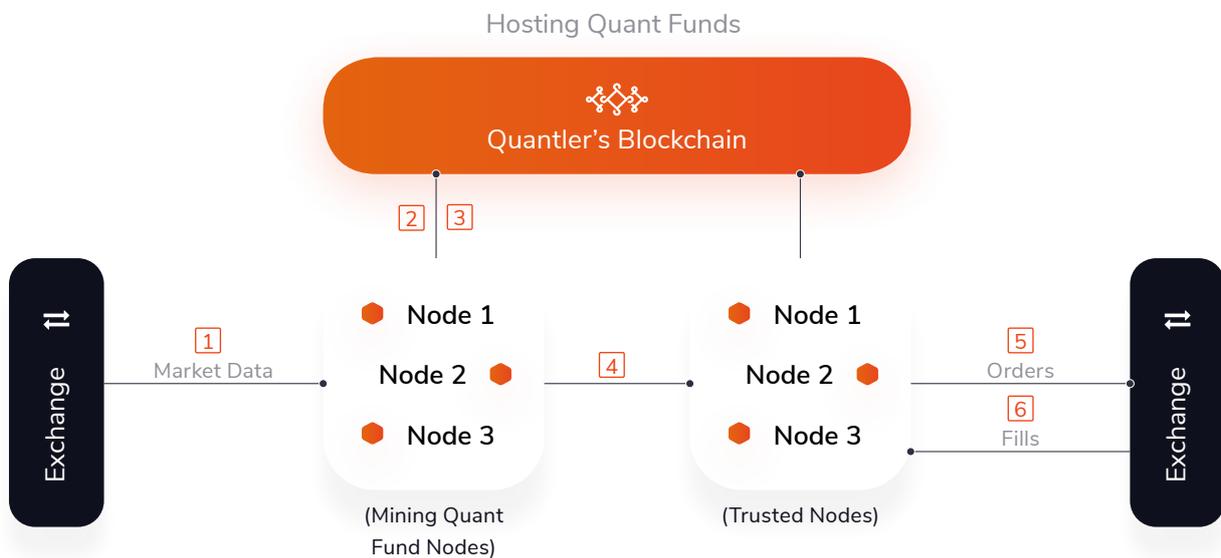


Figure 7. Hosting of Quant Funds

1. Market data is sent to a distribution of nodes. These nodes pre-aggregate data to a 1-minute level.
2. Nodes that are setup to retrieve data from many different data sources, now push this data into the general ledger. Multiple confirmations in the general ledger can confirm that a data point is correct or not (making sure that the input for all Quant Funds is authentic).
3. Nodes that are running Quant Funds use the newly retrieved data (market or fundamental) to process their logic.
4. Nodes that are running Quant Funds now store, check and validate their current state using the general ledger (blockchain) and run their logic on the supplied data to derive a new state. This new state can for instance be a new long position (buy 10 AAPL stocks).
5. Based on multiple confirmations that a new order should be processed, a trusted node containing the connection with the exchange and wallet/account sends the order to either a decentralized or centralized exchange for processing. This trusted node can be running on any environment so private keys are kept safe.
6. Once the order has been filled, a confirmation is returned to the nodes for further processing. The new state is stored in the general ledger to keep track of the state of a Quant Fund.





Development/Voting

Quantler’s framework is open source. Each individual in the community can contribute to the development of Quantler. Approved pull requests are rewarded with QUANT. By allowing developers to be rewarded for continued use of Quantler’s platform, Quantler aims to further incentivize the community to assist in the development of Quantler.

Holders of QUANT will be able to vote on new features to be implemented in Quantler’s ecosystem. The amount of QUANT a participant has, determines the amount of voting rights the participant can exercise.

Token Value - Tokenomics

QUANT has 2 utilities within Quantler’s blockchain:

1. Payment by users of Quant Funds for usage of the network. Which will have to be present in the wallet of the user for a longer period of time.
2. Staking by miners of Quant Funds. Since the amount a miner stakes determines the probability of receiving a mining request

The transaction volume of the network is dependent on the asset under management by the network. We estimate that 43 basis points on average will be paid for the asset under management by investors in Quant Funds. Using the buterin definition $C=TH/M$ we derive the hypothetical intrinsic value of 1 QUANT. Off course market value can always deviate.

T (total value) = 43 basis points of the assets under management of the network * 1.98 for the staking as a miner

H (holding time) = 0.92 (due to heavy staking from miners as well as partly the investors)

M (available supply) = 55,000,000 available supply

To be paid in QUANT:

Allocated Capital < 5,000 USD or equivalent

- 1 USD equivalent value in QUANT
 - Paid Monthly in QUANT with a pre-yearly collateral

Allocated Capital > 5,000 USD or equivalent

- 0.25% of the total allocated capital per year
 - Paid Monthly in QUANT with a pre-yearly collateral
 - ~0.021% per month

No data related fees

Quantler has no data related fees. Anyone can access and use Quantler’s data for free.

Other fees

There are no other fees.



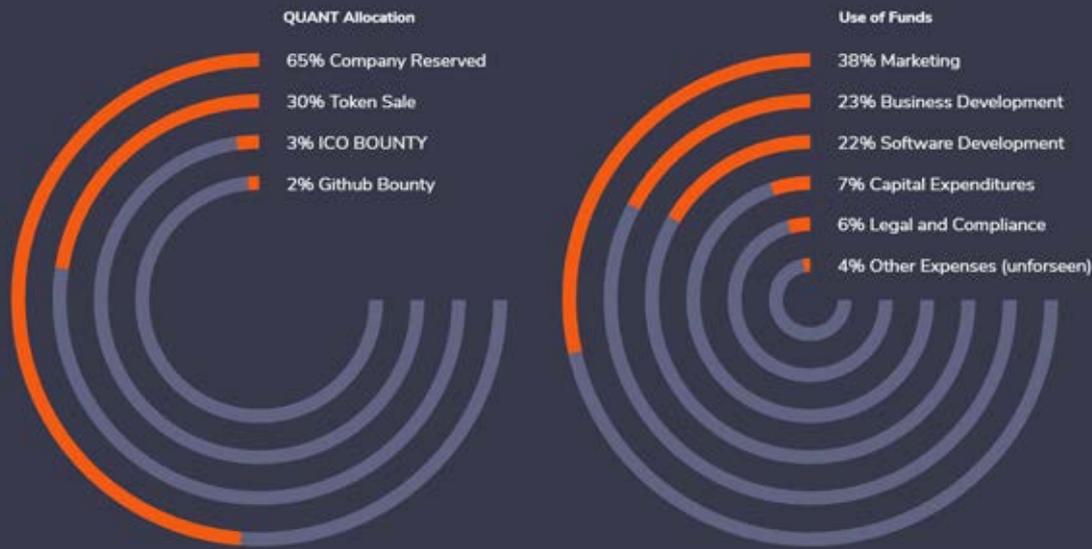
Crowdsale Details

Quantler will only be organizing ONE token sale ever. To participate in the token sale buyers must be on the whitelist! Due to regulatory reasons, Quantler will not accept participants from People's Republic of China, United States and New Zealand. Other interested parties are welcome to participate as long as they are legally allowed. The QUANT is being developed as a hybrid (service, mining and voting) token and is not intended to be a security or regulated product in any jurisdiction. Nor has the QUANT been reviewed by any regulatory authority. Anyone considering participation should assess the risks associated with digital assets and platforms.

There is no minimum number of tokens an individual must buy during the ICO. There is, however, a limit of 10,000 USD in purchase value per identity, which can only be removed on request via: quant@quantler.com.

Use Of Proceeds

Buying QUANT will fund the development of our solution.



65% Company reserved

Part of the tokens is kept by the company (Quantler B.V). These tokens will be used to finance any future expansions by the company.

30% Token sale

Amount of tokens available during the public crowdsale. This includes private-sale, pre-sale and public-sale tokens.

3% ICO bounty

During the ICO there will be bounty (marketing) program open for marketers worldwide. These marketers help spread the word of our ICO. In return, their effort is rewarded in QUANT.

2% Github bounty

Since Quantler is open source, we allow for every developer to push new code (bug fixes, new features, optimizations). These developers are rewarded in QUANT from our Github bounty pool.

38% Marketing

Parts of the proceeds used for the marketing of our solution globally. This will allow Quantler to create awareness for the solution presented, not only in the Crypto space, but also for traditional investors.

23% Business development

This includes setting up offices worldwide for the development of our solution and also the investments needed for running our solution.

22% Software development

Everything that relates to the hands-on development of our solution.

7% Capital expenditures

Expenditures for supporting systems, software, computer and office equipment for the development of the Quantler ecosystem.

6% Legal and compliance

Any legal and compliance costs that are related to the realization and marketing of our solution.

4% Other expenses (unforseen)

Expenditures that are not included in any of the categories stated above.





Terms, Conditions and Risks

The purpose of this whitepaper is to present Quantler, the Product, the Platform, the Quantler ecosystem to potential holders of QUANT. This document should not be considered any form of investment advice nor advice in any other investments. The information set forth herein may not be exhaustive, this whitepaper does not imply any elements of a contractual, partnership, joint venture or agency relationship between the author of this whitepaper and the potential QUANT holders. The sole purpose of this whitepaper is to provide relevant and reasonable information to potential QUANT holders in order for them to determine whether to undertake a thorough analysis of the Quantler project with the intent of acquiring the QUANT either through its initial sale or thereafter.

QUANT holders understand and accept the risks involved in owning, storing, exercising and transferring QUANT and Cryptocurrencies in general, not excluding the risks stated below.

Risk of QUANT price fluctuations. The value of QUANT fluctuates and may be subject to significant and wild volatility. The QUANT may be significantly influenced by digital currency market trends and the QUANT value may be severely depreciated due to non-QUANT related events in the digital currency markets. Quantler cannot guarantee any specific value of the QUANT over any specific period of time and cannot be held responsible for any change in the value of the QUANT.

Risks related to smart contracts. Smart contracts are in their early stages of development. Although an audit conducted by an independent third party on Quantler's smart contract increases the level of security, reliability and accuracy, this audit cannot serve as any form of warranty, including any expressed or implied warranty, that the QUANT smart contract is fit for its purpose or that it contains no flaws, vulnerabilities or issues which could cause technical problems or the complete loss of the QUANT.

Regulatory risks. Blockchain technology, including, but not limited to the allocation of QUANT, may be a new concept in some jurisdictions. Regulators may apply existing laws or introduce new regulations regarding blockchain technology-based applications. Such regulations may conflict with the current QUANT smart contract setup and/or QUANT concept. This may result in the need for Quantler to make substantial modifications to the QUANT smart contract, including its termination, loss of QUANT and the suspension or termination of the Product/Platform operation and activities. Buyers and holders of QUANT at all times take sole responsibility that they are in compliance with laws and regulations that apply to their respective jurisdiction and situation.

Tax risks. Receipt of the QUANT may have tax consequences for the QUANT holder and the holder understands that it is solely responsible for compliance with its tax obligations and Quantler bears no liability or responsibility with respect to any tax consequences to the QUANT holders.



Execution risks. The Quantler team may not be able to reach the set milestones on expected dates or set new milestones. Quantler is a complex software platform and its launch may be significantly delayed due to unforeseen development barriers. Quantler may not reach the target sale amount and may not have the sufficient funds to execute on its currently stated planning. Europe (ESMA) and The Netherlands (AFM) may change its regulatory framework, which may adversely affect the development of the QUANT and its ecosystem. Although it is not Quantler's intention, all of the above may result in value of QUANT going to zero or the platform not being able to be launched.

Force majeure risks. Quantler's platform and its QUANT development and execution may be interrupted, suspended or delayed due to force majeure circumstances. For the purposes of this whitepaper, force majeure shall mean extraordinary events and circumstances which could not be prevented by Quantler and shall include: acts of nature, wars, armed conflicts, mass civil disorders, industrial actions, epidemics; lockouts, slowdowns, prolonged shortage or other failures of energy supplies or communication service; change in legislation, court and/or governmental practices and approach, acts of municipal, state or federal governmental agencies and/or other circumstances beyond Quantler's control, which were not in existence at the time of the start of the ICO.

Unclassified risks. Please note that the Product/Platform may be subject to other risks not foreseen by Quantler herein.



Team

Who is behind Quantler and created what you see today? Quantler currently works on a remote basis and will grow with additional team members once the ICO has concluded.



Menno Hamburg
Founder & CEO

Founder of Quantler, with experience in the investment management industry, data analytics, big data and custom software development in numerous sizes and settings.



MSc in International Management,
Nyenrode Business University



Prof. Vladimir Ceperic, PhD
Blockchain Researcher

Research scientist, currently at Massachusetts Institute of Technology (MIT), with a proven history of delivering comprehensive knowledge and expertise in diverse platforms. Passionate about algorithmic (systematic) trading and blockchain.



PhD Engineering,
University of Leuven



Manuele Monti, PhD
Quantitative Researcher

A senior Financial Trading and Risk Management expert providing extensive business development and effective lead to Front and Middle office desks of Energy and Commodity Trading business.



PhD Engineering,
University of Leicester



Christian Oesch, PhD
Quantitative Researcher

Experienced Data Scientist skilled in Python, R, Matlab, Java, Machine Learning, Agent-based Modeling, and Economics and Finance. Strong research professional with a PhD focused in Economics.



PhD Computational Economics and Finance,
University of Basel



Wadim van Akkeren

Art Director & UI/UX Designer

A dedicated User Interface / Product Designer based in the Netherlands. Works on improving Quantler's UX experience combined with customer development.



Bachelor of Communication and Mediadesign, Avans University



Ruth Griffioen

Online Marketeer & Strategist

Creative thinker, with a strong focus on text and imagery. Experience in online marketing and creating product exposure and awareness.



Bachelor of Arts, Amsterdam University



Elina Nersisyan

UI Designer

Graphic Designer, UI/UX Designer for designing web related functionalities.



Bachelor of Design, National University of Architecture and Construction of Armenia



Vyacheslav Yermakov

Blockchain Developer

Full stack developer, both front and backend in different programming languages.



MSc in Computer Science, Odessa National Polytechnic University



Giordano Frezza
Analyst

Optimization, quantitative analysis, forecasting, trading, reporting and trading system development with over 15 years experience in the trading and hedge fund industry.



MSc Engineering, Aerospace
Università di Roma 'Sapienza'



Andrii Pindiura
Developer

Javascript Engineer with skills: ES6/ES8, HTML5, CSS(SCSS) React/Redux/React-native/(React ecosystem) Node.JS



Bachelor of Physics,
Kyiv Polytechnic Institute



Victor Maliutskyi
Developer

Developer with experience in the development of complex sites and web applications.



MSc in Computer Science,
Kyiv Polytechnic Institute



Sergey Kirpal
Developer

Full stack developer with expertise in Web-based apps, hybrid Android/iOS apps focused on e-commerce, financial industries, health and safety.



MSc in Computer Science,
Kyiv Polytechnic Institute

Advisors



Peter Schroder

Executive, Growth enabler, ICT, BPO, Fintech, HCM, Startups/Scaleups, Corporates, NL, EMEA, Global.

Peter is an experienced executive in international scale-ups. As well as from start-up into IPO as within a corporate environment.



David Morton de Lachapelle, PhD

Senior Scientist Robo Advisory, Data Science & AI with 10 years of experience in academia and the financial industry. Co-created the first European Robo Advisor at Swissquote Bank. Initiated and designed the Digital Goal-Based Investment Platform of Credit Suisse. Adjunct lecturer at two top-tier universities.



Vladimiro Mazzotti

Experienced CEO, Product Strategist, Entrepreneur. Advisor and mentor for several startups companies and large organizations in Europe. Successful managerial experience in Italy, EU and ASIA among various industries (consumer electronics, telco, retail/ecommerce, fashion, food/nutrition, fitness).



Phillip Shade

Mr. Shade is an internationally recognized Network Security and Forensics expert, drawing from his over 30 years of hands-on, real world experience as a Network Engineer and Security Consultant in Network Analysis, troubleshooting and Cyber Forensics / Security.

Advisors



Michiel van Eersel

Experienced lawyer specialized in financial law. Working in private practice since 2001, Michiel assisted in the set up of several investment funds and investment companies. Over the last few years Michiel has advised on fintech propositions, including related to blockchain and cryptocurrencies.



Roadmap



In its current beta mode, users can build themes and Quant Funds. The next developments will be released in milestones. The Quantler roadmap is divided into 5 milestones set between 2019 and 2020. Each milestone consists of a certain number of features that will be released. Each milestone will be thoroughly tested both internally and publicly by the community. This is made possible as Quantler is at its heart an open source solution. Many features are already completed and tested (see our Beta version), which allows Quantler to decrease its time to market significantly. The roadmap presented here is focused on future features, currently implemented features are left out. Quantler will work on multiple features simultaneously and will allow QUANT holders to influence Quantler's roadmap throughout time (through the form of voting on new features). This roadmap provides an overall view of the upcoming features and can be altered if needed.



Q2 2019

Milestone 1

Features: full simulations, dynamic themes, data feeds, debugging mode

Full Simulations

Simulations that users run on the beta version of Quantler are not linked with the full framework of Quantler. The current simulations always make use of the auto rebalance strategy as the full framework is very much under development. To run the full simulations and make use of the framework, Quantler will continue with the development and finish the last parts of the framework. The current state and progress of the framework can be monitored on GitHub.

Dynamic Themes

Currently, themes are static. Users set the composition of a theme by selecting its symbols and assigning their respective weights. To be more resilient in the composition of a theme, Quantler will introduce dynamic themes alongside the current static themes. These more dynamic themes allow users to create a theme based on a certain pattern of logic (slice and dice). For example: create a theme based on the top 20 performing Cryptocurrencies, which are in the Finance sector and weight these Cryptocurrencies according to relative performance in the past 180 days. Since the top 20 performing Cryptocurrencies can change at any moment, the theme is updated according to these market changes as well. This will allow users to follow up on latest trends more closely and have a more resilient theme that can adapt to changing market conditions.

Data Feeds

Quantler's framework knows many data feed connections it connects to. To decrease latency and allow for the more dynamic use of these feeds Quantler will introduce its very own aggregated data feed. Quantler plans to have features such as auto reconnect, get all data



from any of the exchanges at once, get pre-aggregated data (1-minute data for instance) and streaming historical data. This data feed will be publicly accessible and free of charge for: Equities, ETFs and Cryptocurrencies.

Debugging Mode

If the user's Quant Fund is not behaving the way the user expects, the user will be offered a debugging mode in the user's preferred development environment. Using the data feed mentioned above, Quantler will allow developers of Quant Funds to directly debug their Quant Funds with historical data in their preferred development environment (Visual Studio or Visual Studio Code). This allows users to create better quality Quant Funds and modules. Quant Funds created and debugged locally can run on Quantler's network without any modifications to the user's code. Simply copy and paste the code in the online development environment, and the user is good to go.



Q3 2019

Milestone 2

Features: demo trading, mobile app, improved notifications

Demo Trading (Testnet)

Before allowing live trading, Quantler will introduce demo/paper trading first for created Quant Funds. Hosting Quant Funds in a demo trading environment is technically the same as running it in a live trading environment; and it will allow both Quantler's end-users as well as Quantler's technical team to test and improve the technical infrastructure. This will be Quantler's stepping stone to live trading which will follow shortly thereafter.

Mobile App

Quantler will introduce a mobile app which will allow users to create, edit, analyze, import and manage their Quant Funds. This will lower any potential roadblocks for using Quantler when you are on the go. It will have all the same features as Quantler's web-based version except for creating and editing modules. Have a new idea for a new Quant Fund while on the road? Pick up your phone and create your theme, select your modules, run a simulation and host your new Quant Fund all from your mobile phone.

Improved Notifications

Using the mobile app above, users can set certain notifications to receive updates about their Quant Fund. Either by email, SMS or push messages to the Quantler mobile app users can stay informed. Updates can include weekly performance overviews, trading events, affected news items for their Quant Funds, and self-programmed messages.



Q4 2019

Milestone 3

Features: live trading (Crypto), Mining Network (optimizations)

Live Network (Mainnet)

Quantler will launch its mainnet for hosting and executing Quant Funds for cryptocurrencies. At this moment many different pre-created Quant Funds will already be available for direct execution. Next to the launch of the mainnet, many different exchanges which are needed for execution will be attached as well. Quantler's wallet for accessing and managing running Quant Funds will be included.

Live Trading (Crypto)

When Quantler crypto trading goes live, it will allow users to host and run their Quant Funds on Quantler's network. Users can connect to any of Quantler's compatible Crypto brokers and live execute their Quant Funds against their brokerage account. Users can run as many Quant Funds alongside each other on a single brokerage account as needed and use the mobile app, released earlier, to manage their Quant Funds on the road.



Q1 2020

Milestone 4

Features: live trading (Equities & ETFs)

Live Trading (Equities & ETFs)

Quantler will introduce live trading for equities and ETFs via European and U.S. based compatible brokers and exchanges. Quantler mainly focuses on budget brokers to reduce the costs of executing a Quant Fund. This allows for Quant Funds to compete with existing investment products.

Please note that the roadmap is dependent on the number of tokens sold during the initial sale. Furthermore, the roadmap is purely indicative of what Quantler plans to do in the future; no rights can be claimed based on its publication. Not in content, not in proposed functions and not in planning. Quantler reserves the right to change its roadmap, for example, but not limited to user or company needs or changing market conditions.

Who's your source?

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