Alpha Wealth Robo Advisor

and

Digital Assistant AiVA

Our competitive advantages

- **Our open platform allows customization and personalization of portfolios** – in addition to predefined selections of ETFs for optimal portfolio, the clients can construct their own portfolio from a large list of securities. This customized portfolio is then optimized by the Alpha Wealth.

- **Mean CVaR method** can as part of dynamic asset allocation reduce fat tail losses in portfolio

- **Optimization at given maximum drawdown** (no arbitrary scales of risk with no quantitative meaning)

- **Active portfolio management products, including dynamic asset allocation products** which lead to portfolios with better risk adjusted returns and help lower clients behavorial biases (e.g. buy high, sell low) which is especially relevant given the position in the current stock market cycle.

- Sophisticated **framework for financial goals management and planning**

- Use of **artificial intelligence** (deep learning) in determination of optimal dynamic allocation products

- Specialised digital asistant AiVA, with face detection and voice recognition

- Advanced performance, risk and other analytics

Alpha Wealth Robo Advisor

Alpha Wealth

Alpha Wealth is a platform for automated advisor and investment management. See video of iOS app in use: www.alpha-quantum.com/robo_advisor.html

Its main features are:

- Optimisation of portfolios of ETFs and other securities, based on individual risk aversion of client, determined with the use of questionnaire

- Dynamic asset allocation products

- Sophisticated management and tracking of financial goals and its incorporation in investment process

- Open platform - clients can optionally select which securities from a predefined list are included in the portfolio.

- Artificial intelligence – use in creation of dynamic allocation products

Alpha Wealth app

API calls

Alpha Wealth infrastructure

Alpha Quantum Portfolio Optimiser
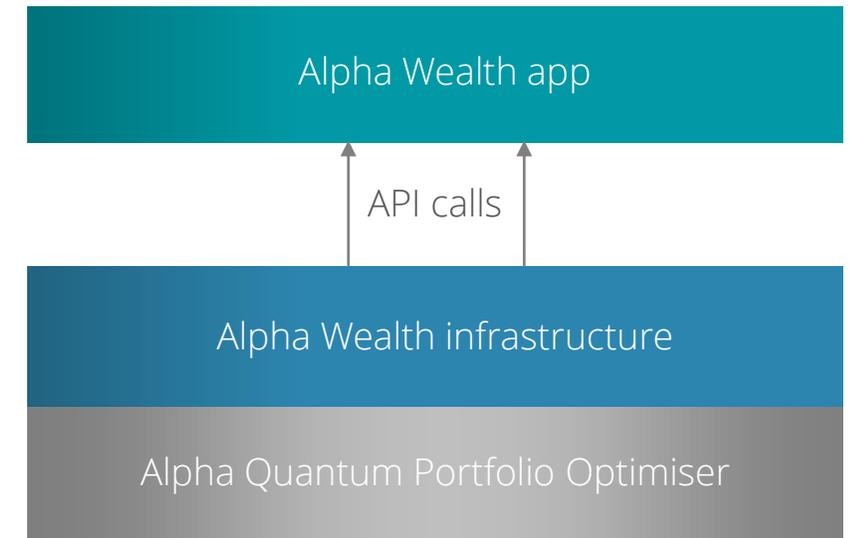
Importance of maximum drawdown and Mean CVaR methodology in our approach

- The central concept of our approach is maximum drawdown by which the different portfolios are differentiated from each other

- This is an improvement from arbitrary scales for risk, for example from 1 to 10 which don't have any quantitative meaning

- With our approach centered on maximum drawdown [8] the client using the particular optimal portfolio will have an approximate estimate of how much it will lose during a particularly bad year (within a given confidence level)

- The portfolio is based on Mean CVaR and Mean CDaR methodology which takes into account higher moments of distribution and can as part of dynamic asset allocation lead to lower probability of fat tail losses in portfolio
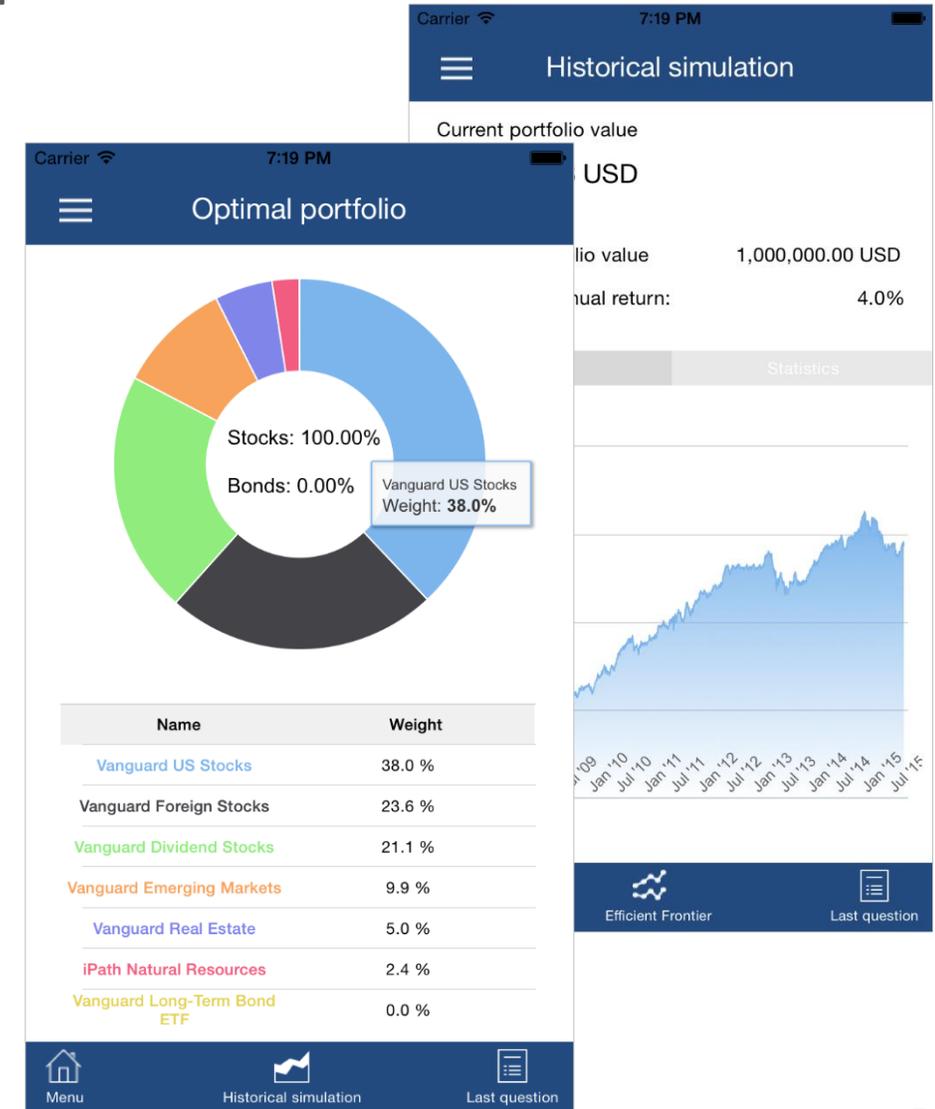
[8] The platform also supports the Mean Variance approach, which is adopted by some of other robo-advisors platforms.

Portfolio optimisation

- Determination of clients risk level from a questionnaire with 10 questions. The most important question is the accepted level of maximum drawdown.

- Portfolio optimization for given risk level and constraints

- Portfolio optimization is based on the Mean CVaR method

- Performance and risk statistics for historical simulation of the optimized portfolio gives the client an indication of possible potentials in terms of returns and risk of losses

- Interactive presentation of the optimal portfolio on the Efficient Frontier. Presentation of risk return differences with respect to current portfolio and other portfolios on Efficient Frontier.
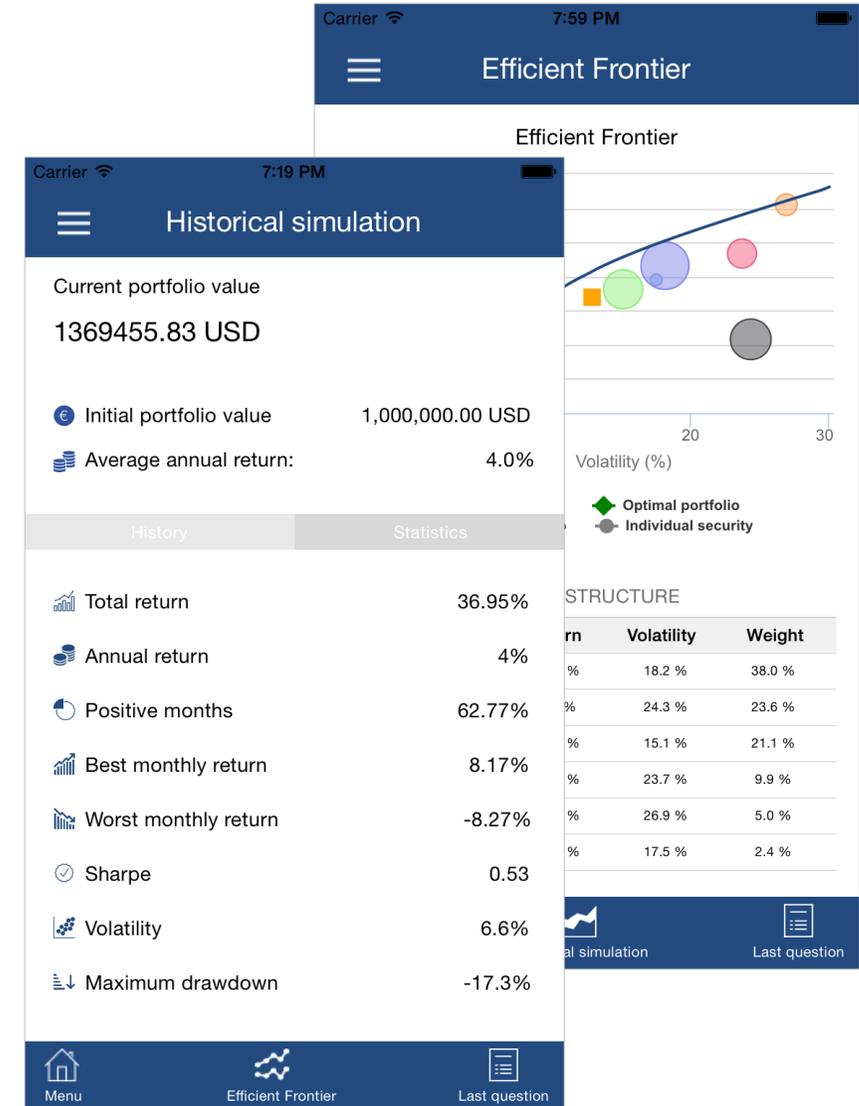
Dynamic asset allocation

Dynamic asset allocation based on Mean CVaR methodology can form portfolios, which dynamically adjust to changing correlations between asset classes and shifts in expected returns and risk regimes, leading to portfolios with better risk adjusted returns.

Dynamic asset allocation in Alpha Wealth:

- Five dynamic asset allocation products based on different risk levels and clients selection of securities

- Products are based on our multiperiod portfolio optimization framework with Mean CVaR methodology

- Current optimal composition for each product

- Performance metrics, risk statistics and dynamic composition of portfolios for historical period
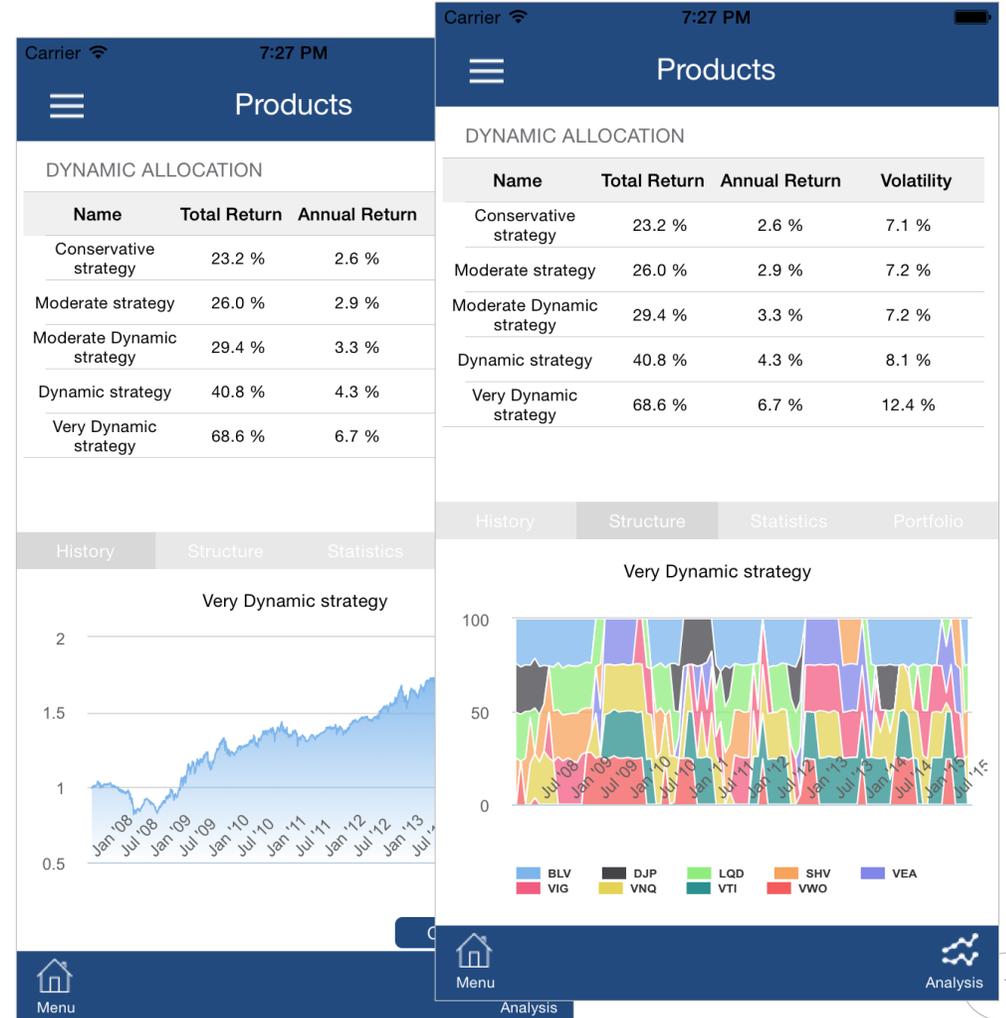
Financial goals

- Clients can define financial goals in a wide array of categories, specifying target value of investment, target date, initial investment and periodic payments

- Intuitive user friendly interface for managing goals

- Monte Carlo simulations for calculating probabilities of achieving each goal

- Monte Carlo simulations for projecting goals investment values for central, optimistic and pessimistic scenarios

Financial goals

- Integration between our financial goals framework and clients optimal portfolio (goal based investing)

- Multiple choice recommendations in case of deviations from the target path to goal

- Tracking of goals investment values through time

- A sophisticated alert system
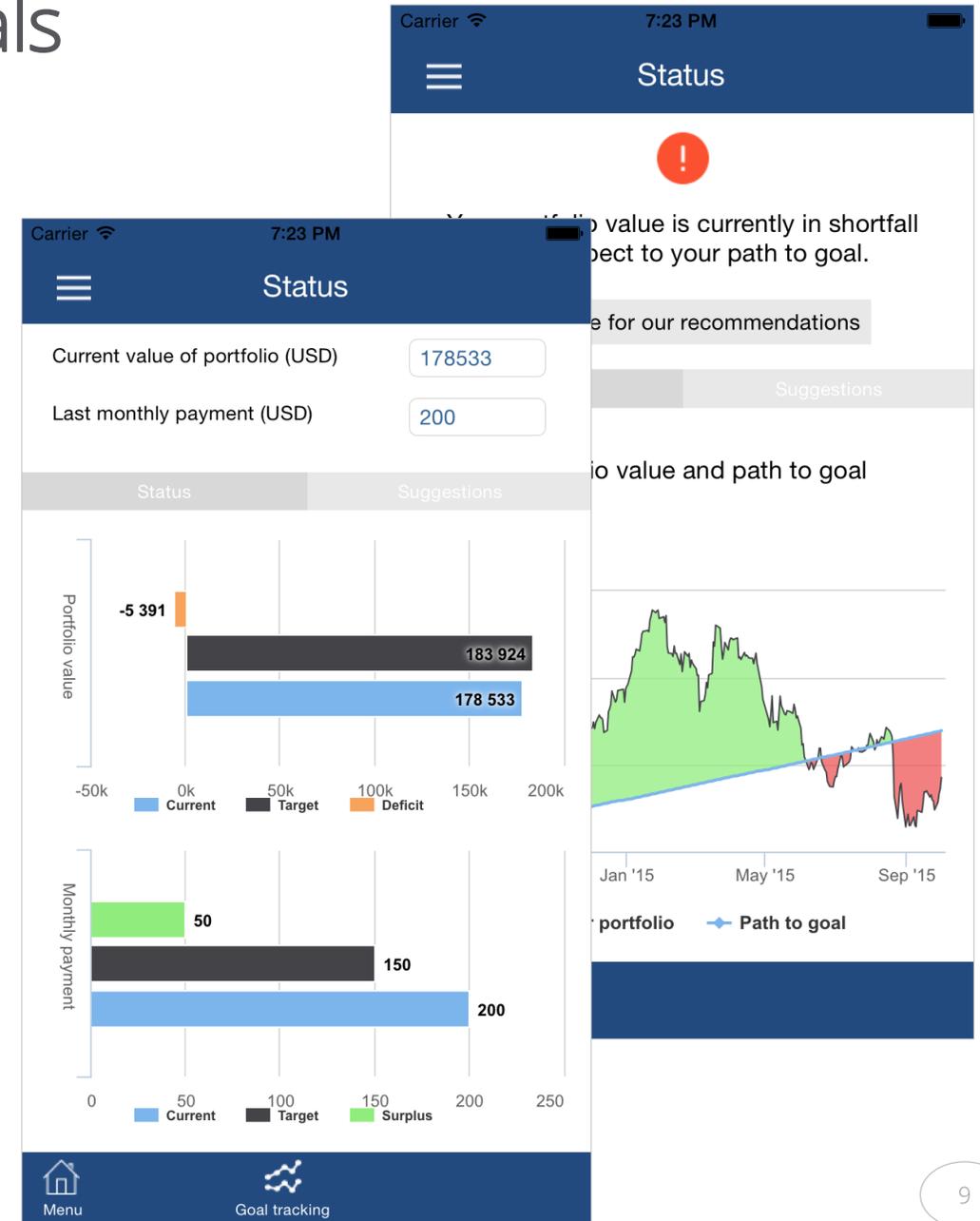
Open platform

- Clients can select predefined portfolios of ETFs or they can form their own portfolios by selecting securities from a predefined list of 400 ETFs and funds

- For this individual selection of securities the clients can also choose constraints for portfolio optimization provided they fulfill certain conditions like no leverage and only long positions

- If the client wants to include an ETF or fund, which is not in our selection, we will add it provided it meets our criteria for liquidity, size and length of data history
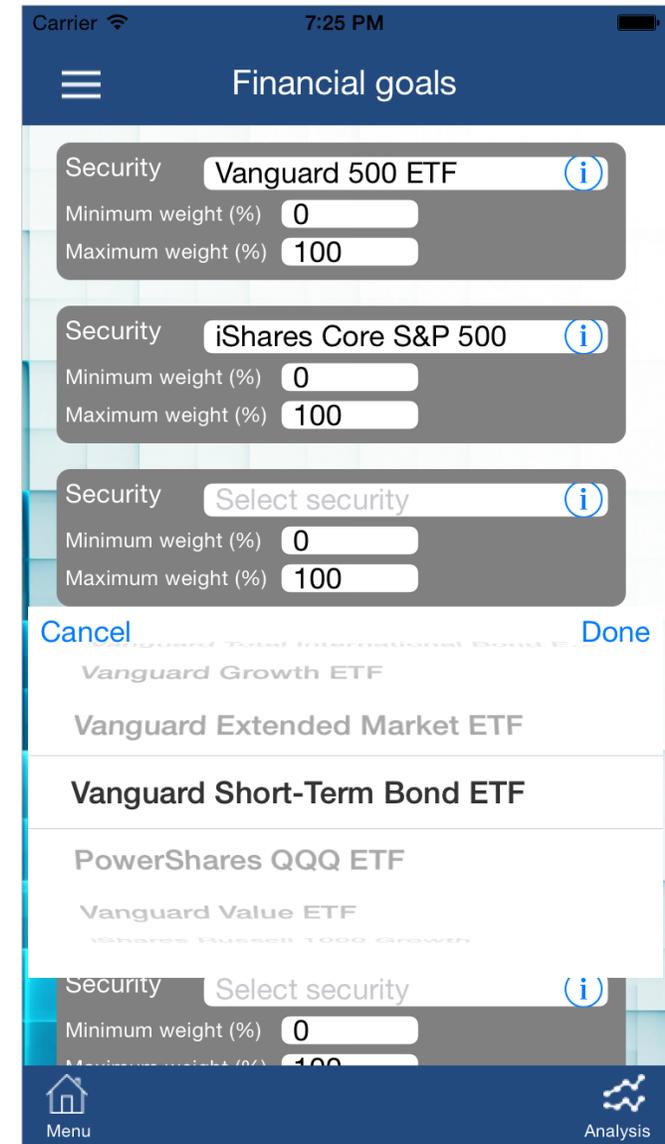
Intuitive user-friendly interface
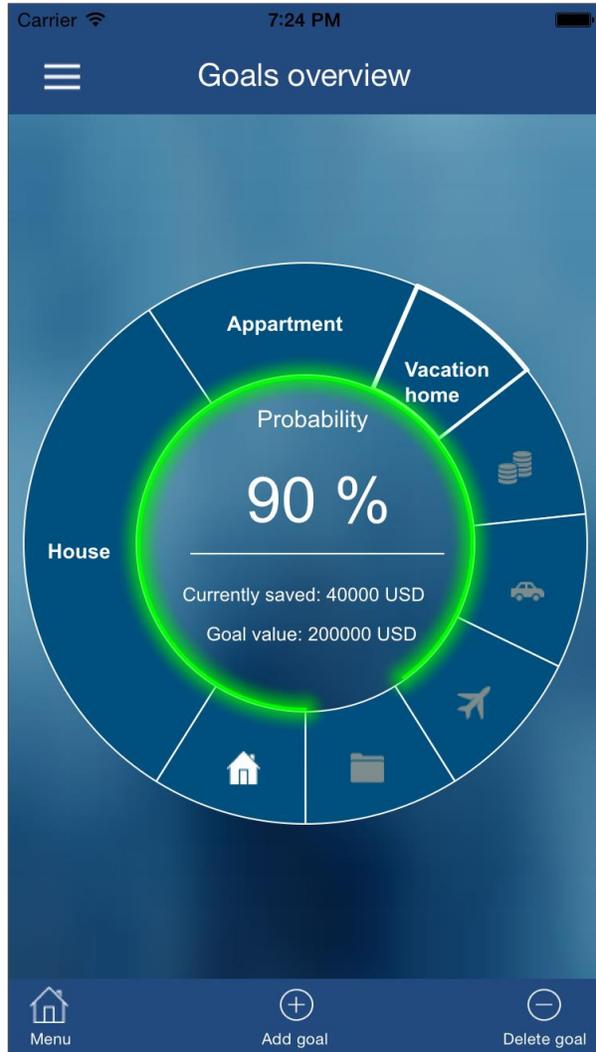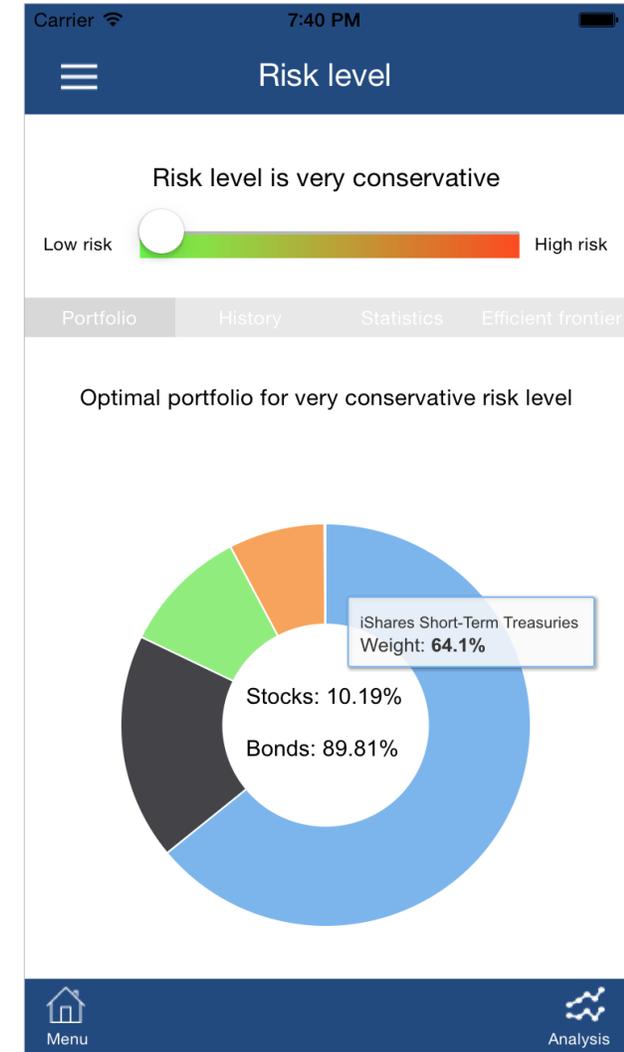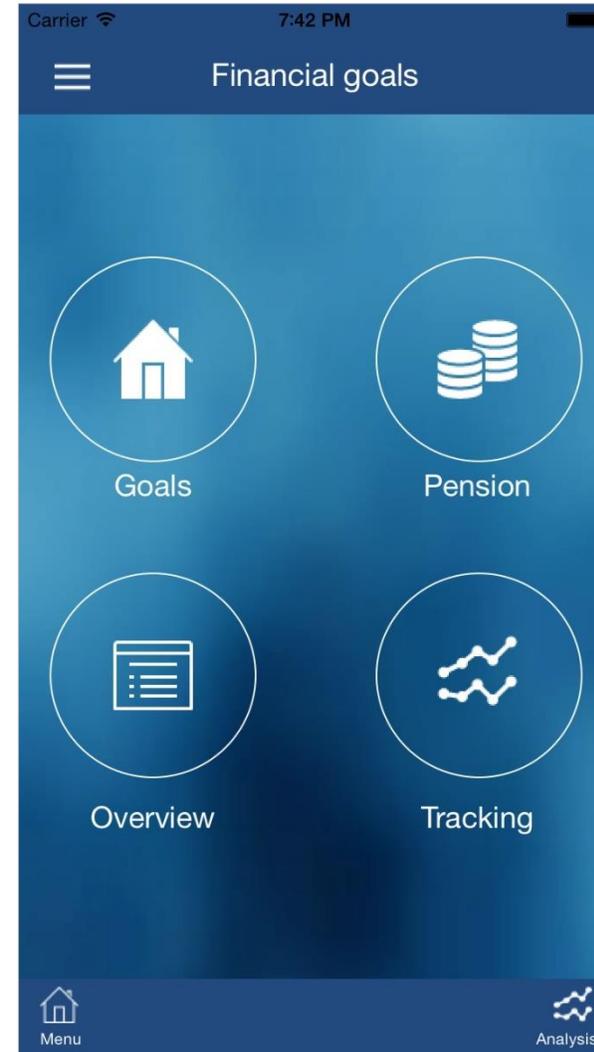
Use of deep learning and AiVA

Deep learning

- We use deep learning for automating search for optimal parameters in backtesting results with multidimensional manifolds.

- Example for dynamic fund of funds allocation. Grey points are set of backtesting results with the 20% highest Sharpe ratios. Picture is a 2D view of a particular plane from 3D structure with train and test results merged in final view.

Search for optimal parameters for dynamic allocation
(Accuracy of learning / testing: 98.9% / 98.9%)
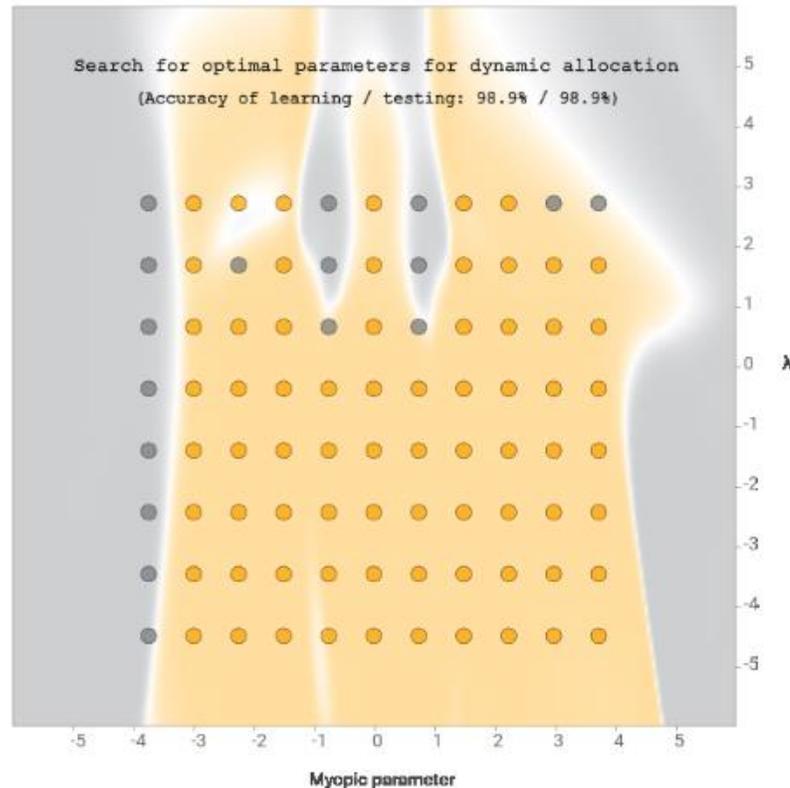
AiVA - Artificially Intelligent Wealth Assistant

● AiVA is a specialized digital assistant which uses voice recognition, face detection, text-to-speech (TTS) and deep learning RNN on Big Data to help human financial advisors in their everyday work

● Tasks that financial advisors can request from AiVA:

- Prepare a report about client from CRM and backoffice data

- Use deep learning RNNs trained on clients data (descriptive, inflows, outflows, past meetings) to generate lists of clients ranked in terms of their potential

- Management of calling and meeting clients

- Use of RNNs for marketing budgeting

- Advisors can ask AiVA for information which would otherwise require statistical analysis and searches in databases

Interface for interaction with AiVA

Alpha Quantum

Quantitative. Innovative. Artifically Intelligent. Researched. Alpha.

The Alpha Quantum Way.

Our solutions

Alpha Wealth Robo Advisor, Specialised Digital Assistants, Portfolio Optimiser, Risk Management, Quantamental, News Analytics

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