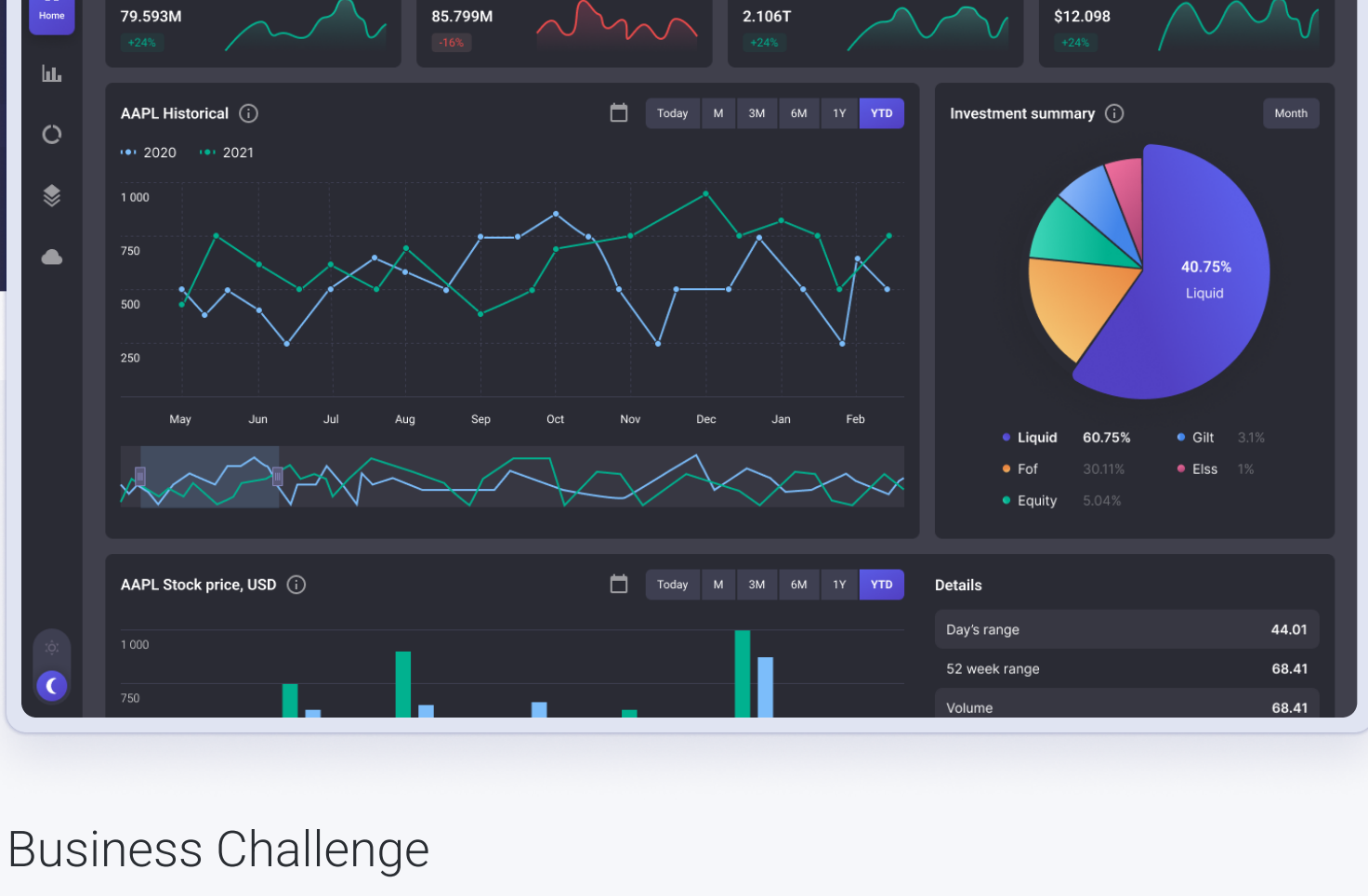


## Rate Management System

A complex currency exchange rate management system that is used for tracking stock and currency rates in real-time with a smart notification system for efficient management of clients' orders. The interactive tool for stock data visualization provides searching for new opportunities by analyzing and dynamic scanning of numerous markets.



## Business Challenge

An onrush of information technologies has moved the stock markets closer to investors. Nowadays, everyone can find detailed financial data of listed companies online, usually for free. Online brokers have made the process of stock trading simpler and more inexpensive. However, you need not only to be aware of some of the market characteristics but to be a master of robust and scaling trading solutions and apps to manage your investments effectively. Traders need sophisticated and comprehensive financial data visualization software to better analyze the market situation.

The client requested to develop an interactive, complex, real-time stock rate management system that allows users to implement accurate technical analysis and displays live market data on currencies, options, equities and futures in a web-browser. The main feature of the stock market data visualization app is to help traders to build an efficient trading strategy for future steps.

## Solution

Our web development team was asked to build a robust and scaling rate management system to allow users to trade in real-time. The customer needed a solution for visualizing live complex market data. The system should handle constant traffic of large financial data streams with a range of plugins to serve each individual purpose.

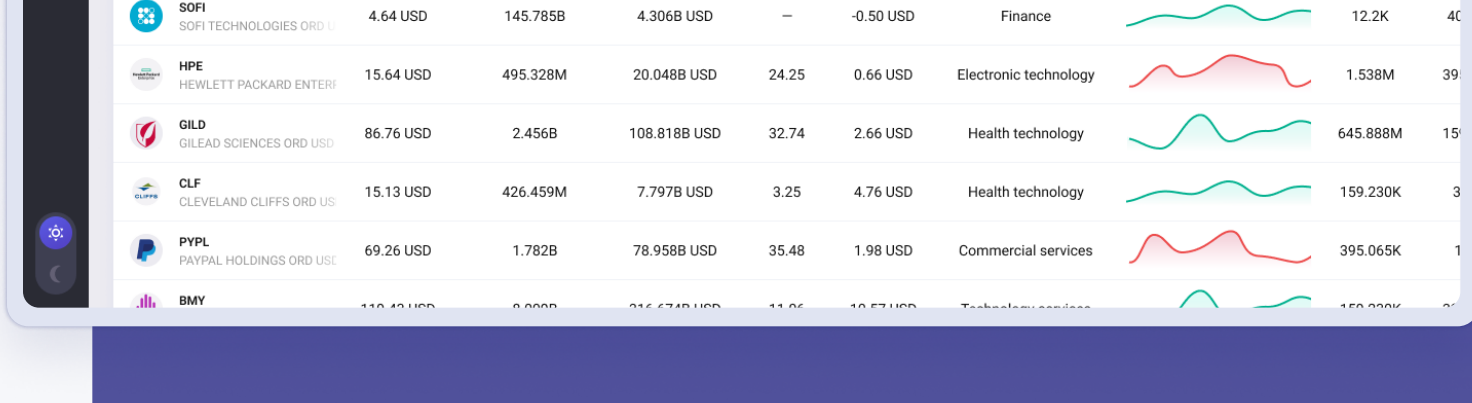
The frontend of the financial charting software was implemented using React.JS development. The backend of the system was built using Node.js and MySQL.

To structure and visualize a huge amount of data, our team used different libraries, such as WebSockets, Backbone.js, HighCharts library, and React.js. The system provides support for tablets and dozen types of data visualization styles: Line, Bar, Candlestick, OHLC and etc.

The feature of implementation as a single-page application helped to operate with data promptly.

The financial charting software uses Apache Solr search platforms which make series fully indexed and capable of being computationally searched. The system facilitates fast data search by any key-values in the indexed documents. The data are indexed by SolrJ.

PayPal technology was implemented to provide stable and secure payments for users of the app.

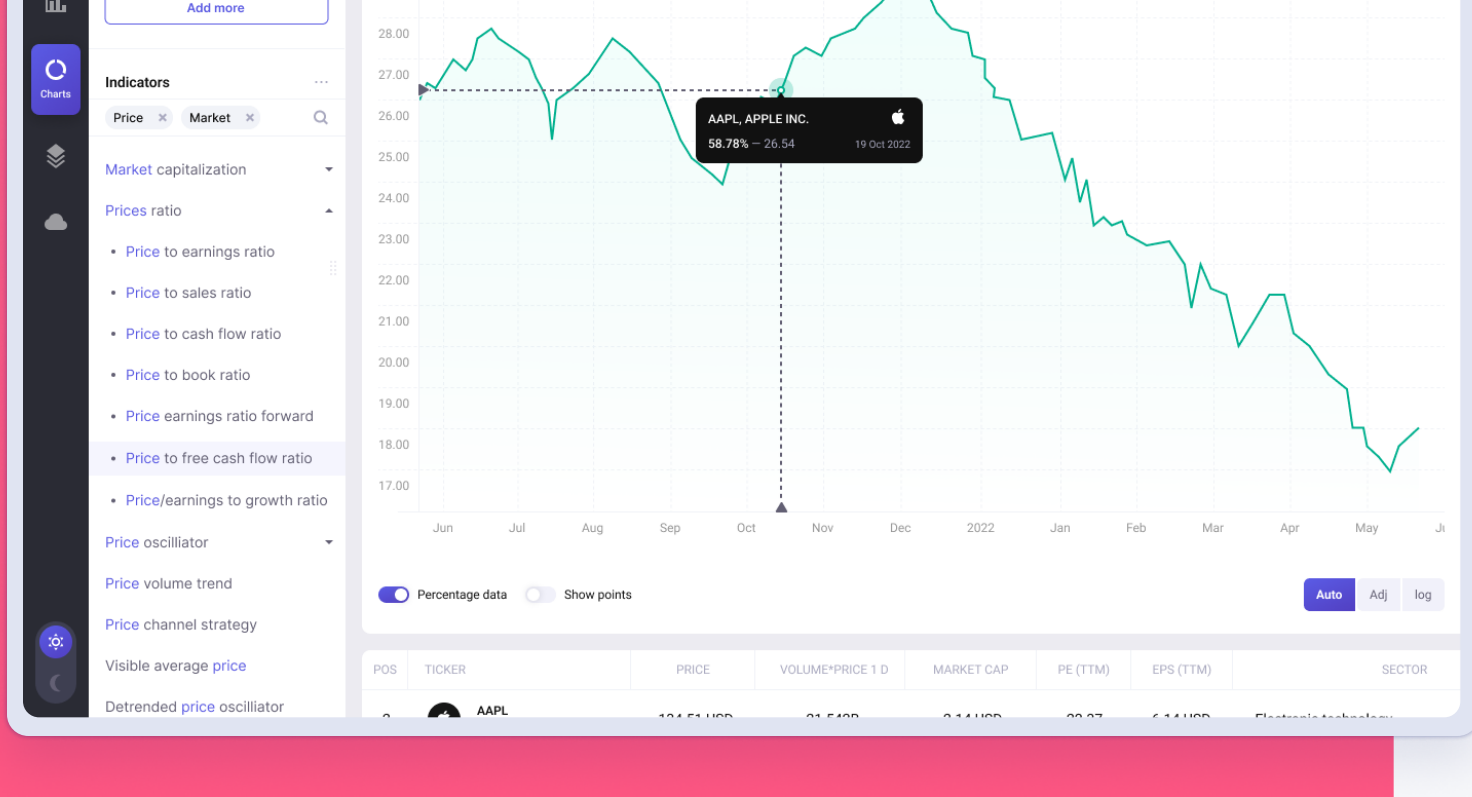


| TICKER | PRICE      | VOLUME*PRICE 1 D | MARKET CAP   | PE (T/M) | EPS (T/M) | SECTOR                | RATING LINE | VOL 1D   | EM |
|--------|------------|------------------|--------------|----------|-----------|-----------------------|-------------|----------|----|
| AAPL   | 134.51 USD | 21.542B          | 2.14 USD     | 22.37    | 6.14 USD  | Electronic technology |             | 1.548M   | 30 |
| AMZN   | 87.86 USD  | 12.84B           | 896 USD      | 81.22    | 1.11 USD  | Retail trade          |             | 4.9M     | 4  |
| MSFT   | 244.69 USD | 21.068B          | 1.824T USD   | 26.83    | 9.33 USD  | Technology services   |             | 159.230K | 7  |
| LUMN   | 5.41 USD   | 454.316M         | 5.597B USD   | 2.72     | 2.01 USD  | Communications        |             | 12.2K    | 1  |
| INTC   | 5.41 USD   | 2.183B           | 111.099B USD | 8.38     | 3.26 USD  | Electronic technology |             | 14.9M    | 3  |
| META   | 119.43 USD | 8.009B           | 316.674B USD | 11.06    | 10.57 USD | Technology services   |             | 4.9M     | 2  |
| CSX    | 31.65 USD  | 1.075B           | 66.541B USD  | 16.90    | 1.88 USD  | Technology services   |             | 395.065K | 15 |
| SOFI   | 4.64 USD   | 145.785B         | 4.306B USD   | -        | -0.50 USD | Finance               |             | 12.2K    | 40 |
| HPE    | 15.64 USD  | 495.328M         | 20.048B USD  | 24.25    | 0.66 USD  | Electronic technology |             | 1.538M   | 39 |
| GILD   | 86.76 USD  | 2.456B           | 108.818B USD | 32.74    | 2.66 USD  | Health technology     |             | 645.888M | 15 |
| CLF    | 15.13 USD  | 426.459M         | 7.797B USD   | 3.25     | 4.76 USD  | Health technology     |             | 159.230K | 3  |
| PYPL   | 69.26 USD  | 1.782B           | 78.958B USD  | 35.48    | 1.98 USD  | Commercial services   |             | 395.065K | 1  |
| BMV    | 4.65 USD   | 8.000B           | 34.674B USD  | 11.06    | 0.66 USD  | Commercial services   |             | 395.065K | 1  |

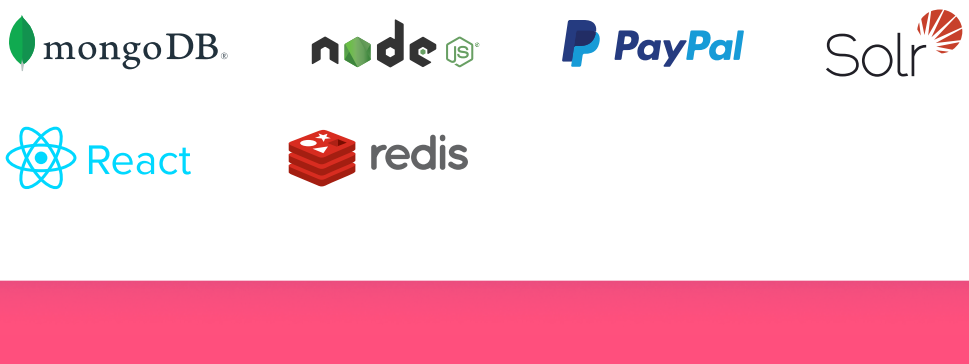
## Project in Figures


**10**  
Months  
Duration


**3200**  
Estimated  
man-hours



## Applied Technologies



## Result

XB Software team developed an interactive and complex exchange rate management system that allows users to create their own indicators using personal criteria of scanning and ordering numerous statistical data and indexes in real time. The rate management system allows searching and scanning of predefined and custom conditions of the market.

The analytical research shows that such indicators as:

- ✓ the number of users and visitors increased by 17,8 %
- ✓ avg.session duration increased by 237,1%
- ✓ bounce rate improved by 32%

## Customer

A US investment company with headquarter in New-York. It provides multi-asset solutions for its clients.

**Your questions and requests are always welcome!**