Verification

Back-testing
Simulation
Real trading

Deep Data

Statistics
Econometrics
Machine learning

Data collection

Price data
Fundamental data
Other data

Deep data

- Moat Indicator
- Change Indicator of earnings expectation
- Investment Rating Change Indicator
- High frequency shift Indicator
- Industry Valuation Indicator...

Investment research platform

- What is going on in the market?
- Which industries deserve attention?
- How do I trade?
- How to control my risk?

Intelligent investment App

- Excellent stock investment strategy
- Real-time trading signal
- Multi-platform synchronous push

HengTian

Status quo of China stock market
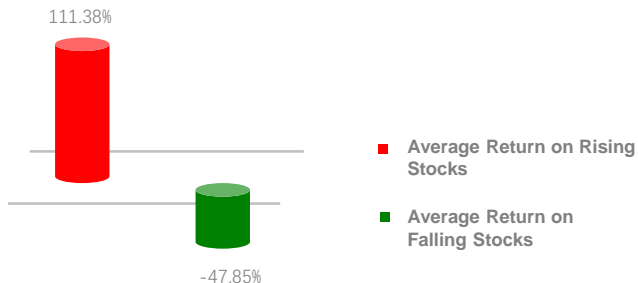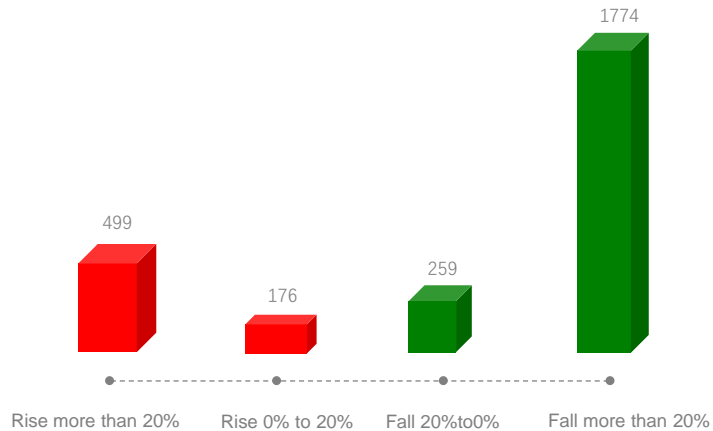
❖ The number of stocks keeps increasing.

❖ The proportion of rising stocks is getting lower.

❖ The price trends of different stocks become divergent.
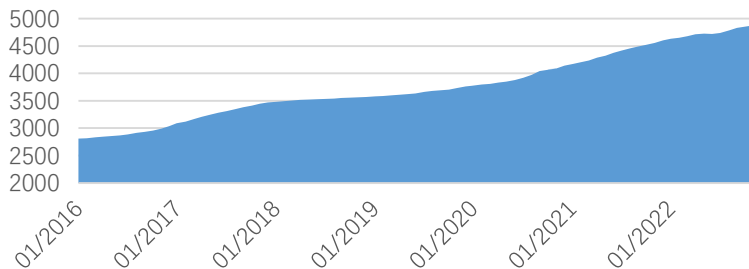
The number of stocks in China keeps expanding

Quant-trading will gain distinct advantage over traditional trading in China
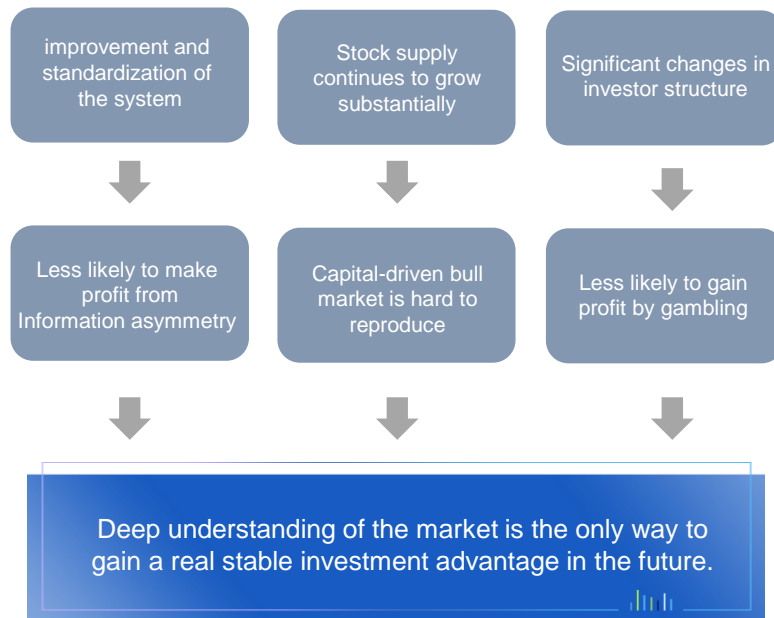
The Rise and Fall Distribution of A Shares in China (2016 - 2022)

499

176

259

1774

Rise more than 20%   Rise 0% to 20%   Fall 20%to0%   Fall more than 20%

111.38%

-47.85%

■ Average Return on Rising Stocks
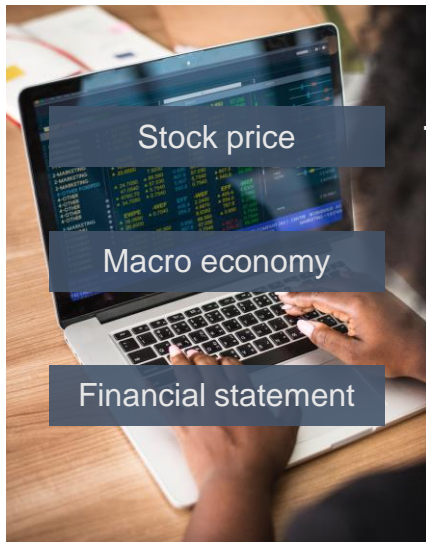
■ Average Return on Falling Stocks
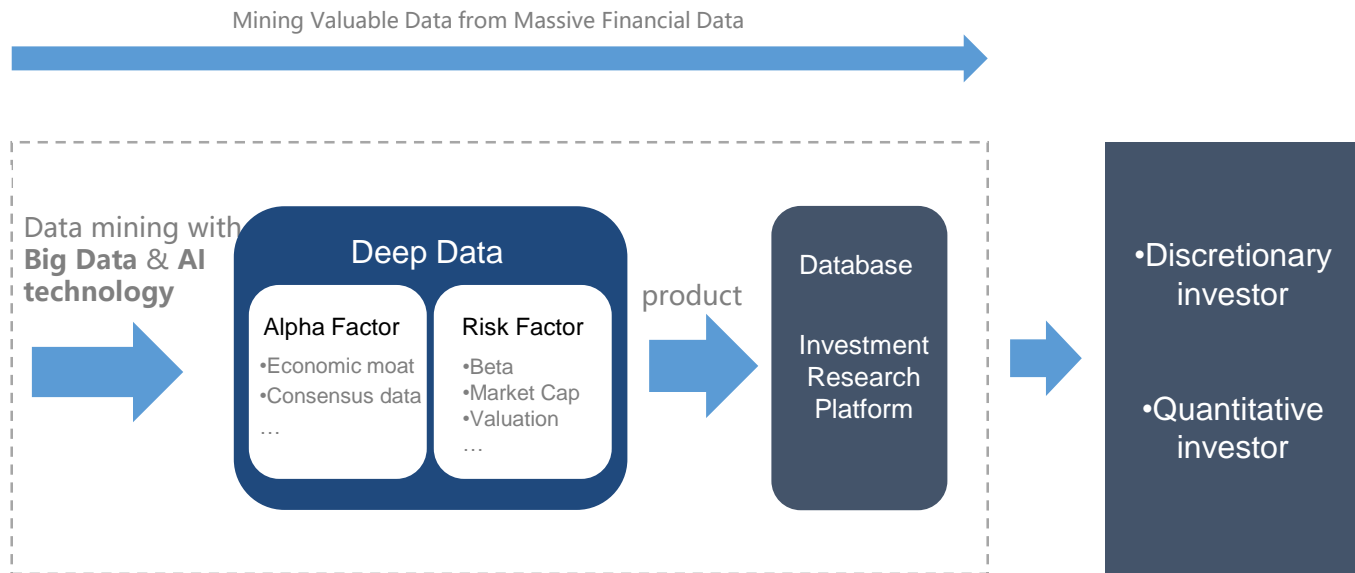
What is deep data?

Deep data is based on rigorous economic theory or financial model. After screening, cleaning, transforming and synthesizing the basic data, the final data indicators which can predict the stock price, industry development and macro-evolution of a company are formed.

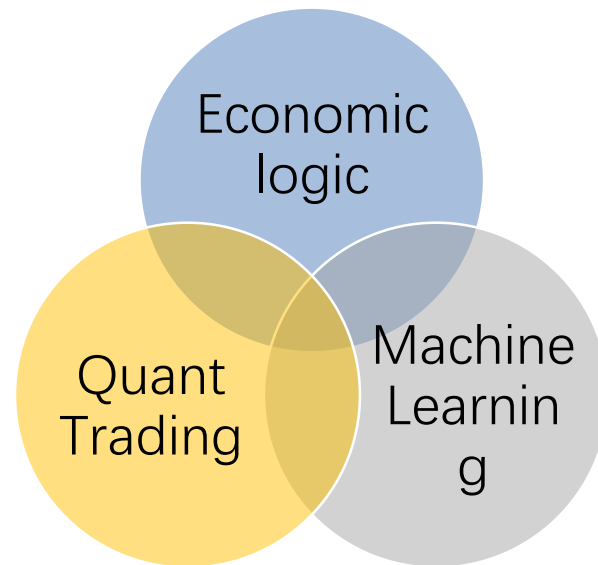**Deep data is a deep understanding and accurate insight into the market.**

improvement and standardization of the system	Stock supply continues to grow substantially	Significant changes in investor structure
Less likely to make profit from Information asymmetry	Capital-driven bull market is hard to reproduce	Less likely to gain profit by gambling

Deep understanding of the market is the only way to gain a real stable investment advantage in the future.

Mining Valuable Data from Massive Financial Data

Stock price

Macro economy

Financial statement

Financial Information

Data mining with **Big Data** & **AI technology**

Deep Data

Alpha Factor
- Economic moat
- Consensus data
...

Risk Factor
- Beta
- Market Cap
- Valuation
...

product

Database

Investment Research Platform

- Discretionary investor

- Quantitative investor

How do we produce profitable Deep Data

❖ Inspired by solid Economic/Psychological facts

❖ Digging alpha with Quant-trading technology

❖ Optimizing factors with machine-learning algorithm

Economic logic

Quant Trading
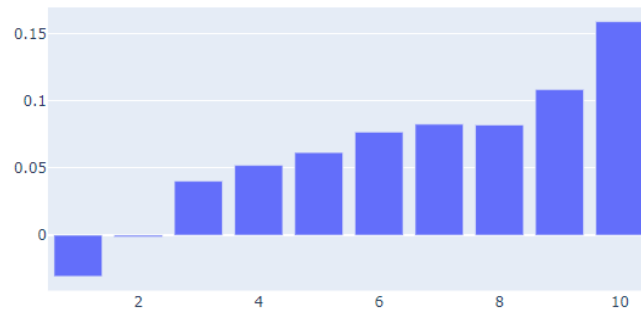
Machine Learning

The performance of stock expectation factor

Stocks are grouped into 10 portfolios according to their factor value.
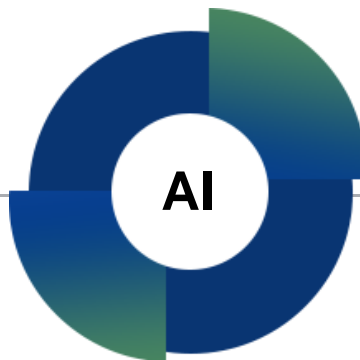The graph shows the return is highly relevant to the factor value.
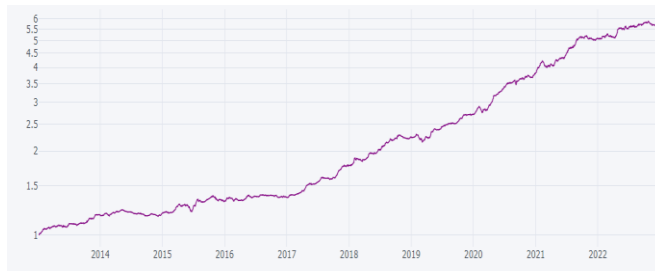
This graph shows the excess return of the group with highest
factor value against the group with lowest factor value.

Stock expectation factor

Facts

- Middle-term price of stocks is highly driven by investors' expectation, which is influenced by public information

- In China, non-professional investors contribute more trading volume, leads to a slower price reaction to important events

Factor producing

- Extract structural information from text data, e.g., financial statements, announcements, news.

- Inspect the Information Coefficient of the factor and optimize by conducting normalization/orthogonalization

Algorithm modeling

- Machine Learning/Deep
- Learning Algorithms
- Time series analysis
- Cross sectional regression
- Financial Model (DCF, CAPM...)

Data quality assurance

- Cross-checking of source data
- Multiplex Testing of Basic Indicators
- Strict Avoidance of Future Data Pollution
- Intelligent Data
- Noise Elimination…

AI

Big data processing

- Distributed Computing Architecture
- Cloud Resource Management and Allocation
- Thought of Embedded Incremental Computing
- Making Full Use of Parallel Ability...

Data dimension extension

- Mature Heterogeneous Data
- Aggregation Scheme
- Intelligent web crawler
- Unstructured Data Processing Technology
- NLP Algorithms...

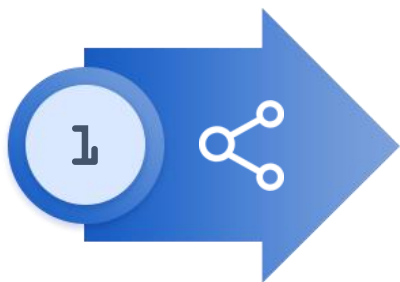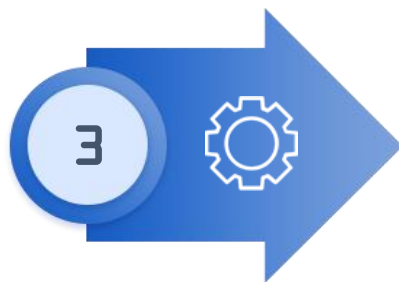**Factorizing Market Information from Text Data**
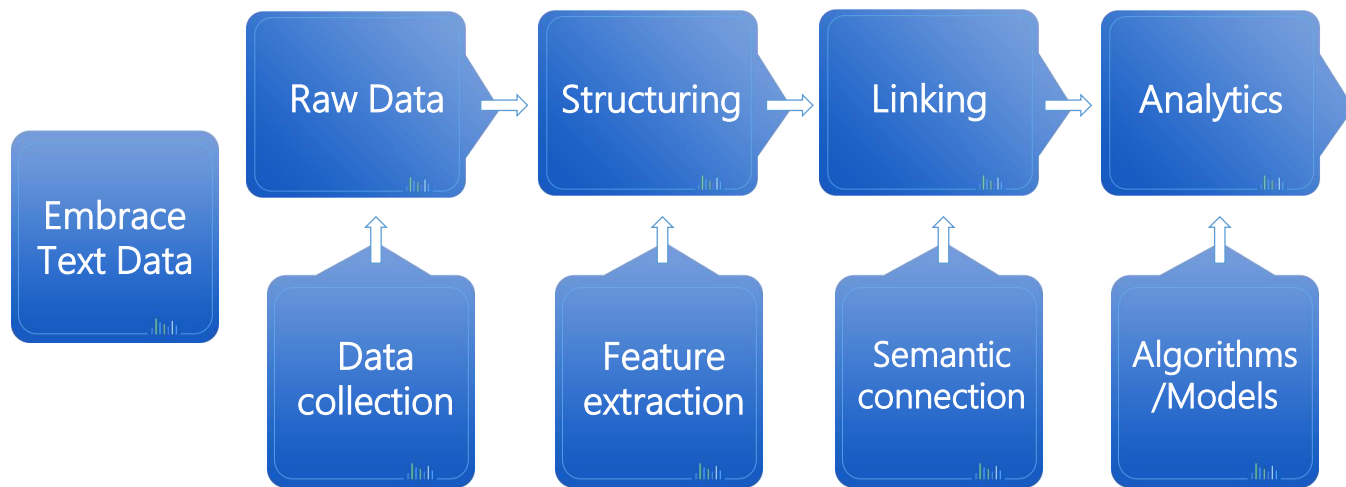
Technologies

Excess factor

- Stock expectation
- Economic moat
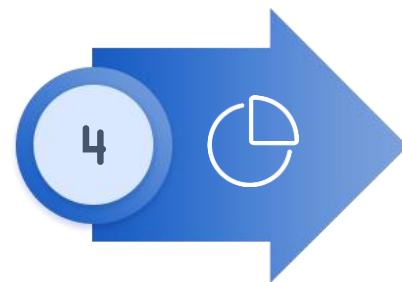- Rating change
  ......

Company

- Economic moat analysis
- Growth analysis
- Special risk
  ......

Industry

- Opportunity analysis
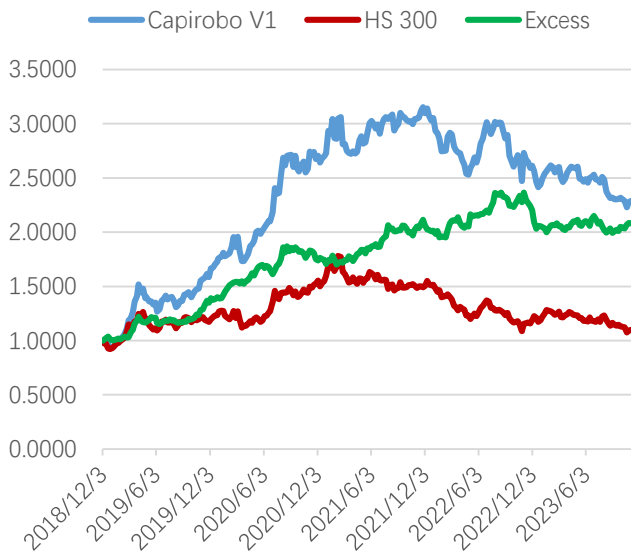- Valuation analysis
- Industry Convergence
- ......

Market

- Trend analysis
- Volume analysis
- Liquidity analysis
- ......

Version 1(Aggressive strategy)

Running time	Annualized return	Annualized Excess
4 years +	**18.15%**	**15.92%**

Version 2 (Balanced strategy)

Running time	Overall return	Overall Excess
2 years	**7.99%**	**46.33%**