

SMACOM Introduction

The AI integrated system, SMACOM supports prudent investor's accurate, faster investment decisions

NIKKEI FTRI

About the “Nikkei FTRI”

Nikkei Financial Technology Research Institute (Nikkei FTRI) is member of Nikkei which is biggest economic news and information provider in ASIA.

Client

Nikkei FTRI

Feature

No. of Financial Institution’s customers

80+

Establishment Since 1999
Capital Nikkei (100% Subsidiary)

Business

News Sentiment Analysis, Accounting Fraud Detection, Credit Scoring Model, Valuation, Risk Control Management, Related Consulting, etc.,

No. of products provided to clients

220+

Our Technologies

Most of our analysts have PhD or Master degree in statistics, physics, etc. All of them makes full use of SAS, Python and R.

Member of the “Nikkei”

Unrestricted access to Nikkei Group news and various economic/market data

Trustworthy

Nikkei FTRI is an official adviser for Risk Management Committee of Regional Bank Associations of Japan over 15 years

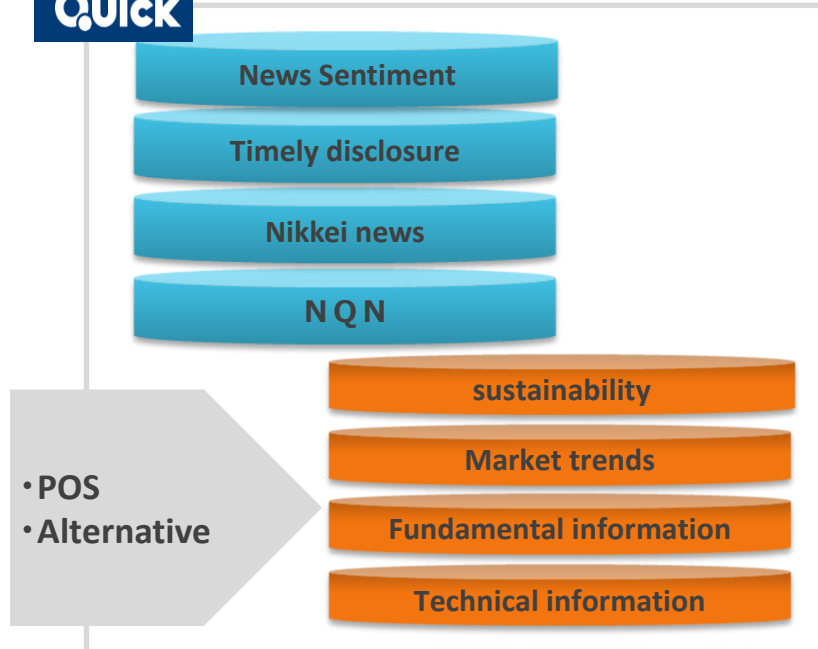
Our Studies

Many experts refer to our research in the area of Credit Risk Management, Text Analysis, Accounting Fraud Detection et

1. Seeking Alpha (Our Service: "SMACOM")

Nikkei FTRI has provided news sentiment score to various investment bank and hedge funds. They all use our information for seeking alpha in capital market.

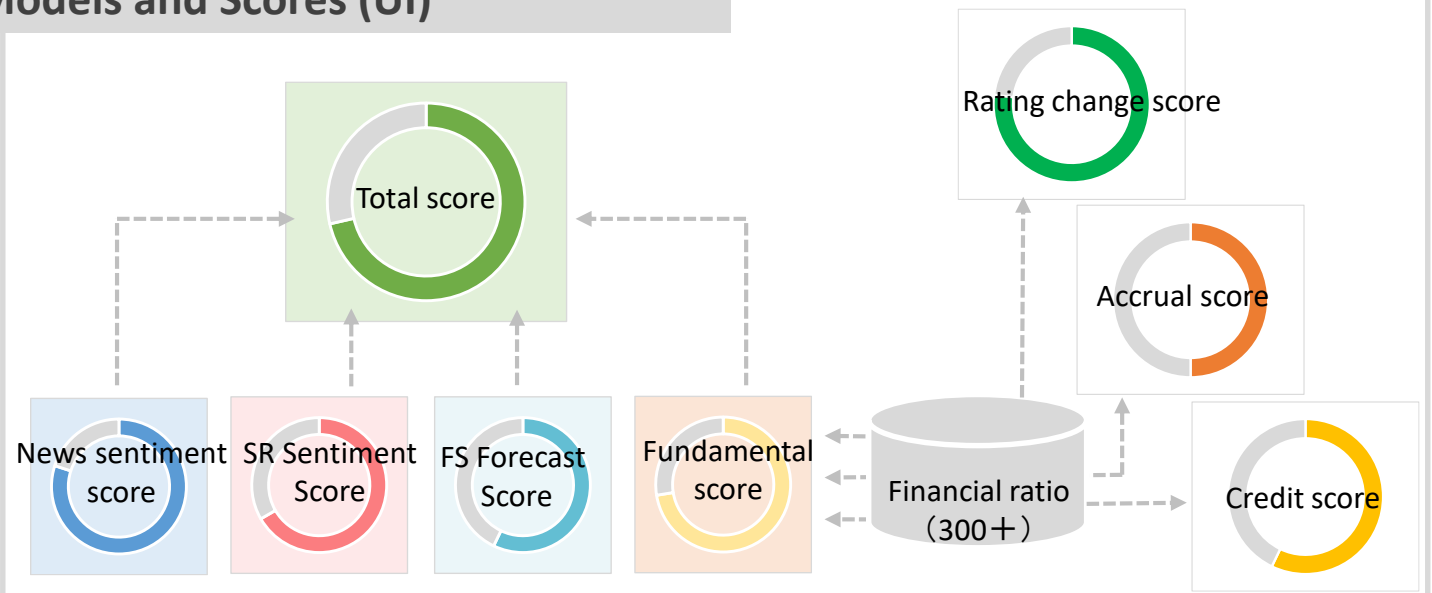
Quick



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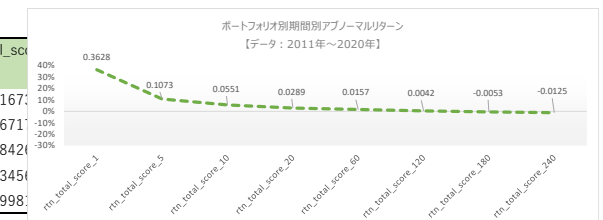
- Financial/Market information
- Credit/Rating/Accrual information
- Text analysis of annual report

Models and Scores (UI)



Data and back test results

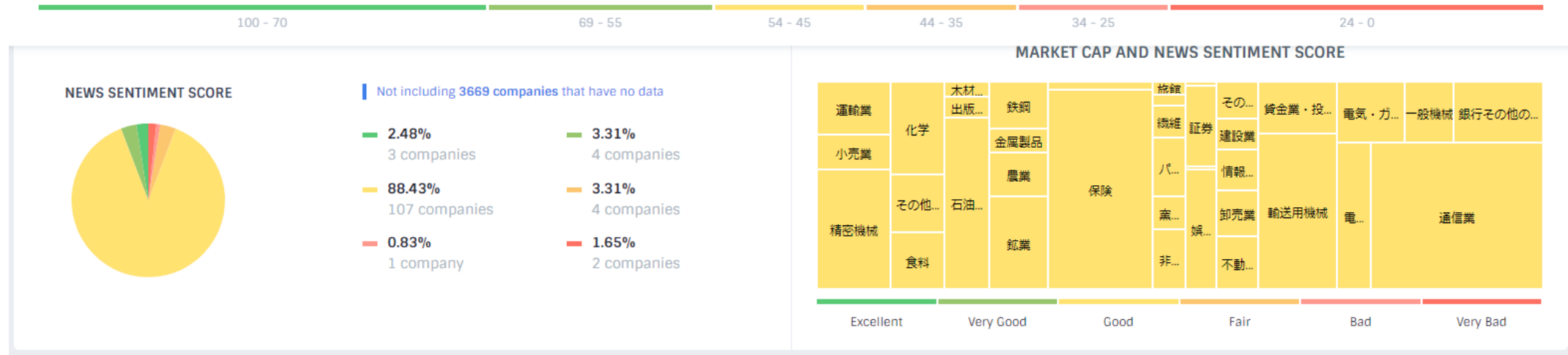
rank_total_score1	year	rtn_total_score 1_1	rtn_total_score 1_5	rtn_total_score 1_10	rtn_total_score 1_20	rtn_total_score 1_60	rtn_total_score 1_120
1 .		0.247174582	0.139925295	0.121241529	0.108303373	0.094522817	0.076167
2 .		0.168811123	0.114254607	0.099647505	0.095383248	0.088503182	0.085671
3 .		0.085376185	0.086204939	0.083067574	0.080677941	0.079443426	0.075842
4 .		0.056593069	0.077630458	0.079111887	0.077475833	0.067907079	0.066345
5 .		-0.115582327	0.032611643	0.066156641	0.07945248	0.078779543	0.071998



2. Models and scores

	JAPAN (Listed company)		Foreign 50 countries (Listed company)	
	Business Corporation	Financial Institutions	Business Corporation	Financial Institutions
Total Score	The best combination of fundamental, SR Sentiment, FS Forecast and news sentiment scores		The best combination of fundamental and news sentiment scores	
Fundamental Score	Logistic regression with return as the dependent variable		Logistic regression with return as the dependent variable	
SR Sentiment Score	Logistic regression with return as the dependent variable		—	
FS Forecast Score	Logistic regression with return as the dependent variable	—	—	
News Sentiment Score	Neural network for estimating news sentiment(ALBERT)		SVM for estimating news sentiment	
Credit Score	Logistic regression for estimating default (including Merton type variables)		Logistic regression for estimating default (including Merton type variables)	
Accrual Score	Logistic regression for estimating accounting fraud	—	M-Score(beneish,1998) F-Score(Dechow et al,2011)	—
Rating Change Score	Logistic regression for estimating rating change		—	

3 – 1 . Score's Details : News Sentiment Score

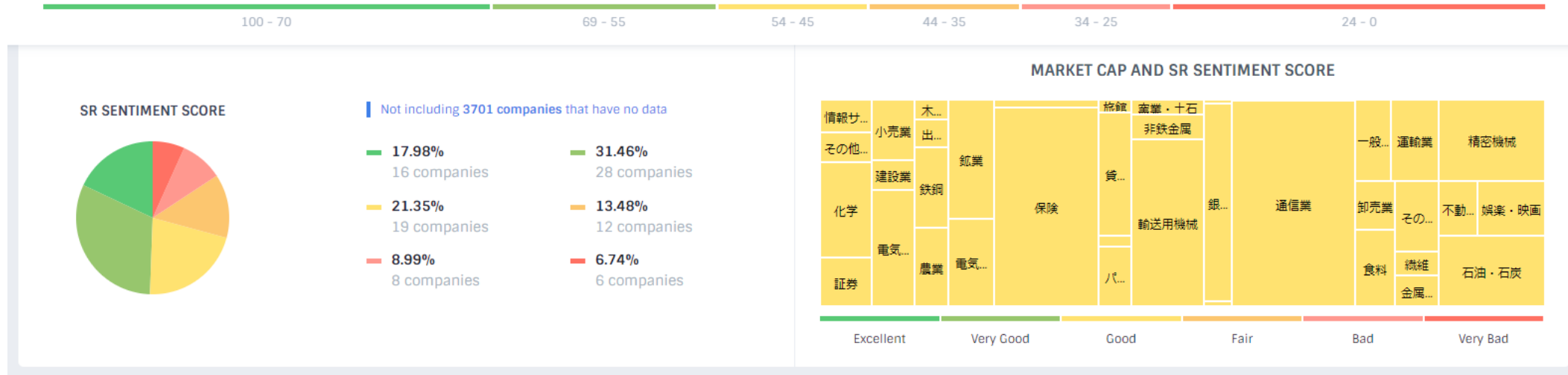


News Sentiment Score

News Sentiment Score from a AI_NLP model which calculates score from news. When the news is good for the company's stock price, it's close to 100 and when it's negative, close to Zero.

Our Japanese analysts actually read/tag news and make training data for improving its quality. (Target: One day to One month)

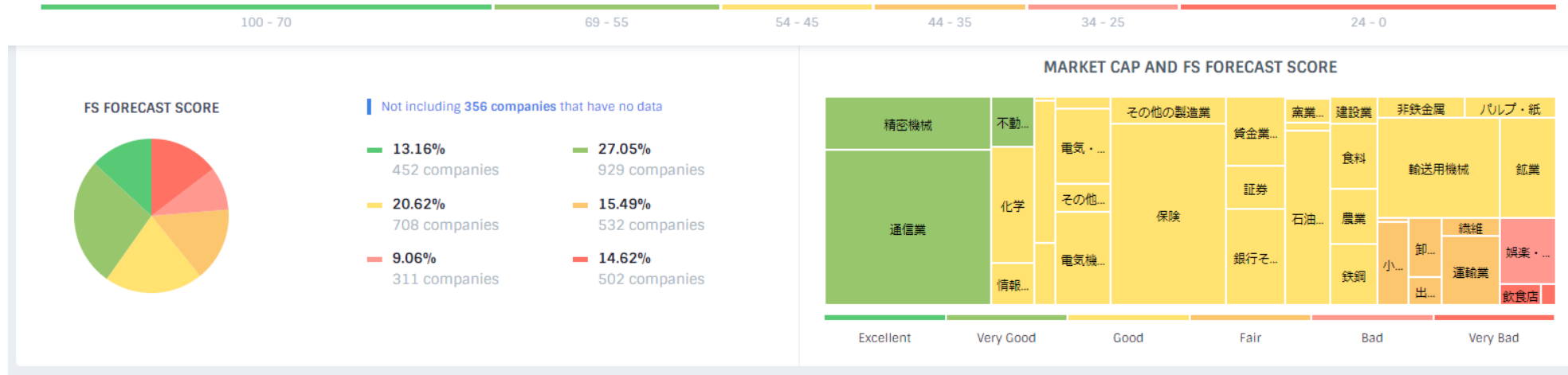
3 – 2. Score's Details : SR Sentiment Score



SR(Securities Report) Sentiment Score

SR (Securities Report) Sentiment Score is the score derived from a security report (= 10K) disclosed by a company. The score mainly evaluates its readability and variety of vocabulary. Main information comes from "Management Analysis of Financial Condition, Results of Operations and Cash Flows" of "Business Overview" in the Annual Securities Report using Natural Language Processing. Adapting NLP technics on a securities reports which disclosed by listed company. Our SR sentiment score performs well in long term alpha through back testing. (Target: One year)

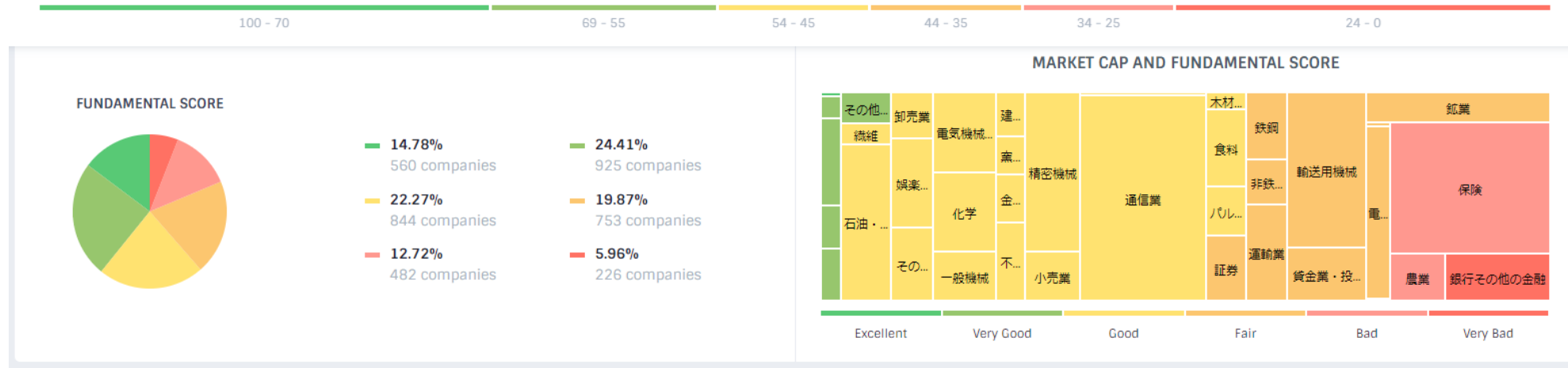
3 – 3. Score's Details : FS Forecast Score



FS(Financial Statement) Forecast Score

Each listed companies' Financial Statement are forecasted using Nikkei FTRI's FS forecasting simulator "AERIS". AERIS is actually used by many banks for stress testing purpose and portfolio simulation. (Target: One year)

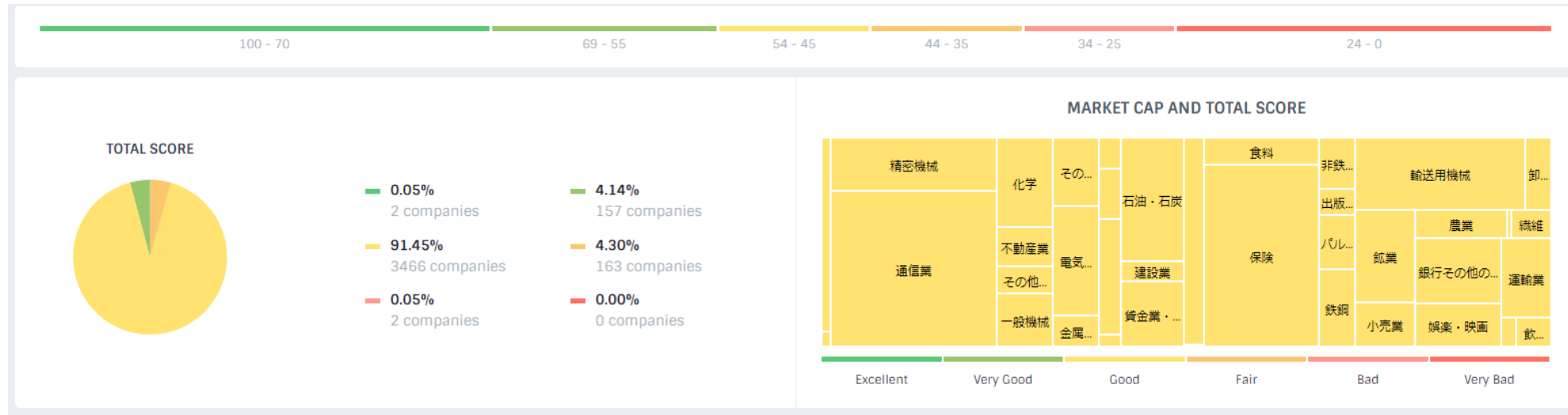
3 – 4. Score's Details : Fundamental score



Fundamental Score

Fundamental Score is calculated from financial information of the company such as FCF and ROA. The score is selected from its uniqueness which are uncorrelated with the Fama and French Three Factors, in terms of making more alpha. (Target: One year)

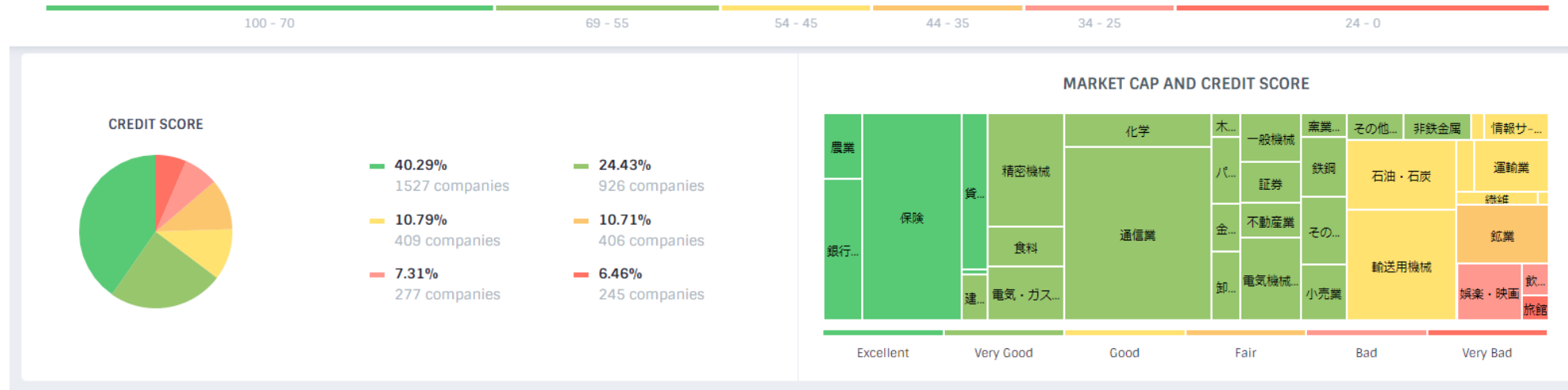
3 – 5. Score's Details : Total Score



Total Score

Total Score is aggregated score which aims to evaluate company's intrinsic value by using SMACOM output (from 1.to 4. scores) as input variables. (Target: One day to One year)

3 – 6. Score's Details : Credit Score



Credit Score

Credit Score calculates probability of default that a company could be in solvency in less than one year. For developing the credit scoring model, we used our unique default database which is exclusively collected and made by Nikkei FTRI. (Target: One year)

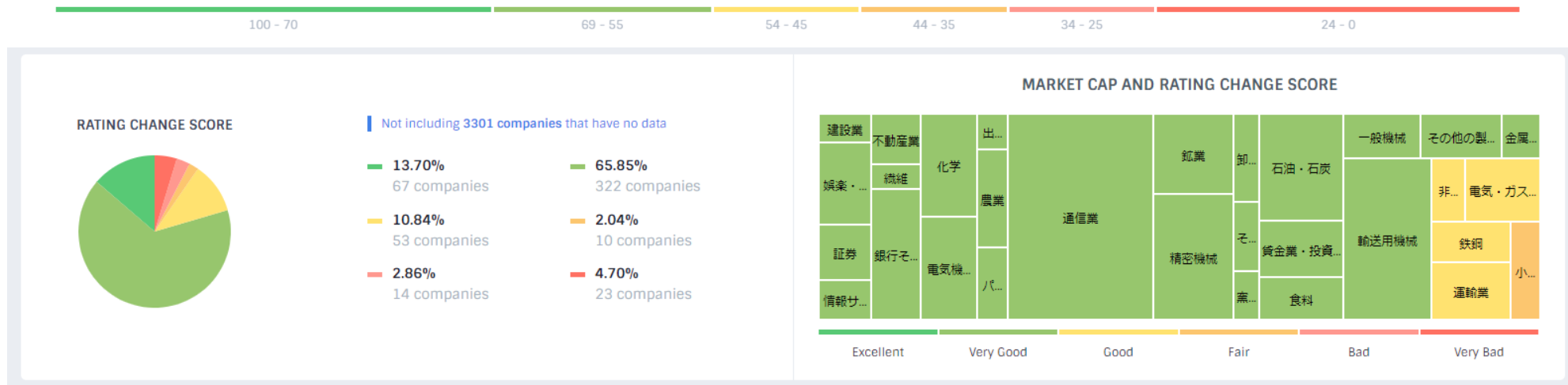
3 – 7. Score's Details : Accrual Score



Accrual Score

Accrual Score evaluates quality of accounting information disclosed by company. When the score is high, it means the company's accounting information such as asset, sales, profit, etc. could be manipulated or less trustworthy. (Target: NA)

3 – 8. Score's Details : Rating Change Score



Rating Change Score

Rating Change Score estimates probability of changing Credit Rating of a company that have a credit rating from credit rating agency. (Target: 3M, 6M, 1Y)

4. Data

Past 5 year's Back testing data is available for trial/evaluation purpose. Please feel free to ask us if you interested in its data. For developing own firm's model and trading algorism, SMACOM also could provide various detailed data such as explanatory variables and ratios used in its models.

Data distribution

Download
from UX

Providing CSV
file

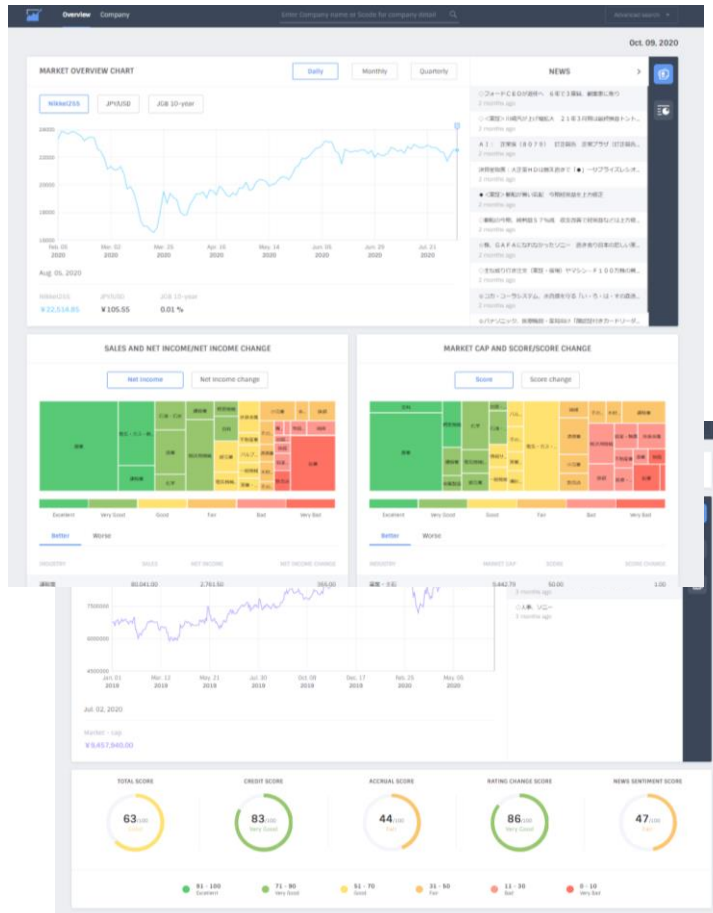
Provided by
API

attributes									Scores					Returns				
Portfolio rank	date	Country code	Ticker	Name	Fiscal year	classification	Industry	Industry name	Total score	Credit score	Accrual score	Rating change	News score	1day	5day	...	240day	
1	20200925	JP	0000-JP	ABCD1	202006	60	15	Agriculture/Forestry/Fishing	80	90	50	70	90	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD2	202006	10	8	Mining	77	100	56	80	80	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD3	202006	60	19	Construction	68	70	60	50	78	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD4	202006	60	14	Manufacturing	70	80	52	77	80	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD5	202006	10	50	Transportation/Communications/Elec	66	50	64	66	77	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD6	202006	60	34	Wholesale Trade	90	77	80	80	68	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD7	202006	30	8	Retail Trade	80	60	78	80	70	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD8	202006	60	68	Finance/Insurance/Real Estate	78	80	63	71	78	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD9	202006	60	43	Services	70	71	50	78	73	00.00	00.00	...	00.00	
1	20200925	JP	0000-JP	ABCD10	202006	10	8	Retail Trade	73	65	45	80	71	00.00	00.00	...	00.00	
...	
2	20200925	JP	0000-JP	ABCD100	202006	60	15	Agriculture/Forestry/Fishing	56	60	50	58	80	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD101	202006	10	8	Mining	59	71	45	60	60	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD102	202006	60	19	Construction	63	65	60	56	55	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD103	202006	60	14	Manufacturing	58	60	52	60	40	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD104	202006	20	50	Transportation/Communications/Elec	65	55	70	64	95	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD105	202006	60	34	Wholesale Trade	60	59	42	62	45	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD106	202006	30	8	Retail Trade	61	60	63	56	60	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD107	202006	60	68	Finance/Insurance/Real Estate	59	54	57	45	80	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD108	202006	60	43	Services	65	62	50	50	32	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD109	202006	10	8	Retail Trade	58	52	60	51	50	00.00	00.00	...	00.00	
2	20200925	JP	0000-JP	ABCD110	202006	60	8	Mining	60	45	55	55	66	00.00	00.00	...	00.00	
...	
...	
5	20200925	JP	0000-JP	ABCD401	202006	60	15	Agriculture/Forestry/Fishing	39	45	61	54	39	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD402	202006	60	8	Mining	30	28	50	35	45	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD403	202006	10	19	Construction	22	30	44	41	50	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD404	202006	60	14	Manufacturing	26	50	59	28	28	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD405	202006	20	50	Transportation/Communications/Elec	38	49	23	39	40	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD406	202006	60	34	Wholesale Trade	11	55	10	50	30	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD407	202006	60	8	Retail Trade	29	60	36	23	41	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD408	202006	10	68	Finance/Insurance/Real Estate	30	37	30	41	35	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD409	202006	60	43	Services	38	22	55	37	50	00.00	00.00	...	00.00	
5	20200925	JP	0000-JP	ABCD410	202006	30	8	Retail Trade	33	30	40	42	60	00.00	00.00	...	00.00	

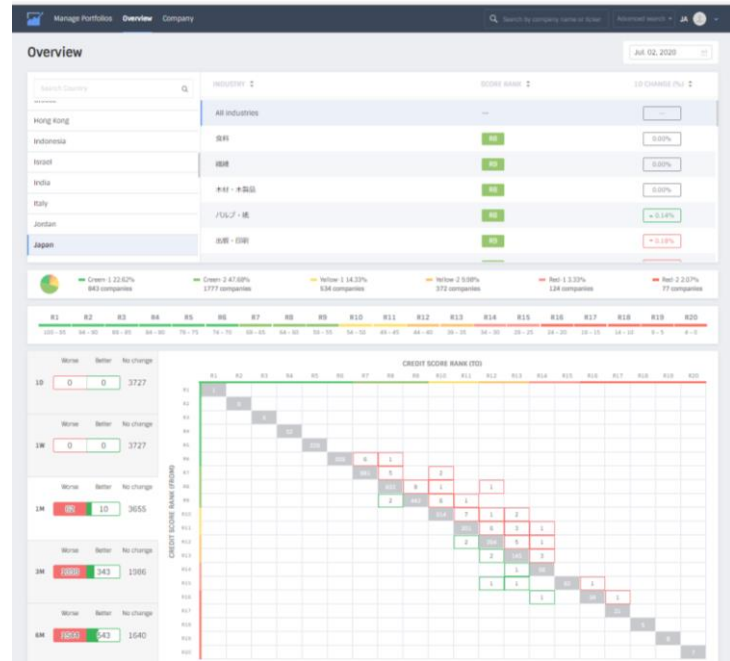
5. UIs

With SMACOM, you can check the trends and time-series trends of your portfolio by industry through advanced UI.

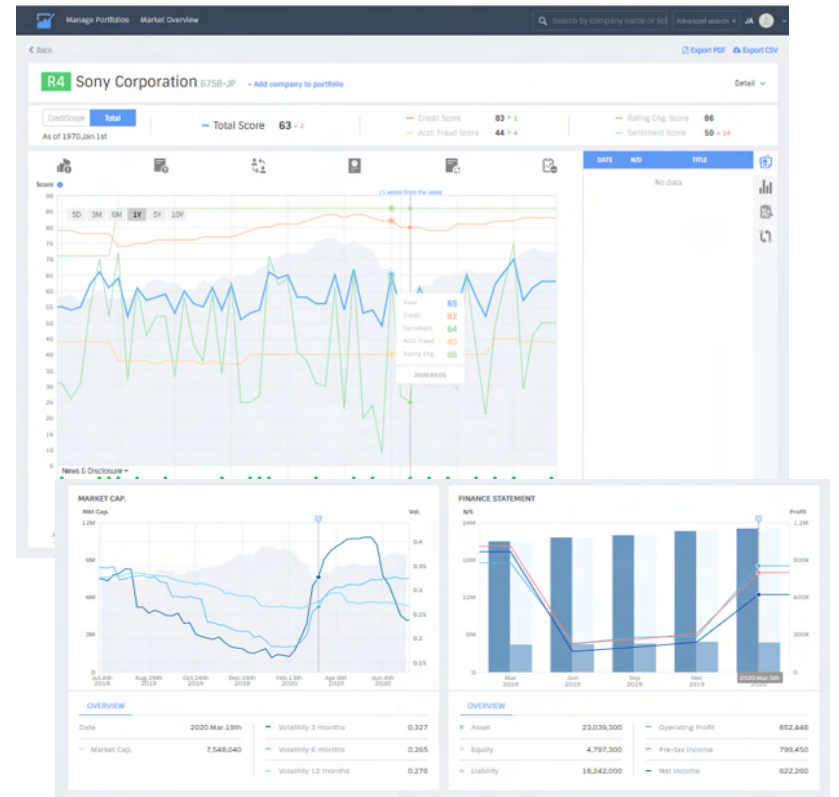
Daily trends for the market



Portfolio quality



Company characteristics



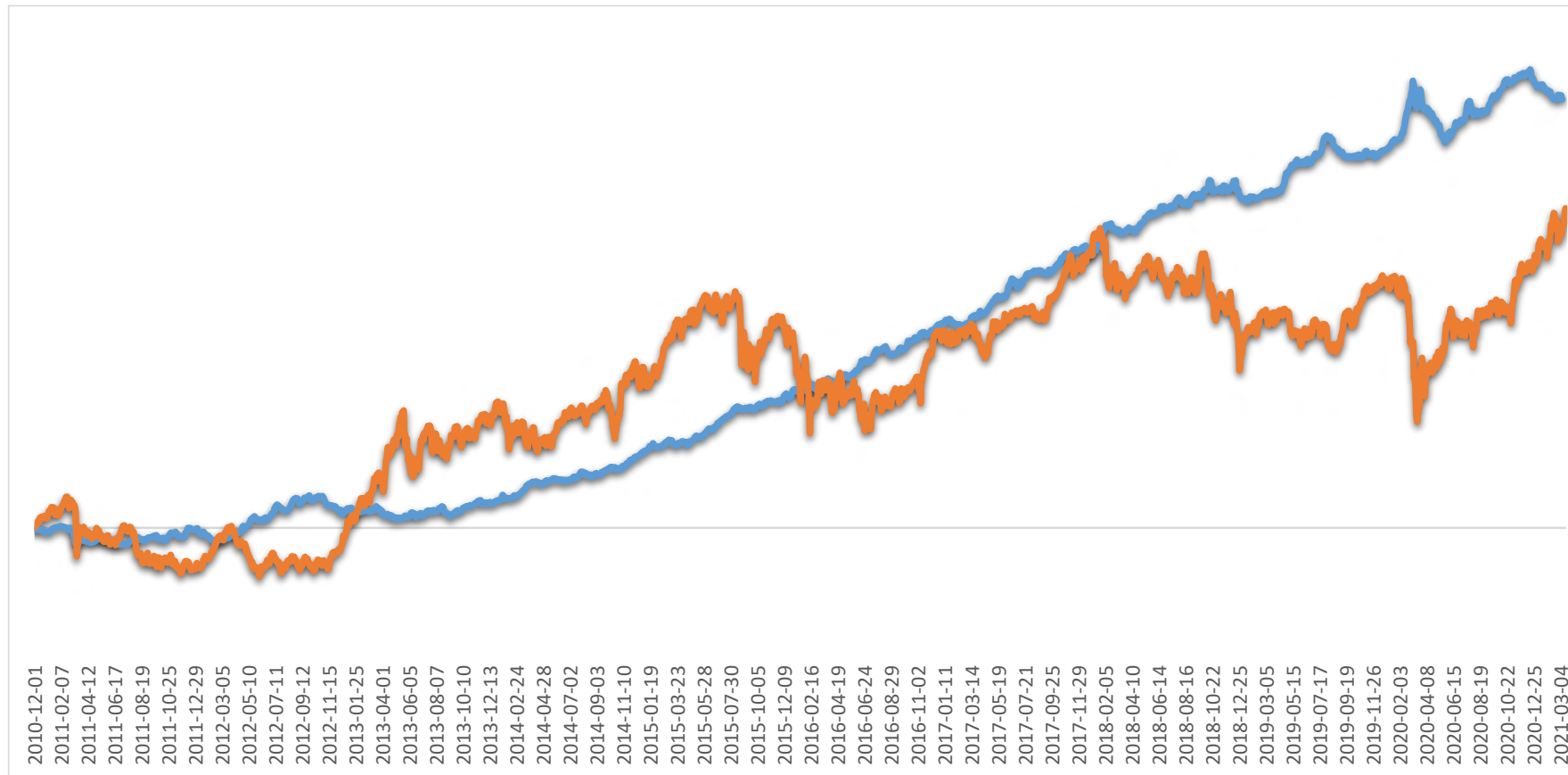
6. Performance(JAPAN Market) – Total Score

The performance of the Total Score, one of the scores delivered by SMACOM, can be evaluated using historical time series data as follows. We have used back data from March 2018 to March 2021. You are able to confirm that Total Score (Blue line) has outperformed over the long term against TOPIX (Orange line).



6. Performance(JAPAN Market) – News Sentiment Score

The performance of the News Sentiment Score from 2011 to 2021 has been measured. We can find that the News Sentiment Score (Blue line) also has outperformed against TOPIX (Orange line) over the term on the 5-day holding period.



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