



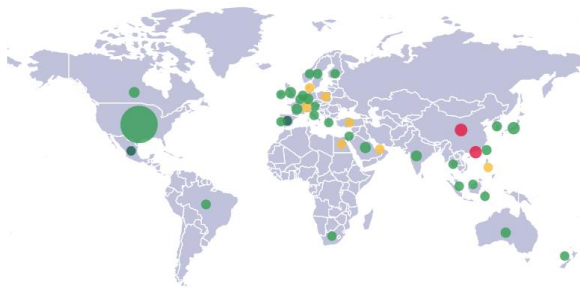
*the***Screeener's**
Target Prices Are
More Accurate
than the Analysts'
Consensus

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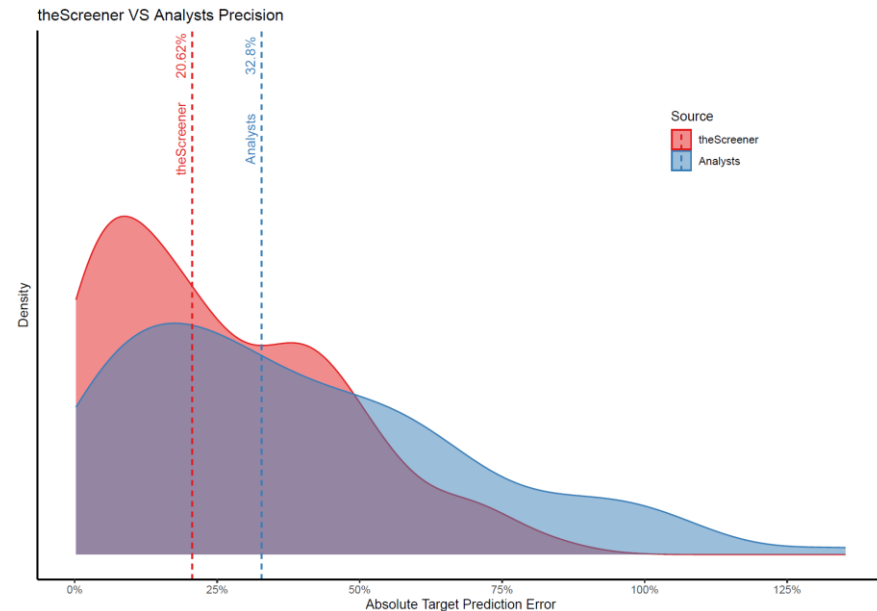
The results of this study are based on backtesting. Due to readability, we refrain from using the conditional perfect (“would have been”) through out this study.

Studying the NASDAQ100 stocks 2022, *theScree*ner's target prices proof significantly more precise than the analyst consensus.



*theScree*ner analyzes 6'000 equities twice a week and provides data driven target prices and ratings.

We assessed the precision of *theScree*ner's target prices in comparison to traditional analyst consensus-based targets for NASDAQ100 stocks in 2022.



Backtesting: *theScree*ner targets show a prediction error of 37%, 12 percentage points smaller than the error of the analyst consensus.

Study Overview

Goal

- Analyze the validity of *the**Screeener***'s target prices

Method

- Comparison of target prices by *the**Screeener*** and of traditional, analyst consensus-based, target prices.

Results

- *the**Screeener***'s target prices were 37% closer to the effective prices after 12 months than the analyst consensus.
- The observed precision for the NASDAQ100 in 2022 is similar to the precision for the entire *the**Screeener***-universe of over 6000 stocks in the last 10 years.

Conclusion

- The *the**Screeener***'s target price is unbiased and a valuable complement to traditional consensus targets.

Who are we?

We are a leading quantitative equity analyst.

We publish global research on 6'000 equities twice a week.

We empower investment advisors.

We improve the effectiveness of digital brokerage channels.



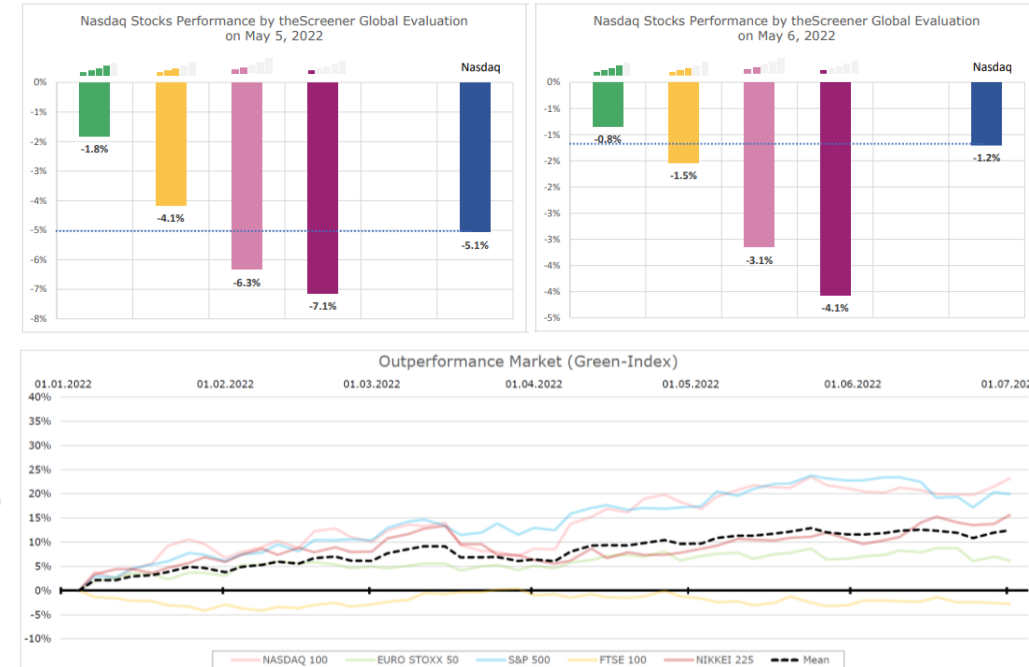
the Screener

Empowering Investors

Purpose of the Study

Background

- A previous study has shown, that *the**Screeener*** ratings have proven highly accurate in the NASDAQ crash of May 5th & May 6th 2022.
(<https://www.thescreener.com/wp-content/uploads/2022/05/theScreeener-vs.-Nasdaq-20220505.pdf>)
- A broader analysis showed that positively rated stocks outperformed the NASDAQ (and other major markets) in the first half of 2022.
(https://www.thescreener.com/wp-content/uploads/2022/09/Performance_Study-1-6-2022.pdf)
- Since December 2022, *the**Screeener*** adjusted the method of calculating its own target prices slightly.



Current research question

- How do *the**Screeener***'s target prices compare to the traditional, analyst consensus-based, target prices?

Method

Backtesting the prediction error of analyst consensus-based target prices and *theScreeener's* target prices for NASDAQ100 in 2022.

- Target prices from January 4th 2022
- End price taken on December 31st 2022
- Evaluated stocks:
 - Unique NASDAQ100 stocks for which the data were available (*see Appendix B*)
 - N = 94

Measures

- Absolute Target Prediction Error = $\left| \frac{\text{Target Price} - \text{Price on Dec 31st}}{\text{Price on Jan 4th}} \right|$

Precision measure in % of the price on January 4th 2022

- Target Prediction Error = $\frac{\text{Target Price} - \text{Price on Dec 31st}}{\text{Price on Jan 4th}}$

Bias indicator – unbiased price targets should have central tendency measures (e.g., median, mean) close to 0.

Results NASDAQ 2022

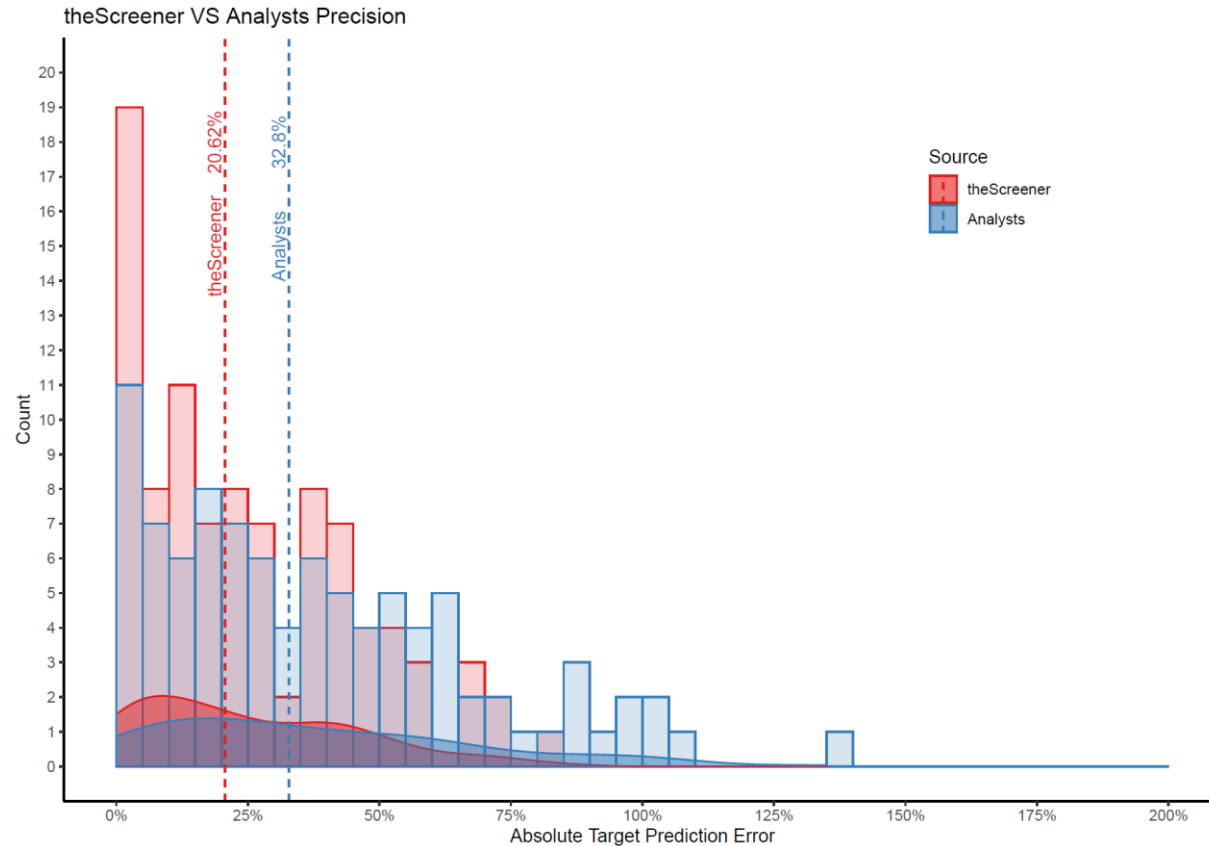


Figure 1. Histogram of absolute target prediction errors including the median for the**Screeener** (20.62%) and analyst consensus of Refinitiv (32.80%).

The hypothesis that *theScreeener's* mean absolute target prediction error (25.3%) was smaller than the analysts' (38.5%) was confirmed by the Wilcoxon signed-rank test ($V = 725, p < .001$) as well as a Bayesian one-sided t-test with a medium width Cauchy prior ($BF_{10} = 2.7 \cdot 10^6$).

theScreeener's target prices were significantly closer to the actual end-of-year stock prices than the analyst consensus.

Results NASDAQ 2022 cont.

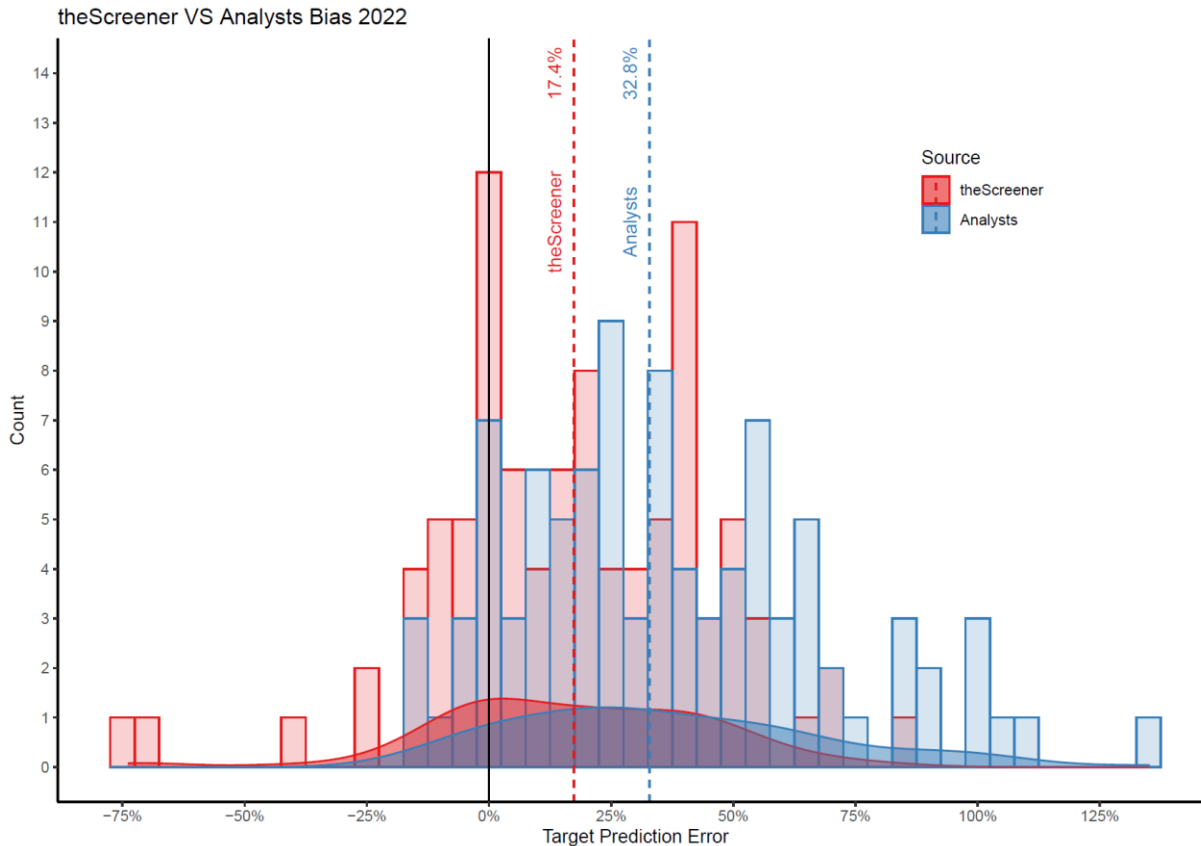


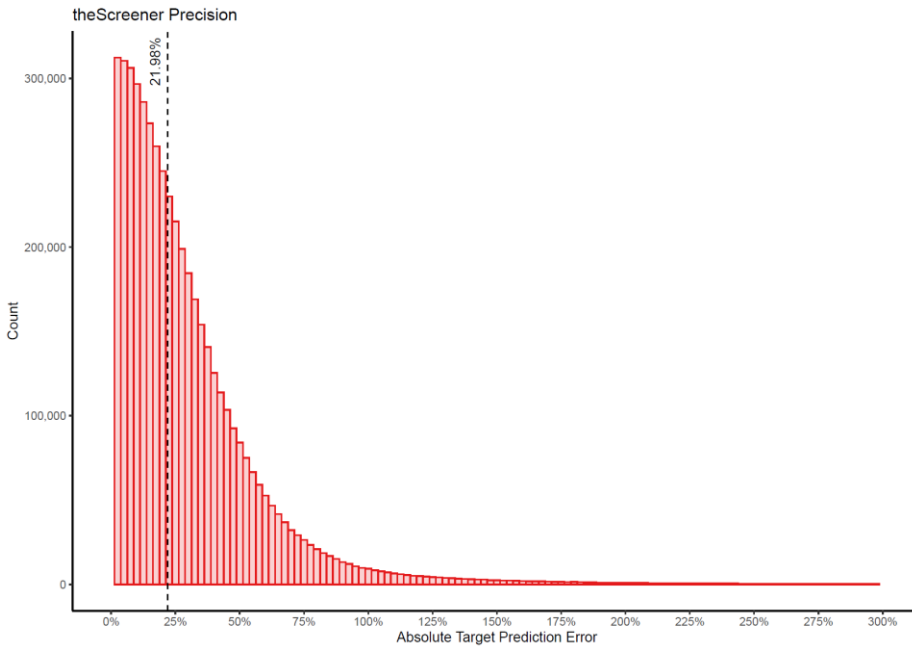
Figure 2. Histogram of target prediction errors including the median for the **theScreener** (17.40%) and analyst consensus (32.80%).

Precision is arguably the most important measure, but biases (systematic optimism/pessimism) should not be neglected. Unbiased target prices have median prediction errors close to 0.

While Figure 2 shows that *theScreener* and analysts were overly optimistic, it should be noted that the NASDAQ100 lost a remarkable 32.97% in 2022. The median overestimation of «only» 17.4% could, therefore, be seen as an indication that this decline was partially captured by *theScreener's* target prices. The analysts bias (32.8%) was considerably larger and very close to the market's decline. This shows that the analysts expected a stable market.

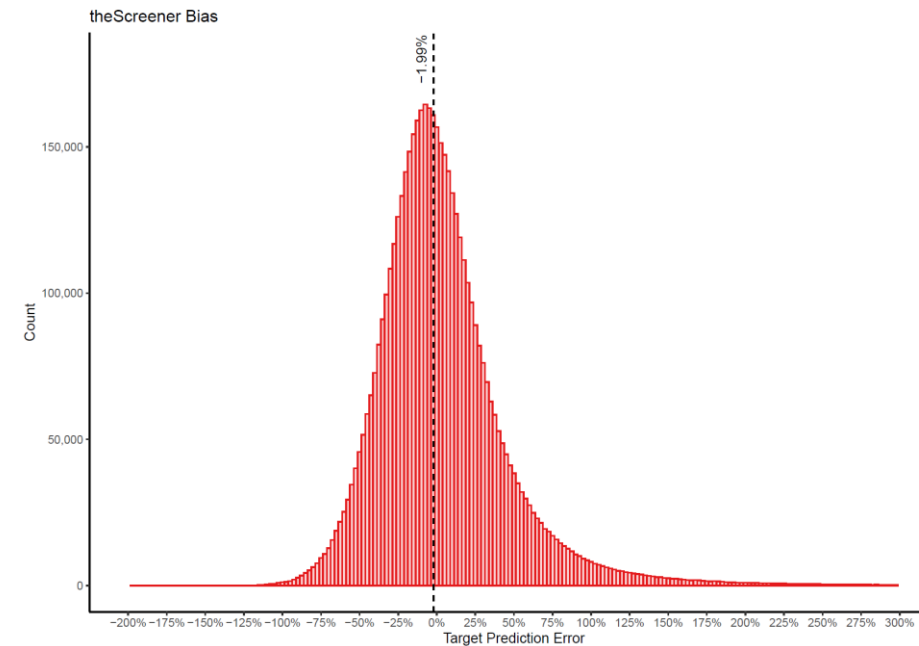
theScreener's target prices were less biased than the analyst consensus.

Results globally over 10 years



The analysis of over 5'000'000 data points showed a median absolute target prediction error of 21.98%, which is comparable to the 20.62% found in NASDAQ100 sample.

The precision of *theScreener's* target prices for the NASDAQ100 in 2022 was, therefore, not an unusual case.



While *theScreener* underestimated the decline of the NASDAQ100 in 2022 (albeit less so than analysts), *theScreener's* target prices can, for practical purposes, be considered unbiased.

It is due to the large amount of data that the slight shift away from zero (towards being too pessimistic; median=-1.99%) is statistically significant $t(5031459)=198.94$, $p<.001$. This shift is equivalent to an effect size of Cohen's $d=.09$.

The precision found in the NASDAQ100 analysis were representative of *theScreener's* target prices. *theScreener's* target prices are generally unbiased.

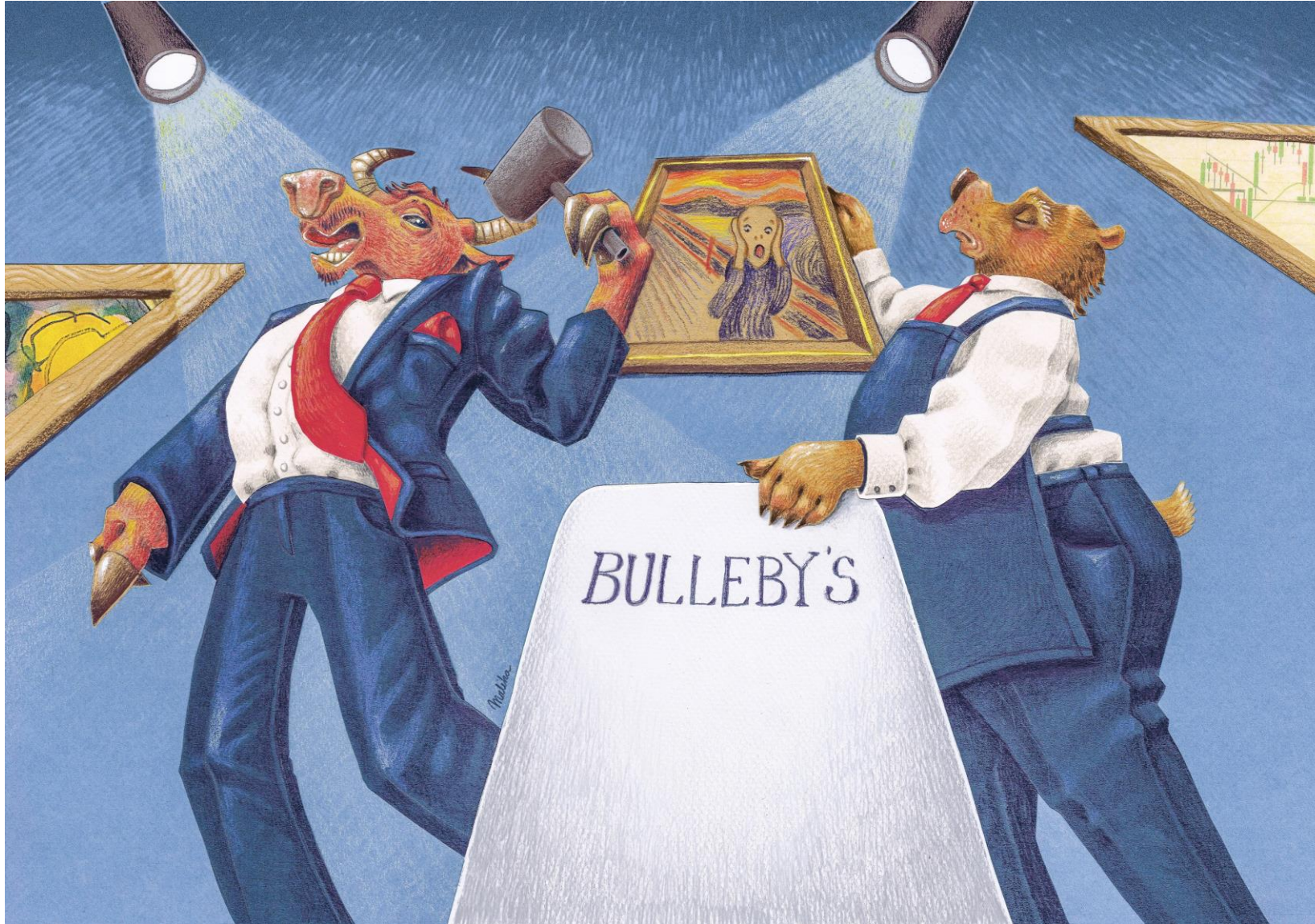
Key Findings

Precision

- *the**Screeener***'s target prices were significantly more precise than the analyst consensus.
- This precision was confirmed by analyzing the data of over 8'000 over the last 10 years.

Bias

- *the**Screeener***'s target prices prove less biased than the analysts'.
- In general, *the**Screeener***'s target prices are largely unbiased.



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Appendix

A: *the***Screeener**'s Methodology

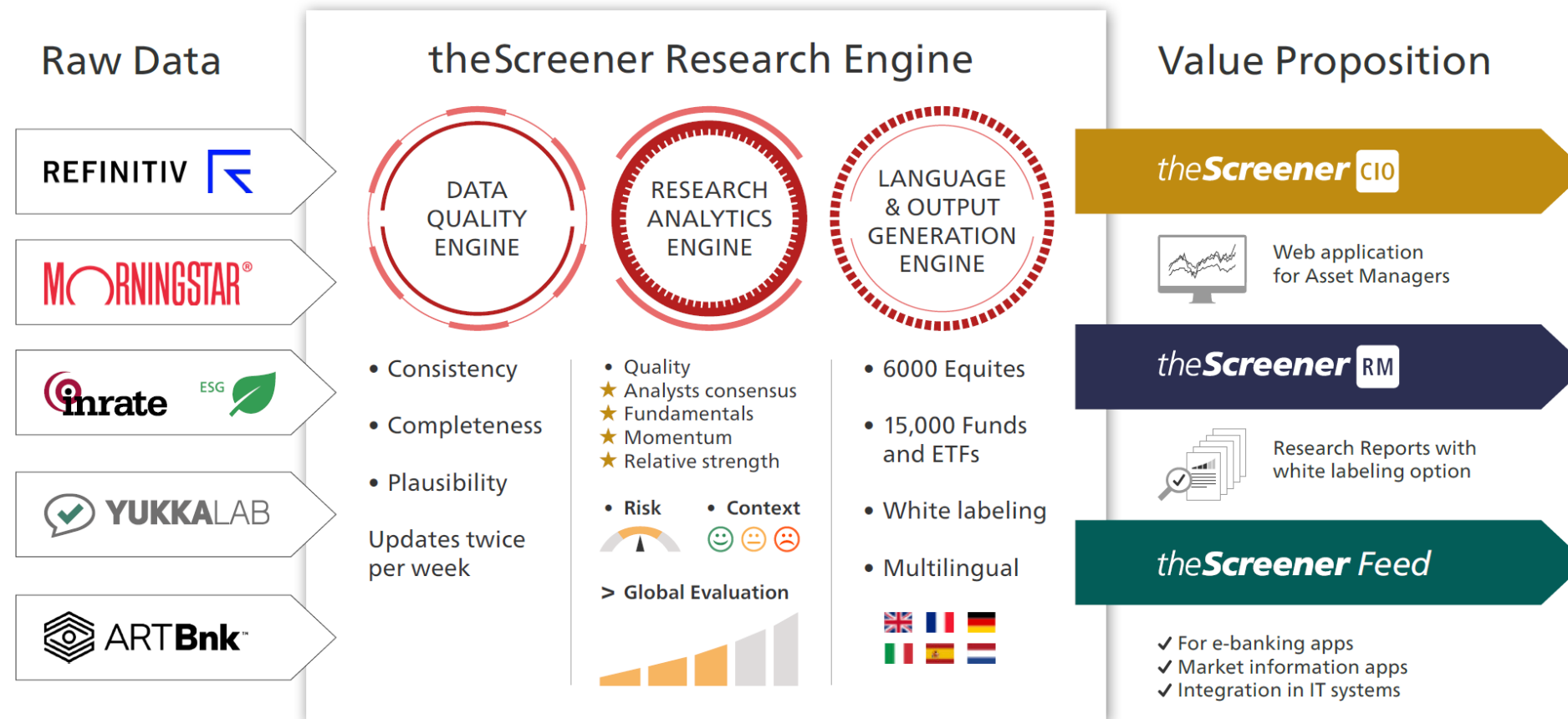
B: Analyzed Stocks

Supporting Material A

*the***Screener's** Methodology

A: *theScreeener's* Methodology

Fine-tuned data integration resulting in valuable output



Supporting Material B

Analyzed Stocks



B: Analyzed Stocks

Isin	Name	Isin	Name	Isin	Name
US00507V1098	ACTIVISION BLIZZARD	US2521311074	DEXCOM	US61174X1090	MONSTER BEVERAGE
US00724F1012	ADOBE INC	US25278X1090	DIAMONDBACK ENERGY	US64110L1061	NETFLIX
US0079031078	ADVANCED MICRO DEVICES	US2567461080	DOLLAR TREE	US67066G1040	NVIDIA
US0090661010	AIRBNB	US2786421030	EBAY	NL0009538784	NXP SEMICONDUCTORS
US0162551016	ALIGN TECHNOLOGY	US2855121099	ELECTRONIC ARTS	US67103H1077	O REILLY AUTOMOTIVE
US02079K3059	ALPHABET INC	US29355A1079	ENPHASE ENERGY	US6795801009	OLD DOMINION FREIGHT
US0231351067	AMAZON.COM	US30161N1019	EXELON	US6937181088	PACCAR
US0255371017	AMERICAN ELECTRIC	US3119001044	FASTENAL	US6974351057	PALO ALTO NETWORKS
US0311621009	AMGEN	US3377381088	FISERV	US7043261079	PAYCHEX
US0326541051	ANALOG DEVICES	US34959E1091	FORTINET	US70450Y1038	PAYPAL HOLDINGS
US03662Q1058	ANSYS	US3755581036	GILEAD SCIENCES	US7134481081	PEPSICO
US0378331005	APPLE	US4385161066	HONEYWELL INTERNATNL	US7223041028	PINDUODUO
US0382221051	APPLIED MATERIALS	US45168D1046	IDEXX LABORATORIES	US7475251036	QUALCOMM
US0494681010	ATLISSIAN	US4523271090	ILLUMINA	US75886F1075	REGENERON PHARMA
US0527691069	AUTODESK	US4581401001	INTEL	US7782961038	ROSS STORES
US0530151036	AUTOMATIC DATA PROC	US4612021034	INTUIT	US81181C1045	SEAGEN INC
US05722G1004	BAKER HUGHES CO	US46120E6023	INTUITIVE SURGICAL	US82968B1035	SIRIUS XM HOLDINGS
US09062X1037	BIOGEN	US47215P1066	JD.COM INC	US8552441094	STARBUCKS
US09857L1089	BOOKING HOLDINGS	US49271V1008	KEURIG DR PEPPER	US8716071076	SYNOPSYS
US11135F1012	BROADCOM	US4824801009	KLA	US8725901040	T-MOBILE US
US1273871087	CADENCE DESIGN SYST	US5007541064	KRAFT HEINZ	US88160R1014	TESLA
US16119P1084	CHARTER COMMU	US5128071082	LAM RESEARCH	US8825081040	TEXAS INSTRUMENTS
US1729081059	CINTAS	US5500211090	LULULEMON ATHLETICA	US92345Y1064	VERISK ANALYTICS
US17275R1023	CISCO SYSTEMS	US5719032022	MARRIOTT INT'L	US92532F1003	VERTEX PHARMA INC
US1924461023	COGNIZANT TECHNOLOGY	US5738741041	MARVELL TECHNOLOGY	US9314271084	WALGREENS BOOTS ALLIANCE
US20030N1019	COMCAST A	US58733R1023	MERCADOLIBRE	US9344231041	WARNER BROS
US2172041061	COPART	US30303M1027	META PLATFORMS INC	US98138H1014	WORKDAY
US22160N1090	COSTAR GP.	US5950171042	MICROCHIP TECHNOLOGY	US98389B1008	XCEL ENERGY
US22160K1051	COSTCO WHOLESALE	US5951121038	MICRON TECHNOLOGY	US98980L1017	ZOOM VIDEO COMM
US22788C1053	CROWDSTRIKE HOLD	US5949181045	MICROSOFT	US98980G1022	ZSCALER
US1264081035	CSX	US60770K1079	MODERNA		
US23804L1035	DATADOG INC	US6092071058	MONDELEZ		



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