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Interactive Brokers

ESG Investing: How Big Data Helps Drive Financial Decisions

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Advanced Technology: AI & Big Data

Many investors are likely to find that conducting fundamental analysis on environmental, social and governance (ESG)-related issues can be quite a daunting task – especially given the massive amounts of variables that may be considered relevant.

To address this concern, many companies and organizations have been working to establish more advanced, technological tools and scoring systems to aid in the effort.

For example, certain companies may employ artificial intelligence (AI), with sentiment analysis algorithms, and natural language processing (NLP), to help arrive at data that may assist in ESG investing analysis.



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S&P Global Case for Using AI

S&P Global recently noted that ESG investing could become more methodical and accessible with [AI technologies](#).

With this in mind, the company recently said the Dow Jones Sustainability Index, the original index of sustainable investments from S&P Dow Jones Indices, aims to use AI to speed up analyses and augment traditional research.



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Benefits of Big Data in Conducting Analysis

Many researchers also agree that using Big Data as a driving tool for conducting fundamental analysis is likely to reduce issues in corporate disclosures, such as:

- Timeliness,
- Accuracy, and
- Adherence to stated policies

- especially since ESG-related information lacks the same set of standards and generally-accepted principles as applied to financial data.



The Role of Media Sentiment

Studies indicate there appears to be a [correlation](#) between media sentiment about a company and its stock's performance.

The socially responsible investing (SRI) data behind IBKR's Impact Dashboard is fueled by data providers who use the unstructured data they collect to compute scores within common frameworks, including the Sustainability Accounting Standards Board (SASB), among others.



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REFINITIV



According to [data services provider Refinitiv](#), stocks tend to outperform after being associated with media sentiment that is high, and when sentiment falls, it may be a warning sign that prices are also likely to decline.

To this end, through its MarketPsych Analytics, Refinitiv produces data by distilling news and social media content through a curated language framework, which not only measures different emotions like optimism, confusion, and urgency, but also financial language and specific topics, such as interest rates and mergers.





TRUVALUE LABS

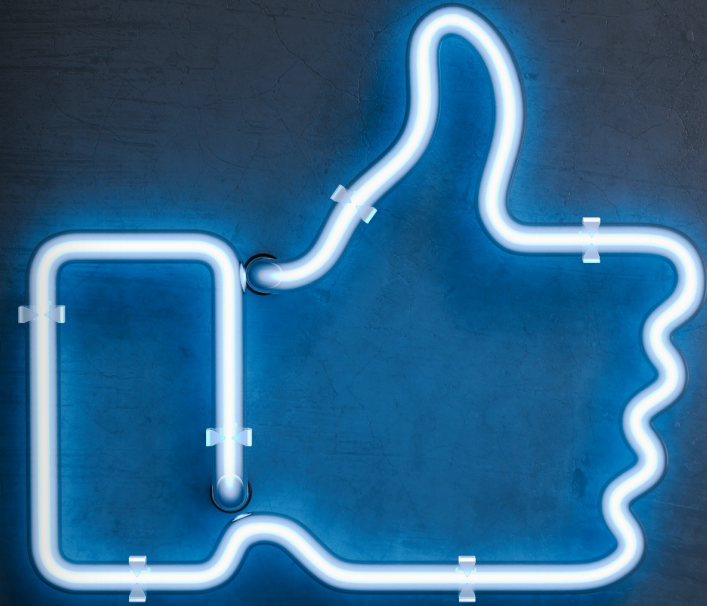
A **FACTSET** Company

FactSet-owned [Truvalue Labs](https://truvaluelabs.com) – another data service provider in the ESG space – can access more than a hundred thousand¹ online sources with unstructured text, such as social media posts.

Besides dynamic web feeds, Truvalue Labs' internal ESG analysts also identify specialized sources to find ESG data, with the company also able to draw on more than two thousand² sources residing behind paywalls.

¹ Truvalue Labs FAQ: <https://truvaluelabs.com/faq>

² Truvalue Labs Data Sources FAQ: "Truvalue Labs currently draws on more than 2,200 sources behind paywalls, including via LexisNexis and Law360."



Several Sources of Data

The scores calculated by Refinitiv and Truvalue Labs are derived from thousands of company and non-company resources, including:

- Annual reports,
- Regulatory filings,
- Trade blogs,
- Industry publications, and
- Social media





IBKR's Impact Dashboard

IBKR's proprietary dashboard technology overlays Refinitiv's and Truvalue Labs' SRI data, and incorporates investors' value preferences and portfolio holdings, to provide investors with a single Portfolio Impact Score letter grade.

You can see how the **Impact Dashboard** works via the link to a short video below, but in brief, the tool supports socially responsible and impact investing by enabling investors to evaluate, and invest in companies, whose business principles align with their own personal values.

The Impact Dashboard essentially personalizes responsible investing by enabling investors to select those values they deem important that companies support, as well as the practices they want companies to avoid.



[Watch IBKR's Short Video on the Impact Dashboard](#)

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Portfolio Impact Score Based on Your Preferences



58.9% of your total portfolio value has impact data

Aligns Neutral Conflicts

Long Positions

INSTRUMENT	EFFECT
BMO BANK OF MONTREAL	👍
WFG WEST FRASER TIMBER CO LTD	👍
CVX CHEVRON CORP	⚖️
DKS DICK'S SPORTING GOODS INC	⚖️
AMC AMC ENTERTAINMENT HLDS-CL A	⚖️
BARC BARCLAYS PLC	⚖️



IBKR Trader Workstation (TWS)

IBKR has also incorporated tools within its Trader Workstation online trading platform environment to help investors find assets offered by companies whose values are better aligned with theirs.

	LAST	CHANGE	IMPACT...	IMPACT...	ESG SCORE
F	12.85	+0.36		👍	██████████
XOM	56.58	-0.23		=	██████████
NFLX	510.01	+5.22		👎	██████████
T	29.75	-0.26	🚩	👍	██████████
IP	c53.92			=	██████████
CPB	49.79	+0.27			██████████
TSLA	653.30	+0.14		=	██████████
VOW IBIS	c327.2			👍	
JNJ	160.00	-0.47	🚩	👍	██████████

TWS

Impact Effect Column

Trader Workstation users can add an **Impact Effect** column to Watchlists and other tools, which displays green thumbs-up, and red thumbs-down, icons to identify potential buy and sell investments that align or conflict with their selected impact values – such as clean air, consumer safety, and gender and racial equality, among others.



The screenshot shows a TWS Watchlist interface with a large blue arrow pointing to the 'Impact Effect' column. The table displays various stock symbols, their last prices, changes, and impact effect icons (thumbs up/down) corresponding to their change percentages.

Symbol	Last Price	Change	Impact Effect	Chng %
DIS	191.66	-0.62	Green thumbs up	2.64%
DAI	73.69	-0.64	Green thumbs up	-0.55%
C	73.10	-0.74	Green thumbs up	1.13%
FOXA	42.94	+0.06	Green thumbs up	-0.77%
CVX	103.38	-0.74	Green thumbs up	-0.63%
NEE	70.84	-0.29	Green thumbs up	0.55%
TDOC	190.50	+5.07	Green thumbs up	-0.10%
AMC	13.58	-0.42	Green thumbs up	-12.4...
RTX	78.36	+0.42	Green thumbs up	-0.27%
PFE	35.56	-0.21	Red thumbs down	-0.59%
DOW	63.91	-0.81	Red thumbs down	-1.25%
GIS	60.07	+0.17	Green thumbs up	0.28%
MCD	222.44	-0.46	Green thumbs up	-0.21%
GME	198.95	-2.80	Red thumbs down	-1.39%
NOK	4.02	+0.11	Green thumbs up	2.81%
BBY	118.19	+4.81	Green thumbs up	4.24%
BBBY	31.58	+0.99	Green thumbs up	3.24%
GS	344.45	-3.55	Green thumbs up	-1.02%

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TWS

Impact Flag Column

The **Impact Flag** column may also be added to Watchlists to see which companies are flagged for engaging in practices tagged as *unacceptable*, including greenhouse gas emissions, weapons and gun manufacturers, hazardous waste, animal testing, and high-water usage, among others.



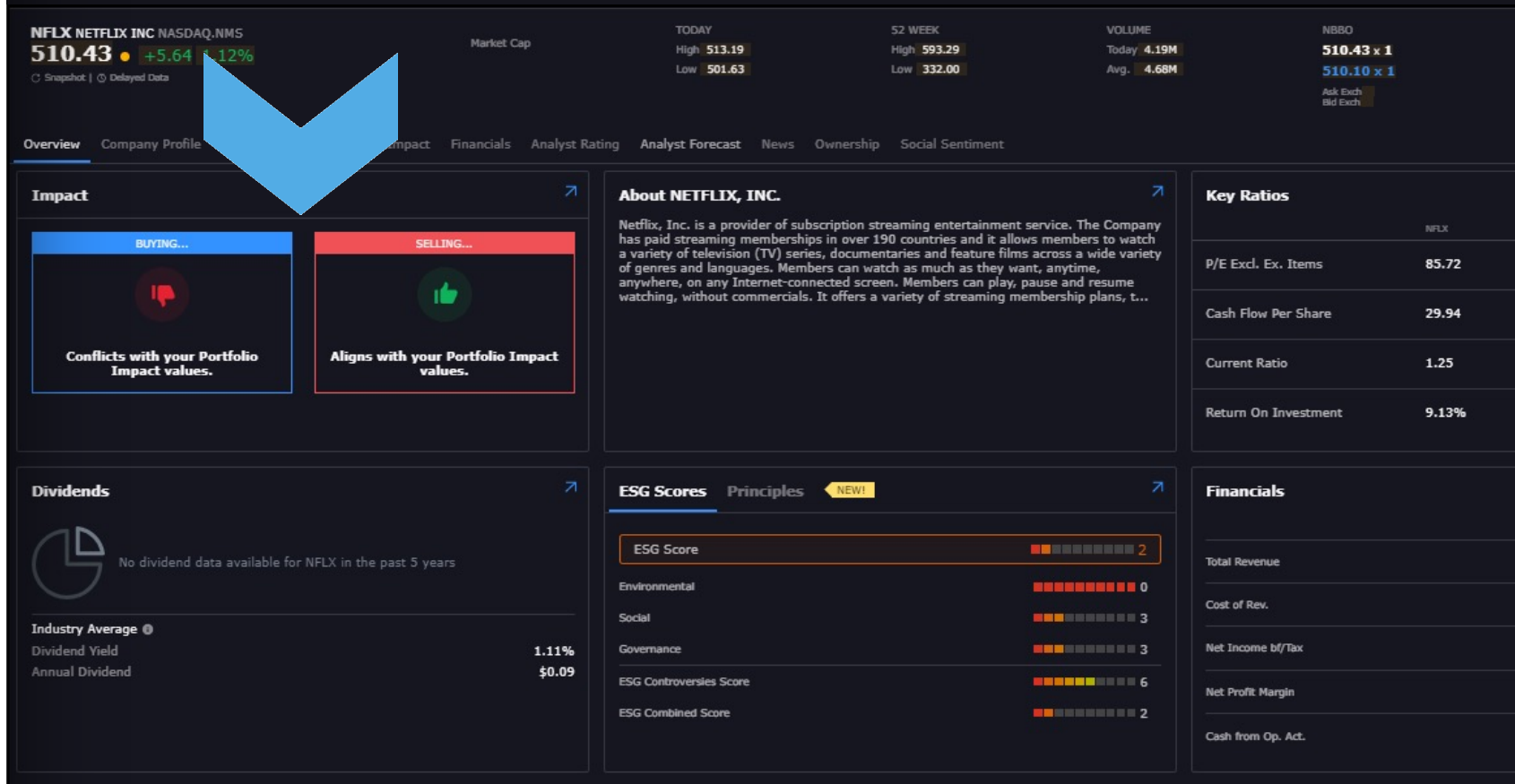
The screenshot shows a TWS Watchlist table with columns for stock symbols, last price, change, and impact flags. A blue arrow points to the Impact Flag column, which contains thumbs up, thumbs down, and equals signs. A red bar is visible above the table.

Symbol	Last Price	Change	Impact Flag	Symbol	Last Price	Change	Impact Flag
DIS	191.66	-0.62	=	PFE	35.56	-0.21	=
DAI	73.69	-0.64	👍	DOW	63.91	-0.81	=
C	73.10	-0.74	👍	GIS	60.07	+0.17	👍
FOXA	42.94	+0.06	=	MCD	222.44	-0.46	=
CVX	103.38	-0.74	=	GME	198.95	-2.80	👎
NEE	70.84	-0.29	👍	NOK	4.02	+0.11	=
TDOC	190.50	+5.07	=	BBY	118.19	+4.81	👍
AMC	13.58	-0.42	=	BBBY	31.58	+0.99	=
RTX	78.36	+0.42	=	GS	344.45	-3.55	👍

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TWS Fundamentals Explorer

The **Impact** tab in IBKR's [Fundamentals Explorer](#) offers signals for whether a company aligns with stated Impact values.

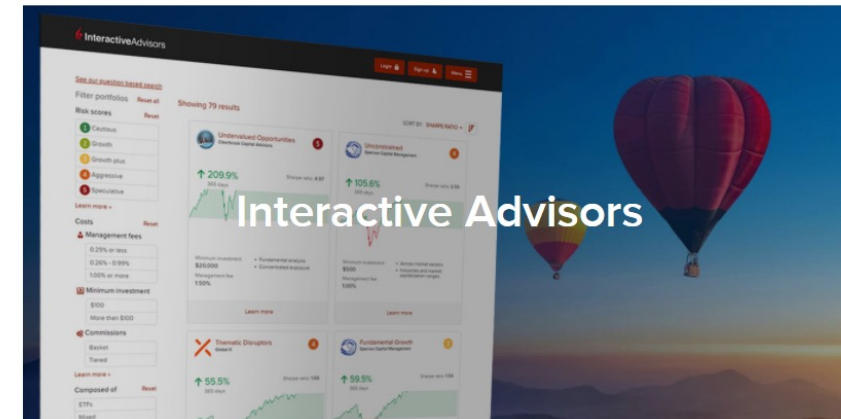
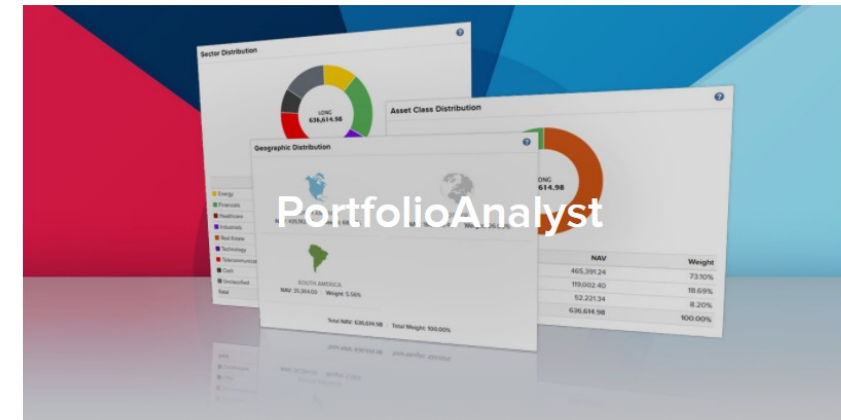
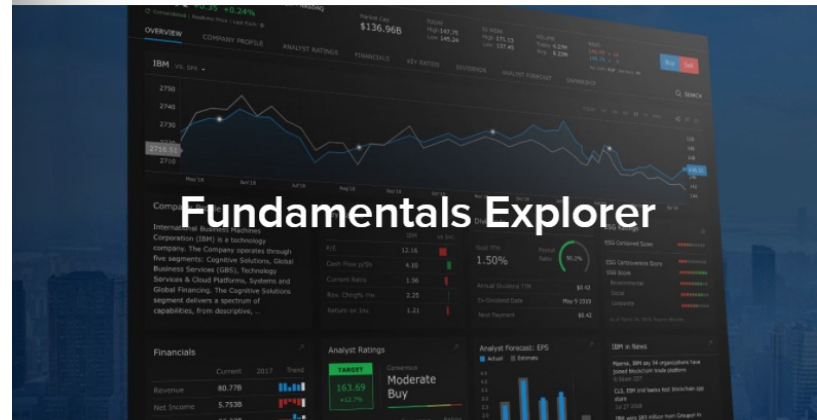


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ESG Data Integrated Into IBKR Platforms

IBKR has integrated ESG data to help inform investors' decision-making into several of its platforms, including Portfolio Analyst, as well as its [Model Marketplace](#), and at [Interactive Advisors](#)³ – its robo-advisor and investment management arm.

³ Interactive Advisors is an affiliate of Interactive Brokers LLC (IB LLC). Interactive Advisors and IB LLC are each subsidiaries of Interactive Brokers Group, Inc. (IBKR). IB LLC provides execution services to clients of Interactive Advisors.



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Explore Additional Resources

- [IBKR Traders' Academy – ESG Investing](#)
- [IBKR Traders' Academy – Big Data & IBKR Tools](#)
- [IBKR Trader Workstation – ESG Scores](#)
- [IBKR Sustainable Investing](#)
- [IBKR Impact Dashboard & White Paper](#)
- [IBKR PortfolioAnalyst](#)
- [ESG Scores from Refinitiv](#)
- [At A Glance: Truvalue Labs' Insight360 Data Feed](#)
- [Dynamic Materiality In The Time of COVID-19](#)
- [Truvalue Labs – ESG Research in the Information Age](#)



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