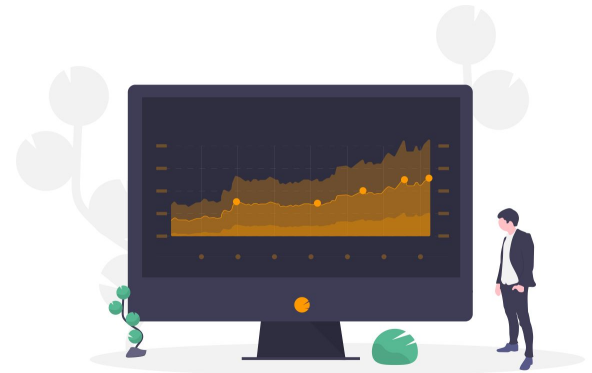


Stock KPIs

A proof-of-concept analysis of the most influential fundamental factors with regard to changes in share price for a given company.

By T.J. Kyner





Stock KPIs

Discover influential factors



Valuation Model

Targeted focus



Predictions

Enhanced insight



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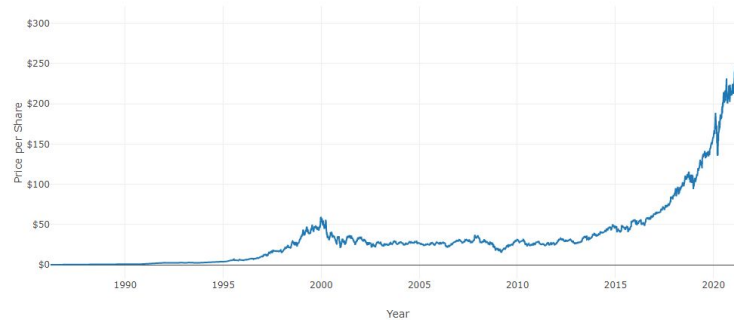
Microsoft (MSFT)

Sector: Information Technology **Headquarters:** Redmond, Washington **Market Cap:** \$2,255,819,636,736
Industry: Systems Software **Founded:** 1975 **Website:** <http://www.microsoft.com>

Description

Microsoft Corporation develops, licenses, and supports software, services, devices, and solutions worldwide. Its Productivity and Business Processes segment offers Office, Exchange, SharePoint, Microsoft Teams, Office 365 Security and Compliance, and Skype for Business, as well as related Client Access Licenses (CAL); Skype, Outlook.com, OneDrive, and LinkedIn; and Dynamics 365, a set of cloud-based and on-premises business solutions for organizations and enterprise divisions. Its Intelligent Cloud segment licenses SQL, Windows Servers, Visual Studio, System Center, and related CALs; GitHub that provides a collaboration platform and code hosting service for developers; and Azure, a cloud platform. It also offers support services and Microsoft consulting services to assist customers in developing, deploying, and managing Microsoft server and desktop solutions; and training and certification on Microsoft products. Its More Personal Computing segment provides Windows original equipment manufacturer (OEM) licensing and other non-volume licensing of the Windows operating system; Windows Commercial, such as volume licensing of the Windows operating system, Windows cloud services, and other Windows commercial offerings; patent licensing; Windows Internet of Things; and MSN advertising. It also offers Surface, PC accessories, PCs, tablets, gaming and entertainment consoles, and other devices; Gaming, including Xbox hardware, and Xbox content and services; video games and third-party video game royalties; and Search, including Bing and Microsoft advertising. It sells its products through OEMs, distributors, and resellers; and directly through digital marketplaces, online stores, and retail stores. It has collaborations with Dynatrace, Inc., Morgan Stanley, Micro Focus, WPP plc, ACI Worldwide, Inc., and ICIMS, Inc., as well as a strategic relationship with Avaya Holdings Corp. Microsoft Corporation was founded in 1975 and is headquartered in Redmond, Washington.

Price History



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Overview

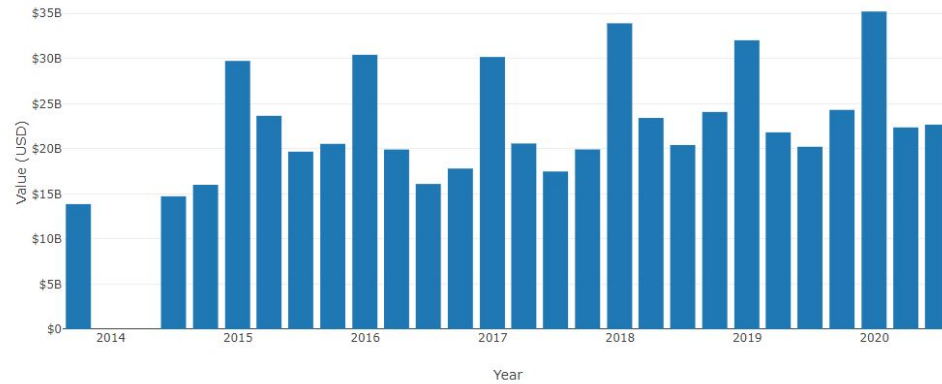
Features

SHAP Analysis

Apple (AAPL)

Feature Explorer


Gross Profit




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Microsoft (MSFT)

Feature Importances

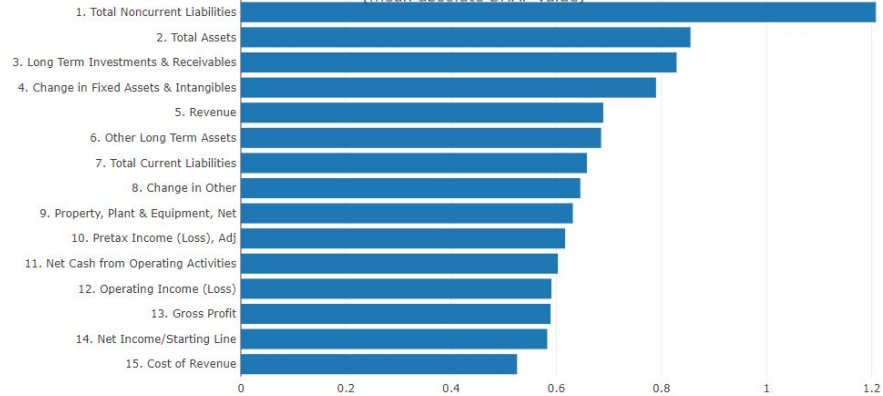
Which features had the biggest impact?

Depth:

15



Average impact on predicted Close
(mean absolute SHAP value)



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Shap Dependence

Relationship between feature value and SHAP value

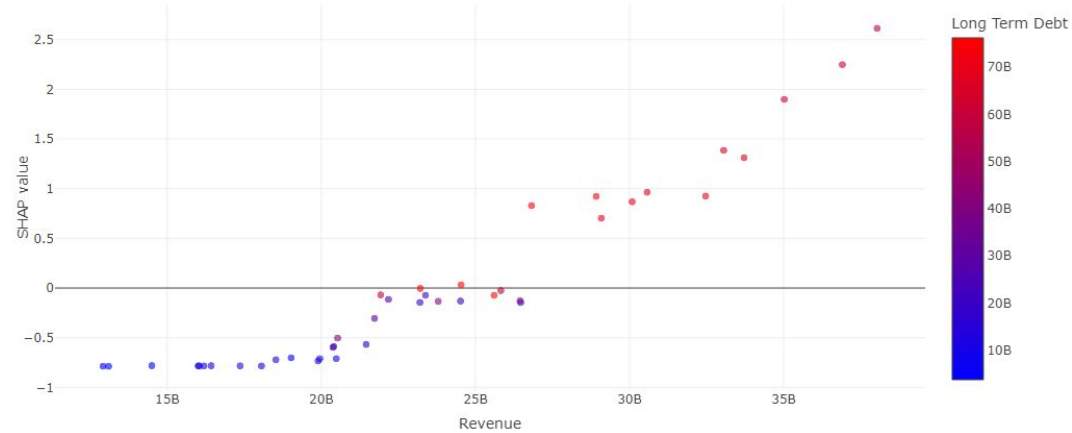
Feature:

Revenue

Color feature:

Long Term Debt

Dependence plot for Revenue



Interactions Summary

Ordering features by shap interaction value

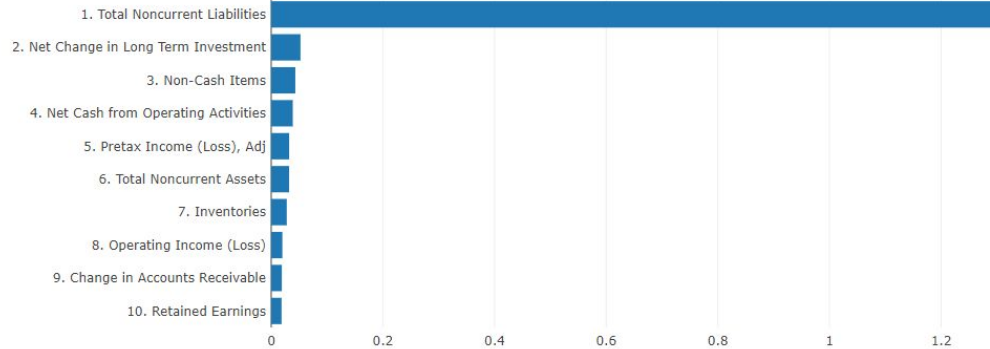
Feature

Total Noncurrent Liabilities

Depth:

10

Average interaction shap values for Total Noncurrent Liabilities



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Interaction Dependence

Relation between feature value and shap interaction value

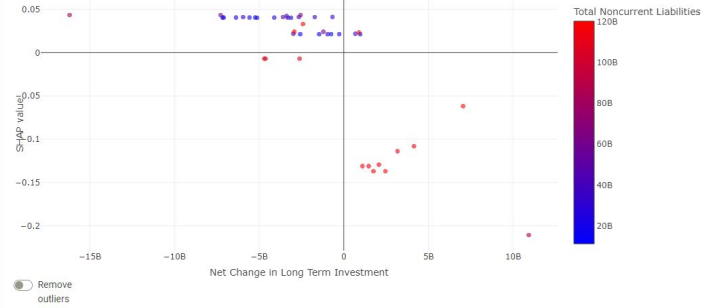
Feature:

Total Noncurrent Liabilities

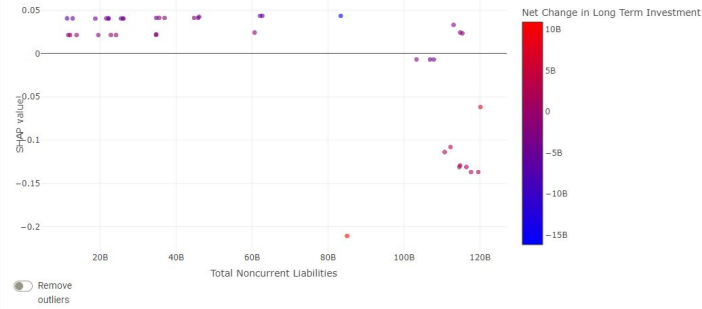
Interaction:

Net Change in Long Term Investment

Interaction plot for Net Change in Long Term Investment and Total Noncurrent Liabilities

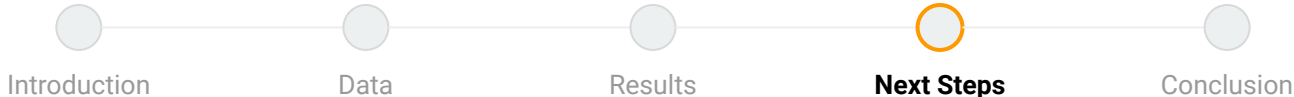


Interaction plot for Total Noncurrent Liabilities and Net Change in Long Term Investment



Future Improvements

- Investigate enhanced techniques for better results
- Rank companies by specific fundamentals
- Include additional model analysis components
- Allow for changing between companies directly within the dashboard



Thank You!

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Acknowledgments:

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