

RESEARCH BRIEF • JUNE 2023

Profitability Context and the Cross-Section of Stock Returns

Based on BFI Working Paper 2023-76, "[Profitability Context and the Cross-Section of Stock Returns](#)," by Alex G. Kim, Chicago Booth: and Valeri V. Nikolaev, Chicago Booth

This novel study documents the importance of contextual information for asset pricing, revealing context-adjusted profitability's superior ability to explain expected returns, both statistically and economically, compared to conventional operating profitability.

There is much more to a company's earnings report than the figures that the company releases. Imbedded in those numbers is a story that describes such economic events as the company's strategic goals, changes in competition, delays in production, disruptions in the supply chains, trends in demand for products, future plans, and many more factors that impact the firm's bottom line.

For investors, this narrative context (required by the Securities and Exchange Commission) is essential for making informed decisions. However, asset pricing models, which are tools used in finance to describe the relationship between the risk of a particular stock (or other investment) and its performance in the stock market as a whole, are still largely reliant on numeric information.

For example, existing asset price models make quantitative adjustments based on disclosed line items within earnings reports; in other words, such models are improved by a finer consideration of reported data, but not contextual information.

So, on the one hand, investors are told that contextual information matters, but on the other hand, existing analytical tools do not adequately incorporate such information. How, then, can narrative context sharpen existing models' insights? The authors address this question by constructing a new model that incorporates unstructured narrative context within which reported numbers should be interpreted. Please see the working paper for details about their methodology, but broadly speaking, the authors incorporate recent advancements in natural

language processing and deep learning to develop a measure of context-adjusted operating profitability (across heterogeneous firms and over time) to make the following contributions:

- The authors show that the interpretation of numeric characteristics varies with the non-quantitative context within which the characteristics are reported. Taking context into account adds considerable value and improves models' performance, including up to five years into the future.
- This work proposes a measure of context-based operating profitability that consistently outperforms the unadjusted profitability measure in explaining the cross-section of stock returns.
- Finally, this work shows that machine learning models outperform traditional models by allowing for non-linear interactions among variables.

Bottom line: Context matters when making estimations of current and future earnings. This new approach—the first to document the importance of contextual information when measuring asset pricing characteristics and constructing factors—goes a long way in resolving this issue. Importantly, the authors' context-adjusted proxy for future profitability can be easily adopted by other asset pricing researchers or modified to address the context of other characteristics.

READ THE WORKING PAPER

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Profitability Context and the Cross-Section of Stock Returns

bfi.uchicago.edu/working-paper/2023-76

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