

# Factor Zoo (.zip)

## A systematic analysis of the emerging 'factor zoo'

Since the introduction of the Capital Asset Pricing Model (CAPM), researchers have been on a quest to find the most important factors, leading to a crowded "factor zoo." Despite the variety of these factors, academic models suggested for years that most of them can be boiled down to just four to six key ones.

Recent publications in this area have overcome one key challenge in sorting through this factor zoo: Not only did they reconstruct a majority of factors from the literature and publish them in open-source databases but also addressed the so-called replication crisis in finance with this approach.

In this paper, the authors build on the work of Jensen, Kelly, and Pedersen (2023) to answer a crucial question: How many factors do we really need to simplify the factor zoo without losing much information? They propose a straightforward yet effective method to identify the factors that capture most of the available "alpha".

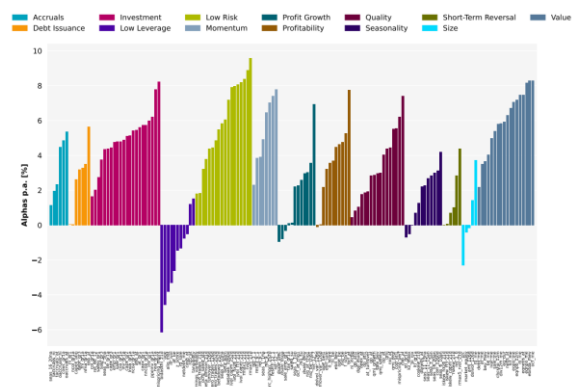
Here are the key takeaways:

- By analyzing 153 U.S. equity factors, they found that a model with just 15 factors can represent the entire factor zoo, covering 8 out of 13 factor style clusters like value or momentum, amongst others.
- Over time, they observed that certain factor clusters remain relevant, even as new factors emerge and sometimes replace older ones.

These findings help investors navigate the complex factor zoo by pinpointing strong alpha contributors and comprehensive models. It also highlights the ongoing need for innovation and adjustments in models.

For more on this topic, see: Swade, A., Hanauer, M. X., Lohre, H., and Blitz, D. (2024). **Factor zoo (. zip)**. *The Journal of Portfolio Management*, Quantitative Special Issue 2024, 50 (3), 11-31.

**Exhibit 1: Factor alphas**




The Exhibit depicts annualized CAPM-alphas across different factor style clusters for the U.S. factor zoo. Source: Swade et al. (2024)

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Expiration date: 03/18/2026

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