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Eidgenössische Technische Hochschule Zürich
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An improved feature screening technique for asset selection in the U.S. market

MASTER'S THESIS

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Abstract

The purpose of this master's thesis is to assess the profitability in the U.S. market of a newly-proposed asset selection technique, which is suitable in a high-dimensional context, i.e., when the number of assets is at least equal to the total number of observations. We focus on the out-of-sample portfolio performances, showing that the approach can potentially deliver good returns, but is unable to deal with bad market phases, when volatility increases. To overcome this limitation, we propose a risk-managed version of the asset selection technique that delivers much larger returns over the time frame analyzed and overwhelms the performance of the commonly employed momentum strategy, even accounting for transaction costs.