

# Liquidity - Adjusted Risk Measures

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## 1 Abstract

Liquidity risk is an important type of risk, especially during times of crises. While classical asset pricing theory assumes that the value of a portfolio is proportional to the number of assets, liquidity risk requires adjustments to standard portfolio valuation and risk measurement, as observed by Acerbi & Scandolo (2008). Main drivers are two dimensions of liquidity risk, namely price impact of trades and limited access to financing. The key contribution of the current paper is the construction of a new, cash-invariant liquidity-adjusted risk measure that can naturally be interpreted as a capital requirement. We clarify the difference between our construction and the one of Acerbi & Scandolo (2008) in the framework of capital requirements using notion of *eligible assets*, as introduced in Artzner, Delbaen & Koch-Medina (2009). Numerical case studies illustrate how price impact and limited access to financing influence the liquidity-adjusted risk measurements. This is joint work with William Anderson, Thomas Knispel, Maren Liese, Thomas Salfeld and Stefan Weber.

## 2 Keywords

Liquidity, risk measures, supply-demand curves, capital requirements

## 3 Main references

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