

LiquidityMetrics

Raising the bar for liquidity risk management for U.S. buy-side institutions

MSCI's LiquidityMetrics is an advanced multi-asset class liquidity risk framework designed to support regulatory reporting and investment management processes for asset managers and hedge funds such as:

- Regulatory reporting and enhanced liquidity risk management programs
- Extensive liquidity risk analysis that accounts for transaction cost, market impact, market depth and market activity
- Stress testing the liquidity of a portfolio under alternative trading scenarios and adverse market liquidity conditions

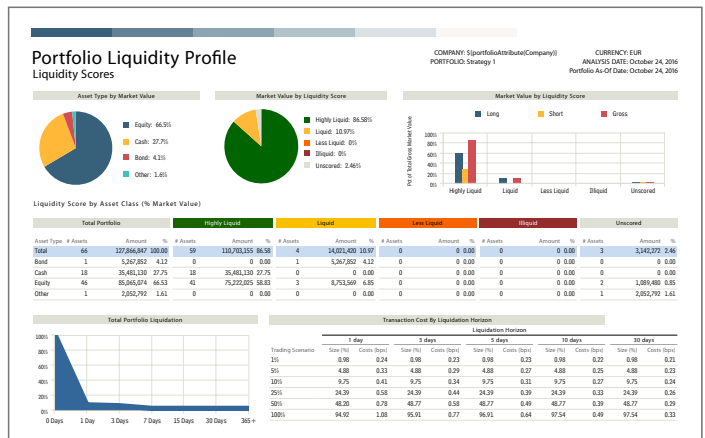
Optimized to support compliance with SEC Rule 22e-4 and Form-PF

Designed to enable you to:

- Use a single, transparent liquidity risk model for all funds and across asset classes
- Classify your fund's investments into the pre-scribed liquidity buckets 'Highly Liquid', 'Moderately Liquid', 'Less Liquid' and 'Illiquid'
 - leveraging analytics which have been designed to measure the time-to-liquidation based on trading size and market impact constraints,
 - and quality reviewed settlement period data
- Determine the percentage of highly liquid investments (investments that can be converted to cash within three days)
- Measure the percentage of illiquid assets which is expected to not exceed 15 percent

Extensive coverage and support

- Global multi-asset class coverage supported by IHS Markit quote and trade data for fixed income, Virtu's cost curves for equities and data-driven calibrations for derivatives
- Methodology that jointly models the multiple facets of liquidity risk – time, cost, and size – in a consistent manner
- Automated workflow with large scale throughput for batch processing



Methodology - liquidity surface

The LiquidityMetrics methodology is based on constructing asset-specific liquidity surfaces designed to capture the time, cost, and size dimensions of market trades to provide a more thorough description of asset liquidity.

Inputs into liquidity surfaces include:

- **Market impact** – dependence of the price on order size
- **Market elasticity** – the ability and speed of a market to regenerate liquidity, an indicator of market activity
- **Market depth** – the maximum size thresholds for sufficient supply and demand
- **Bid-ask spread** – the expected transaction cost for standard orders

Analytics - from asset to portfolio level

Analytics available through LiquidityMetrics include:

- **Liquidation horizon** – the time to liquidation of an order given a transaction cost threshold
- **Liquidation amount** – the maximum size of a position that can be liquidated given transaction cost and liquidation horizon constraints
- **Liquidation value** – the proceeds expected to be realized from an order
- **Transaction cost** – expected difference between realized price of an order and the prevailing price
- **Liquidity bucketing** – ready-to-use regulatory (SEC Liquidity Rule 22e-4 and AIFMD) and custom scoring

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 45 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

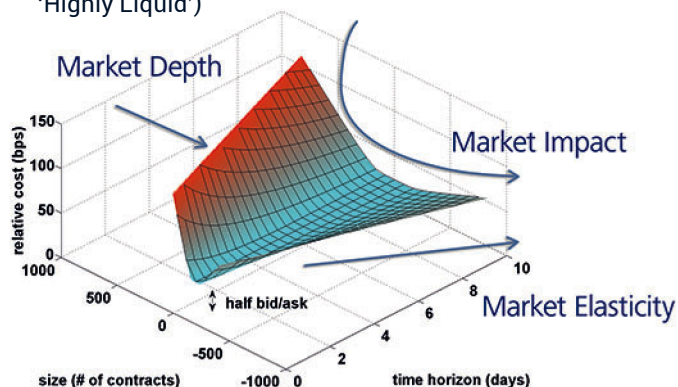
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rules

- **Regulatory bucket threshold** - the maximum position size for a security and a given liquidity bucket (e.g. 'Highly Liquid')



LiquidityMetrics in practice

LiquidityMetrics provides a consistent liquidity analytics framework that can be applied throughout an organization.

Risk management and control

- Support regulatory risk reporting
- Enable firm-wide liquidity risk measurement
- Quantify unrealized costs in liquidation/redemption commitments

Investment management

- Conduct stress testing via alternative liquidation scenarios
- Perform pre-trade, expected transaction cost analysis
- Facilitate liquidity-based investment decisions