

# LIQUIDITYMETRICS

## RAISING THE BAR FOR LIQUIDITY RISK MANAGEMENT

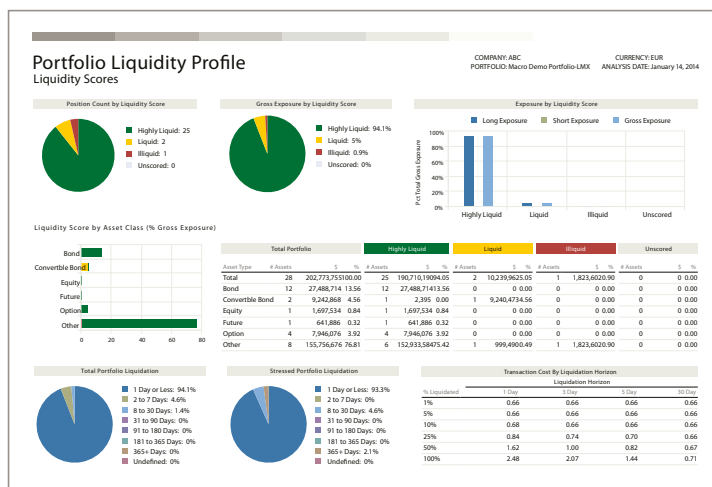
LIQUIDITYMETRICS: AN ADVANCED MULTI-ASSET CLASS LIQUIDITY RISK FRAMEWORK FOR REGULATORY REPORTING AND INVESTMENT MANAGEMENT

LiquidityMetrics is designed to support:

- 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

### FEATURES

- Apply a consistent market liquidity framework across funds, and asset classes.
- Classify the liquidity of fund positions into different categories (1 day; 2-3 days, etc.) based on the amount of time an asset could be converted to cash without a material impact to price.
- Compute a fund's holdings of "illiquid assets" that cannot be sold within seven days at approximately their current value.
- Compute "three-day-liquid assets" that can be converted to cash within three business days without materially impacting their price prior to the sale.
- Global multi-asset class coverage supported by a proprietary bond bid/ask spread model for over 350,000 bonds, additional bond liquidity data collected from market participants through the MSCI Liquidity Observatory, MSCI data for OTC derivatives, and an equity market impact model.
- 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.



## 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.

## METHODOLOGY - LIQUIDITY SURFACE

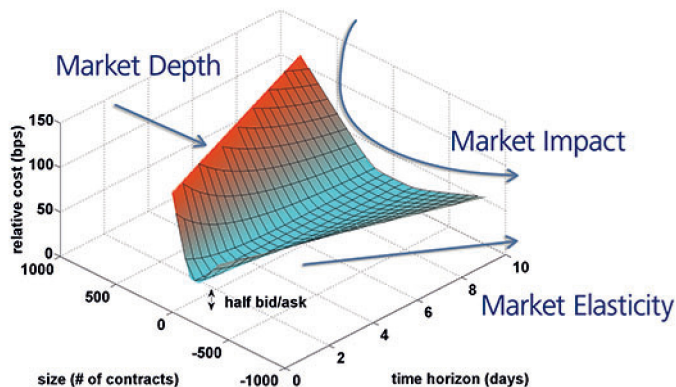
The LiquidityMetrics methodology is based on constructing asset-specific liquidity surfaces designed to capture the time, cost, and size dimensions of market trades to provide a more thorough description of asset liquidity.

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.

## THE MSCI LIQUIDITY OBSERVATORY

MSCI's Liquidity Observatory collects bond liquidity data from market participants, aggregates it, and makes it available to participants. Liquidity Observatory data is used to construct liquidity surfaces.



## 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**



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