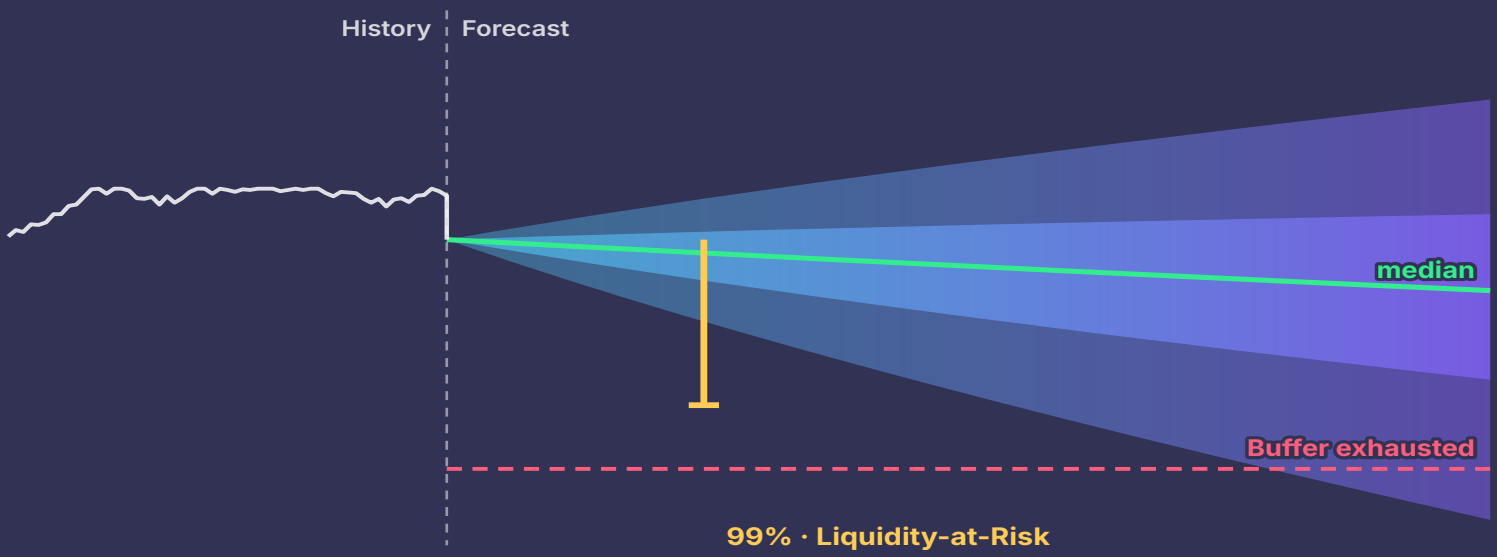
izi Risk

LIQUIDITY-RISK MODEL · IZIRISK HUB

How many days would your buffer last?

Load the daily balances of the deposits and liquid assets of any number of banks, simulate thousands of correlated futures, stress a deposit run, check the model against history and get AI reports with their charts — all in your browser.



Treasury and ALM
Buffers sized on your own deposit behaviour

Risk and supervision
Evidence for ALCO, audit and the supervisor

Banking groups
Every bank, and the group, side by side

THE PROBLEM

A ratio on a quiet day says nothing about a run.

Liquidity is usually judged with a ratio taken on one date, against outflow rates fixed in advance. That snapshot hides how a bank's own deposits really move — payroll days, month-end sweeps, the weeks when money leaves together.

WHAT A RATIO SHOWS

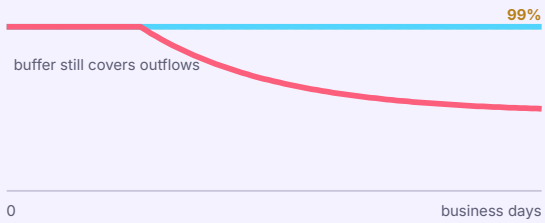
Liquid assets today

Outflow at fixed rates

Ratio: one number, one date

One figure for one day, with the same outflow assumptions for a retail bank and a corporate one.

WHAT THE SIMULATION SHOWS



For every day ahead, the probability that the buffer still covers what has left — and the day it stops being reliable.

1 **Runs are not in the history**
Two years of data rarely contain a run; stress overlays add one, on the same random numbers.

2 **The calendar hides the risk**
Month-end sweeps and payroll make ordinary days look volatile and real outflows look ordinary.

3 **The group hides the weakest bank**
Pooled liquidity looks ample while one bank's buffer runs out first.

HOW IT WORKS

From daily balances to decisions, on one page of iziRisk Hub

Loads and cleans
One table — date, bank, account type, balance — with headers in any of five languages; a quality check repairs gaps.

Calibrates
Calendar effects and a model of each series: a filtered bootstrap of its own history, a random walk or mean reversion.

Simulates
Thousands of correlated paths of every deposit series, summed by bank and for the group, against each buffer.

Stresses and checks
Deposit runs, a walk-forward backtest with the Basel traffic light, and Miller–Orr cash limits.

⚠ **Why the joint draw matters.** Banks lose deposits on the same bad days. The bootstrap draws the same historical day for every series at once, so the joint stress days stay exactly as they happened — without assuming a bell curve.

🔒 **Your data stays with you.** The simulation runs in your browser: daily balances are never uploaded. Only the figures you choose to send go to the AI reports.

LIQUIDITY, MEASURED DAY BY DAY

From the deposits you hold to the days the buffer lasts.

Every measure is read off thousands of simulated futures, for each bank and for the group, at the confidence level you choose.

3 deposit models, fitted series by series

4 stress scenarios, plus your own

4 AI reports, as PDF or PowerPoint

5 languages: EN, ES, PT, FR, DE

The measures

Liquidity-at-Risk
The largest cumulative outflow reached within the stress horizon, at 99%: what the buffer has to meet.

Coverage ratio
Buffer ÷ LaR. Below 1, the buffer does not cover the stressed outflow.

Core deposits
The balance that stays for the whole year with 99% confidence; the rest is volatile.

Survival horizon
The first day on which the probability that the buffer is exhausted reaches 1%.

Stress, validation and cash management

Stress tests
Idiosyncratic, systemic and severe runs, or your own: day-one outflow, daily run-off and volatility, on any bank.

Backtest
Walk-forward test of the 1-day outflow per bank: Kupiec, Christoffersen and the Basel traffic light.

Indicative LCR
Buffer against deposits times the run-off rates you set — clearly marked as not the regulatory ratio.

Miller–Orr
Operating-account limits, checked on simulated flows that keep the trend and the calendar.

A worked example: five banks, two years (synthetic demo)

BANK	DEPOSITS (BN)	BUFFER (BN)	LAR, 22 DAYS	COVERAGE	CORE	SURVIVAL
Alfa Universal	9.81	2.12	1.8%	11.7×	96.1%	> 250 days
Beta Commercial	4.61	0.90	9.8%	2.0×	78.2%	175 days
Gamma Retail	3.90	0.59	2.4%	6.4×	94.9%	> 250 days
Delta Digital	1.70	0.26	8.0%	1.9×	87.2%	> 250 days
Épsilon Cooperative	0.46	0.09	2.8%	6.9×	91.4%	> 250 days

A severe run at Delta Digital — 25% of its deposits on day one, then 2% a day — takes its coverage from 1.9× to 0.36× and exhausts its buffer on the first day.

RESULTS AND REPORTS

Every result answers an ALCO question

Deposits over the horizon
How far can deposits fall in a bad month, and in a bad year?

Peak outflow against the buffer
Does the buffer cover the worst 22 days, at 99%?

Survival curve
Day by day, how likely is the buffer to still be there?

Bank by bank
Which bank runs out first, and which account type drives it?

Stress scenarios
What does a run on one bank, or on all, do to coverage and survival?

Backtest
Did the model's daily outflow forecasts hold up against what happened?

Cash limits
Where should the operating account's lower limit, return point and upper limit sit?

Help in five languages
A narrated guided tour and an example file to start from.

Four AI reports, one for each reader — each as PDF or PowerPoint, with its charts

Technical
For treasury, ALM and validators: every figure, the calibration, stress, backtest and limitations.

Regulatory
For supervisors and audit: scope, assumptions, LCR and stress context, outcomes analysis and numbered findings.

Executive
For ALCO and the board: does the buffer hold, which bank is weakest, and what to do.

Plain-language
For any reader: could the banks pay their depositors back, in everyday words.

Plans

Free
The five-bank demo with every step but the backtest and custom stress, up to 200 iterations and 10 AI reports, to learn the method.

Professional
Your own balances, up to 100,000 iterations, backtest, custom stress, cash management and 150 AI reports a month.

Enterprise
Professional for every seat of your organisation, with roles and two-factor sign-in.

Next step: a demo on your banks

We load a few months of your daily balances, simulate your deposits against your buffers and walk you through Liquidity-at-Risk, coverage, core deposits, a deposit run, the backtest and the AI reports. Your team sees the method on banks it already knows.

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