March 2024

Liquidity Risk Management

Executive summary of the Liquidity Risk Manual

Energy Traders Europe Manual on Liquidity Risk Management

In December 2024, the Credit & Collateral Working Group of Energy Traders Europe has drafted the Liquidity Risk Management Manual. The purpose of the manual is to provide a clear and actionable framework for managing cash liquidity risk stemming from margin requirements in the energy sector.

01 — **Introduction**

02 — **Concept of Liquidity Risk**

03 — **Measurement of Liquidity Risk**

04 — **Governance of Liquidity Risk**

05 — **Optimization & Steering of Liquidity Risk**

Starting with an introductory chapter, the manual outlines, in the next four chapters, guidelines for Energy Market Participants (EMPs) to establish robust liquidity management processes that can withstand market fluctuations and ensure continued operational resilience.

02 Concept of Liquidity Risk

The 2022 energy crisis highlighted the essential role of effective liquidity risk management in ensuring EMP's stability, resilience and ability to balance financial risks. Robust liquidity risk management is crucial for EMPs to navigate volatility, sustain performance, and ensure security of energy supply.

What is cash liquidity risk?

Cash liquidity risk for EMP's is defined as the risk of insufficient cash reserves to meet the collateral requirements for centrally cleared positions and collateralized OTC transactions in a timely manner.

Why does cash liquidity risk need to be managed?

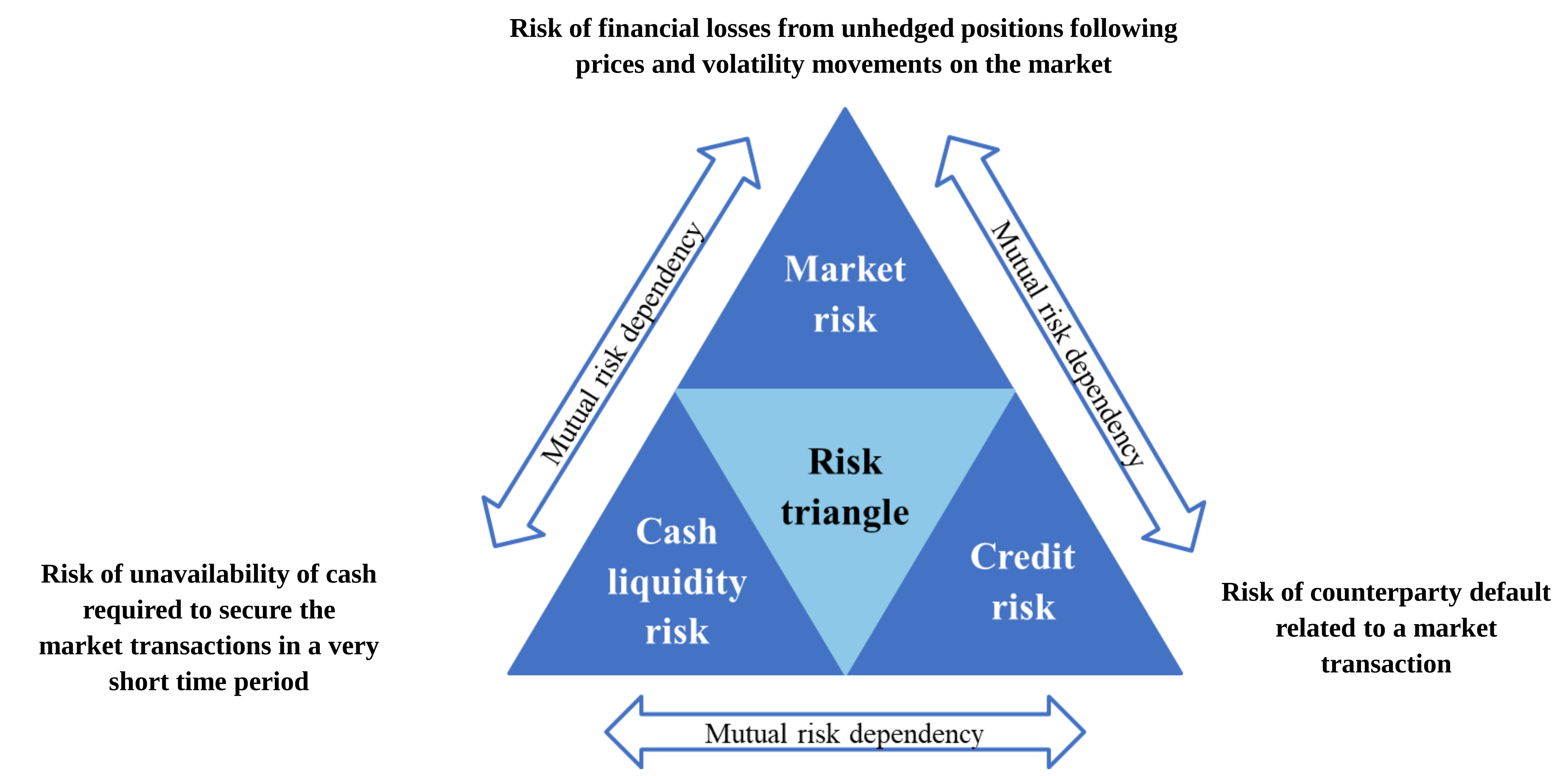
The repercussions of cash liquidity risk stemming from margining and collateral requirements can be significant. Organizations may face operational disruptions, increased costs of capital, and challenges in maintaining financial stability. Considering these risks, effective liquidity management is crucial.

What are the main tools used by organizations to manage cash liquidity risk?

- Monitoring & Reporting
- Contingency Planning
- Stress testing & scenario analysis
- Efficient working capital management
- Diversification of funding
- Cash reserves
- Collaboration with financial institutions

The risk triangle represents a constant trade-off between risk types

Each trading decision impacts multiple dimensions of risk. For robust financial management, EMPs must balance the triangle by implementing efficient market channel steering.



	Not entering into hedging contract	OTC hedge Non-CSA / CSA	Hedging on exchange/ cleared markets
Market Risk	↑	↓ ↓	↓
Credit Risk	—	↑ ↗	↗
Cash Liquidity Risk	—	— ↗	↑

03 Measurement of Liquidity Risk

To create a picture of an EMPs current liquidity risk, it is crucial to understand the current and potential future margined position of the EMPs portfolio.

These are the 4 key steps to measuring EMPs liquidity risk

Data Basis

01 — **Achieve transparency on the total margined position**

02 — **Ensure accurate margin reconciliation and contribution views**

Measurement

03 — **Deploy Margin at Risk model (MaR)** | **Establish EMP specific Single Liquidity Risk Metric (SLRM)**

04 — **Stress test based on historical and hypothetical stress testing scenarios**

Margin at Risk (MaR) – allows EMPs to gain an overview of the magnitude of short-term liquidity risk

- Leading practice to use the MaR model as it is based on existing VaR models in place for market risk, but enhancements are required to establish meaningful MaR.
- Enhancements to make the MaR more reflective of reality may include adjustment of lookback period, adjustment of confidence level, introduction of correlation break assumptions, combining multiple metrics, calculation on multiple forecast time horizons.

Single Liquidity Risk Metric (SLRM) – is a combination of multiple risk metrics for the ease of management and communication of liquidity risk

- The composition of the SLRM will look different for each EMP, as it is tailored to their specific liquidity risk exposure.

Stress Testing scenarios – allow the comparison of the term structure of funding needs under stressed conditions with the term structure of available funding

- Should include historical, hypothetical and reverse stress tests.
- Historical stress tests are a good first step to scale past price changes to current price levels and assess their impact.
- Hypothetical stress test should be run to ensure testing EMPs robustness against stress events with shocks of higher magnitude than in the past.

04 Governance of Liquidity Risk

To ensure the management of liquidity risk the establishment of a fit-for-purpose governance and organizational set-up is key.

To ensure a fit-for-purpose governance set-up to manage cash liquidity risk the following categories need to be defined by EMPs

Stakeholders

- **Stakeholders' roles and responsibilities need to be defined and formalized in accordance with Segregation of Duties principles**
- **Typical stakeholders involved are:**
  - The Board of Management
  - Specialized Liquidity Risk Management teams
  - Treasury department
  - Business units/ trading desks
  - Audit units
  - Back Office
- **Effective liquidity risk management is characterized by strong collaboration between all stakeholders**

Organisational set-ups

- **EMPs generally establish dedicated teams responsible for managing the liquidity position**
- **Typical adaptations observed during the crisis in 2022 are:**
  - Enhancement of governance by adjustment of risk mandates
  - Improvement of Liquidity Risk measurement and transparency
  - Formation of "Liquidity Risk Forum" to steer and optimize
  - Hiring of additional staff for liquidity management
- **Dynamic adaptations of the organizational set up are key**
- **No one-size-fits-all org structure for all EMPs, but any setup should aim to optimize liquidity and ensure solvency**

Risk appetite and limit setting

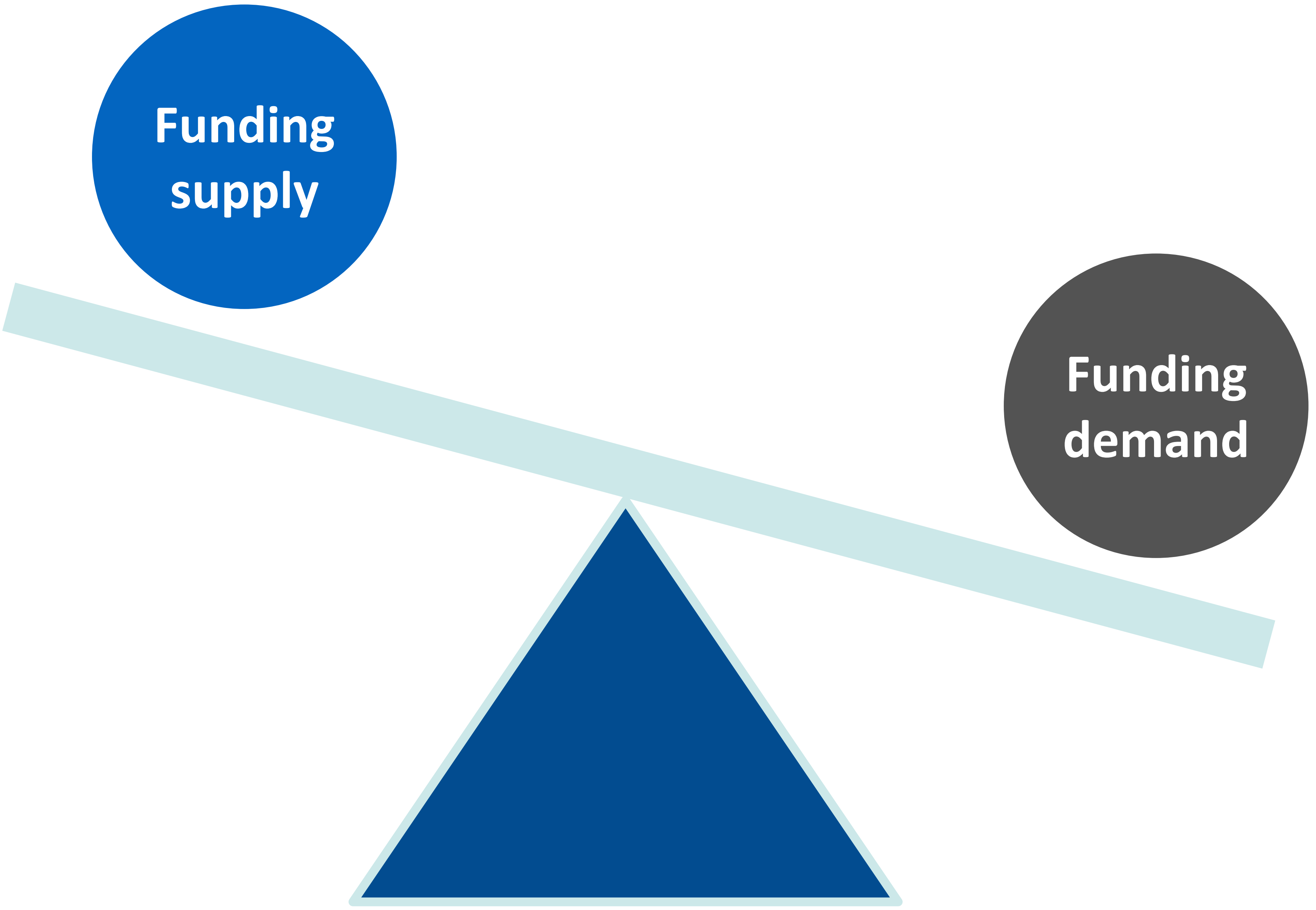
- **Risk appetite setting for liquidity risk lies in the responsibility of the Board of Management**
- **The established risk appetite serves as a guideline for decision-making and forms the foundation for developing policies and procedures**
- **Organisations should review the risk appetite and tolerance as well as size their liquidity risk limits at least annually**
- **Limit size may be impacted by rating classifications, Key Performance Indicators' (KPIs), or financial covenants**

Reporting

- **Reporting, its granularity and KPI's need to be consistent with stakeholder needs and ensure transparency for decision making**
- **Possible reporting dimensions are** *Time, Channel, Portfolio hierarchy* **and** *Commodity*
- **Ability to allocate margining requirements to an as granular level as possible is key to understand risk contributors and managing the risk in the portfolio**
- **Reports should be based on current and stressed market conditions to enable assess-ment of EMPs resilience**

05 Optimization & Steering of Liquidity Risk (1/3)

In order to manage liquidity risk, organizations must include this into their yearly funding planning and optimize and steer liquidity demand and supply according to the actual situation.



The balancing of funding supply with funding demand to achieve EMPs business objectives is key to optimising opportunity and lending cost

Optimizing funding supply

Funding

- **Funding planning** needs to be set up for projected liquidity demand and updated regularly to prevent suboptimal capital allocation
- It is important to **assess funding robustness** and grouping funding sources into **"stable" and "unstable" of which former are unconditionally available (even in stress) and latter may not be available**

Contingency

- **Contingency planning** is performed to support navigating complex and volatile energy markets and involves development of preventative measures and response strategies to address risks and uncertainties
- It should **anticipate potential liquidity strain** and **enable taking pro-active steps to mitigate risks** and ensure maintenance of financial position, in challenging market conditions

- **Liquidity buffer** determines the reserve for short-term liquidity needs of EMPs under stressed market conditions

- **Scenario analysis** is the tool that EMP's can use to identify **liquidity stress points** and **determine the funding gap**

Action plan

05 Optimization & Steering of Liquidity Risk (2/3)

In order to manage liquidity risk, organizations must include this into their yearly funding planning and optimize and steer liquidity demand and supply according to the actual situation.

Optimizing funding demand

Exchange

- **Optimizing IM across exchanges** considers whether positions in the same commodity and delivery period are held at two exchanges which can offset each other and be transferred
- Analysis needs to consider if the move would **reduce IM balance across both exchange accounts**

EFPs

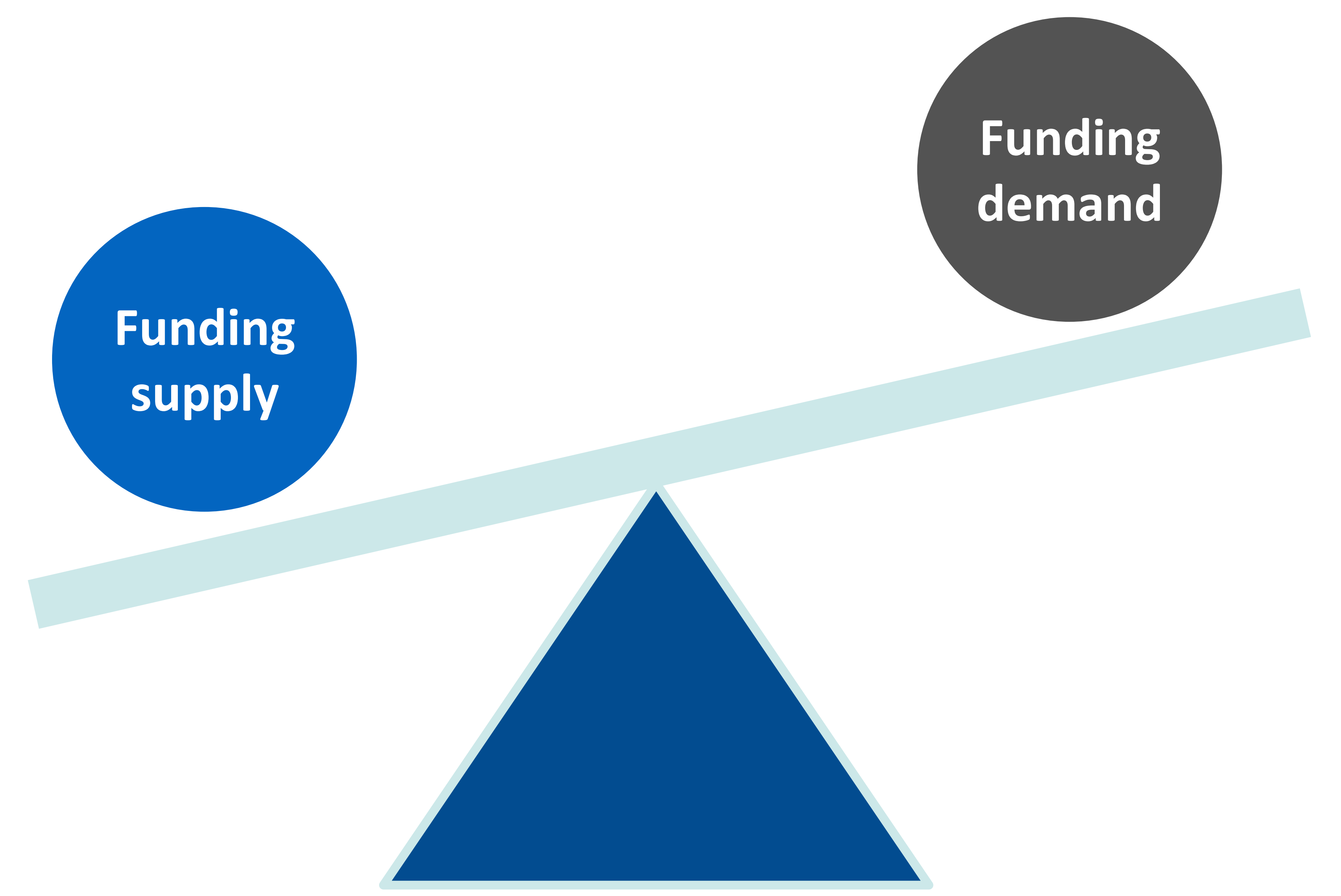
- **An Exchange for Physical (EFP) involves 3 counterparties,** the EMP, the clearing house and counterparty C. The EFP transfers EMP's position towards the clearing house to counterparty C.
- With an EFP, **IM, risk of increasing IM and risk of increasing VM** can be **reduced**
- Performing an EFP **comes with a trade-off** to increased **credit risk**

Triangulation

- **Triangulations involve three counterparties** and can be organized directly or via brokers or other specialized firms
- **Triangulation involves replacing the clearing house with another EMP** and is market-risk neutral for all three parties however reducing net positions between two parties, affecting their bilateral credit risk

Charges

- The purpose of applying charges **is to limit risk, and incentivize the proactive management of liquidity risk**
- Charging for cash liquidity risk should only be applied **if charging for the other financial risk types (market risk, credit risk)** is in place **to ensure the risk triangle is not disbalanced**



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05 Optimization & Steering of Liquidity Risk (3/3)

In order to manage liquidity risk, organizations must include this into their yearly funding planning and optimize and steer liquidity demand and supply according to the actual situation.

Optimising by application of charges

Principles

- **Holistic optimization of the risk triangle** can be achieved if all risk faced are assigned a price tag
- The **purpose of charging is to limit risk** i.e. the materialization of future negative cash balances
- **Charging for liquidity risk** should promote accountability and **incentivize proactive management of this risk type**

Elements of charges

- Expected **cash utilization from VM (futures) or MtM** (collateralized bilateral transactions)
- Expected **cash effect for settlement** exposure of collateralized physically settling transactions
- Transaction's marginal **contribution to the liquidity buffer**
- Transaction's marginal **contribution to the IM (futures)**

Challenges of implementing

- **Counterparties (CSA)** in brokered screen trading are **unknown** prior to transaction
- Calculation parameters for CSA (e.g. rating thresholds) make **calculations non-linear and non-deterministic**
- Portfolio **evolution over time is not known**, therefore the effect of **marginal contribution** of transaction is **unknown**
- **Future** set of **market prices**, **volatilities** and **IM parameters** are unknown at transaction closing
- Definition of **fair allocation models** to allocate cost/ benefit **can be complex** as these depend on EMPs trading operating models and book structures