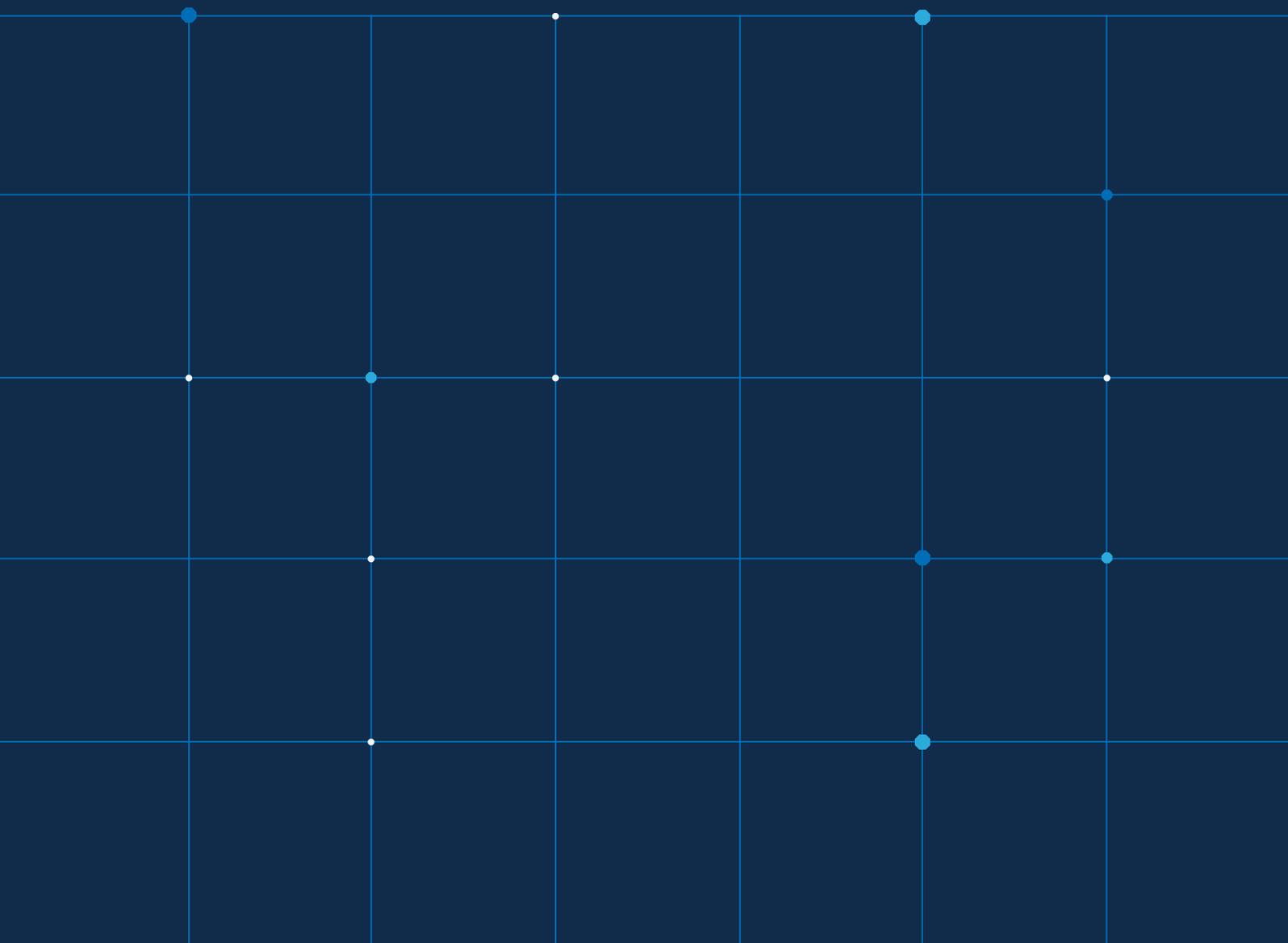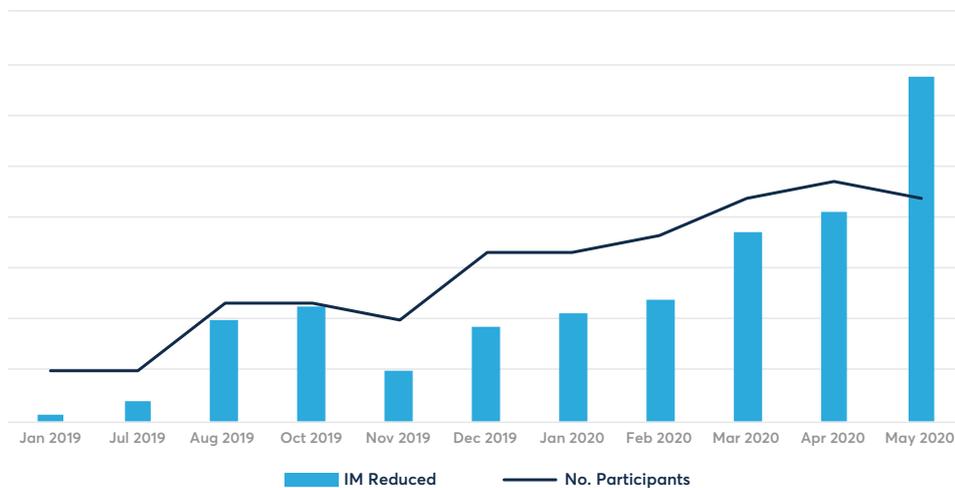# TriOptima

CME Group

triBalance
Equity

triBalance is a risk mitigation service offered by TriOptima that reduces outstanding Initial Margin (IM) exposures and, as a result, the cost of funding. Bilateral counterparty risk exposures and IM requirements (SIMM) are optimized by adding new risk mitigating transactions that offset outstanding counterparty risk. In addition to reducing the cost of funding, optimized bilateral risk exposures will also reduce market contagion and mitigate systemic risk.
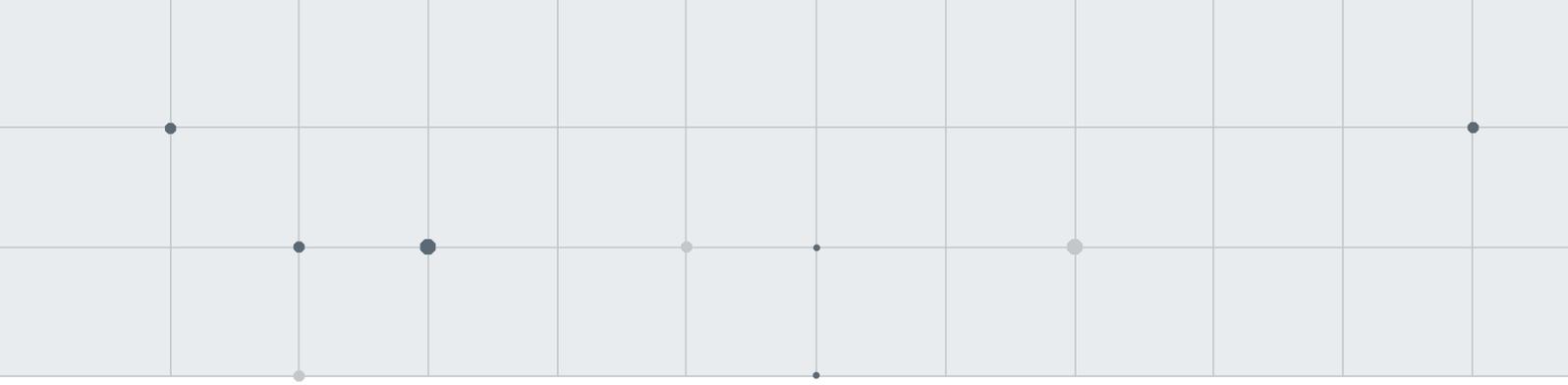
triBalance Equity in short

- Bilateral (SIMM[1]) IM is reduced by adding equity index swaps and single equity stock swaps that address delta.
- Enables reduction of bilateral IM exposures facing all major dealers.
- Full support for indices represented either as SIMM equity bucket 11 exposure or as decomposed risk.
- Automatic data feed from AcadiaSoft for uncleared IM risk exposures.
- Monthly cycles.

triBalance equity growth

| IM Reduced | No. Participants |

Chart x-axis labels: Jan 2019, Jul 2019, Aug 2019, Oct 2019, Nov 2019, Dec 2019, Jan 2020, Feb 2020, Mar 2020, Apr 2020, May 2020

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[1] Licensed from International Swaps and Derivatives Association, Inc., All Rights Reserved

Taking part in triBalance

A streamlined process minimizes the effort of participation by utilizing automatic input and output data feeds.

1. Sign up to a triBalance cycle or automatically sign up for future cycles.

2. Submit tolerances in a spreadsheet that can be adjusted and reused between cycles.

3. Exposure data is pulled automatically from AcadiaSoft at 11 am GMT.

4. TriOptima generates a triBalance proposal which is published on the secure triBalance website at 1 pm GMT.

5. The proposal is accepted and transactions executed bilaterally, directly between counterparties, typically by 3 pm GMT. Following execution, these transactions will reduce firms' IM exposure and the cost of trading.
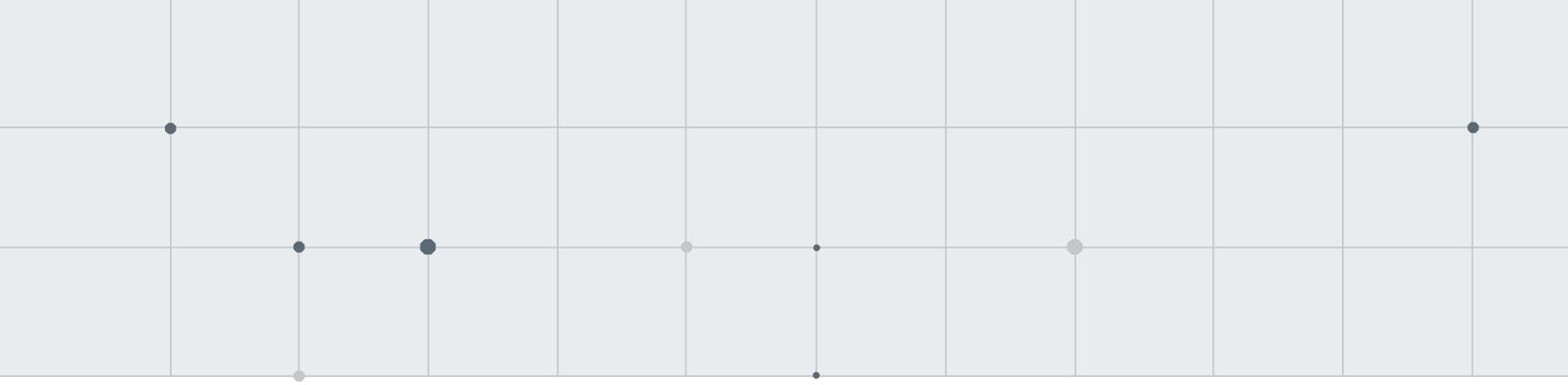
Getting ready

To join the triBalance network, complete a service agreement, test connectivity and you're ready to go.

- Execute the triBalance service agreement.
- Ensure that you submit risk expiry date in your daily data upload to AcadiaSoft.
- Check that all approvals to book price return equity index and single name swaps are in place.
- Review and ensure that you have MCAs (Master Confirmation Agreements) in place with all relevant counterparties, and that these cover price return swaps.
- Ensure that the proposal can be verified and approved within the timeline.
- Discuss how trades will be booked internally with your equity middle office teams.
- Consider setting up a separate trading book to house new risk mitigating triBalance transactions.

REDUCE YOUR COST OF TRADING >
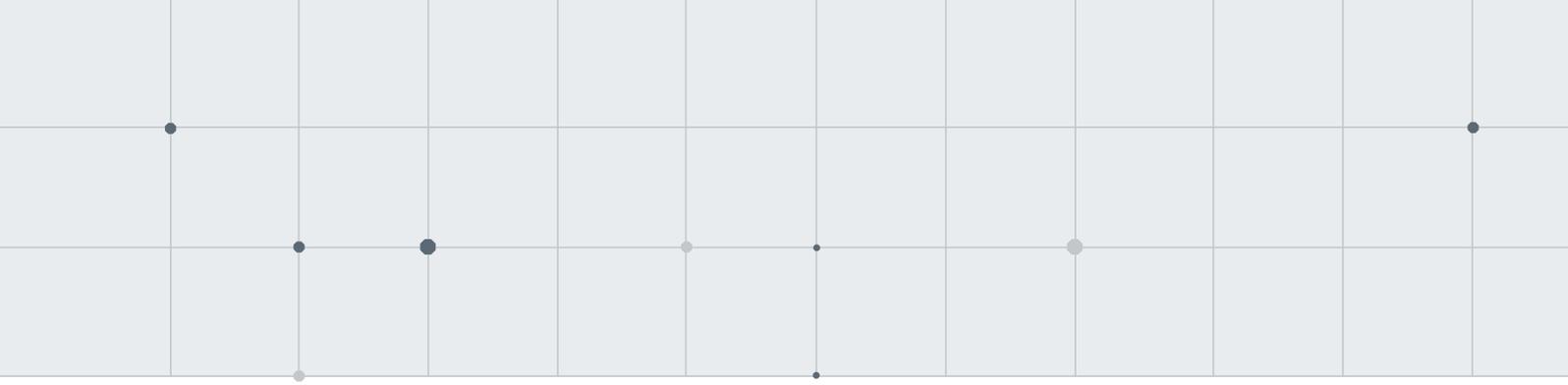
Methodology

The triBalance algorithm uses the SIMM formula to optimize the bilateral IM exposure, whilst keeping each participant's market risk unchanged.

To maintain an efficient ratio between IM reduction and notional/number of trades added, the triBalance algorithm incorporates a "cost of notional". This ensures that only the most effective offsetting transactions from a balance sheet and operational standpoint are added.

triBalance pulls data that has been submitted to AcadiaSoft and a net exposure per qualifier, risk type and counterparty is calculated. Projected next day net exposures are used as input for the optimization because the new transactions will not impact today's IM calls, but tomorrow's. The benefit of participating in a triBalance run will materialize in the morning following the cycle, when IM calls are calculated and exchanged.

triBalance has full support for decomposition of equity index exposures which can be configured on a bilateral basis. This determines whether the SIMM risk from an equity index should be allocated to the index name itself (SIMM bucket 11) or to the underlying constituents of the index.

triBalance optimizes secured IM exposures across all participants to achieve the most efficient result. All participants are interested in reducing the amount of IM that they expect to pledge, and optimizing on the counterparties' secured IM is the most efficient way to do this, as this is what the actual margin call will be based on.

Regulation typically requires counterparties to exchange margin for exposures with a counterparty group over a certain threshold. For instance, assuming a threshold of 50mm (EUR or USD) reducing a bilateral IM exposure from 80mm to 60mm may be considered differently, from a benefits case, from reducing an IM exposure from 40mm to 20mm. Staying below the 50mm threshold over time will enable firms to continue trading without having to worry about the IM impact. Applicable thresholds per individual entity can be specified by each participant and will be considered when optimizing the outstanding IM exposure.
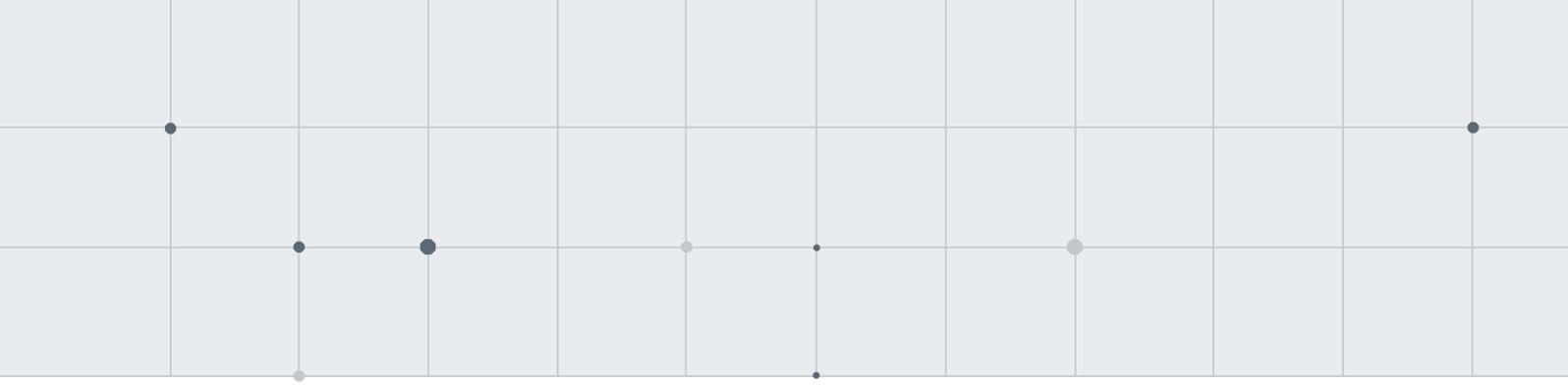
Risk mitigating triBalance transactions

triBalance suggest a set of price return equity swaps to mitigate the counterparty risk exposures and reduce the outstanding IM amounts. The equity swaps will either reference an underlying equity Index or an underlying single name share. Price return equity swaps are used to avoid operational and tax related issues from dividend payments and corporate event in the underlying name. The proposed trades will be risk-neutral per underlying name, i.e. each firm will buy and sell the same amount of notional across all their counterparties.

The major equity indices are eligible including S&P 500, Euro Stoxx 50, Nikkei 25, DAX, CAC 40 and FTSE 100. Where applicable both the Total Return (TR) and Price Return (PR) versions of an index are eligible. The SIMM risk of an index will be allocated to either SIMM bucket 11 or to each underlying constituent, depending on the decomposition setup.

The eligible set of underlying single name shares is determined ahead of each triBalance equity run. The single name shares are chosen based on the rebalancing potential amongst the participating firms.

The proposed price return equity swaps will have a maturity of about four or five weeks depending on when the next cycle is scheduled. The return on the underlying equity is swapped against 1M IBOR. The final valuation (fixing) of the equity leg will coincide with the next triBalance equity run. This will ensure that a new transaction can be entered on the same day, which will keep the counterparty risk exposure and the outstanding IM amounts at a steady low level.

Tolerances

To enable each participant to control their outcome of the optimization, TriOptima supports an array of tolerances. These include an IM tolerance to control the IM impact, a delta tolerance to control the delta impact facing a counterparty, and trading restrictions that are used to prevent new transactions from being proposed in certain underlying indices or facing certain counterparties. Please contact the TriOptima team for any specific considerations.
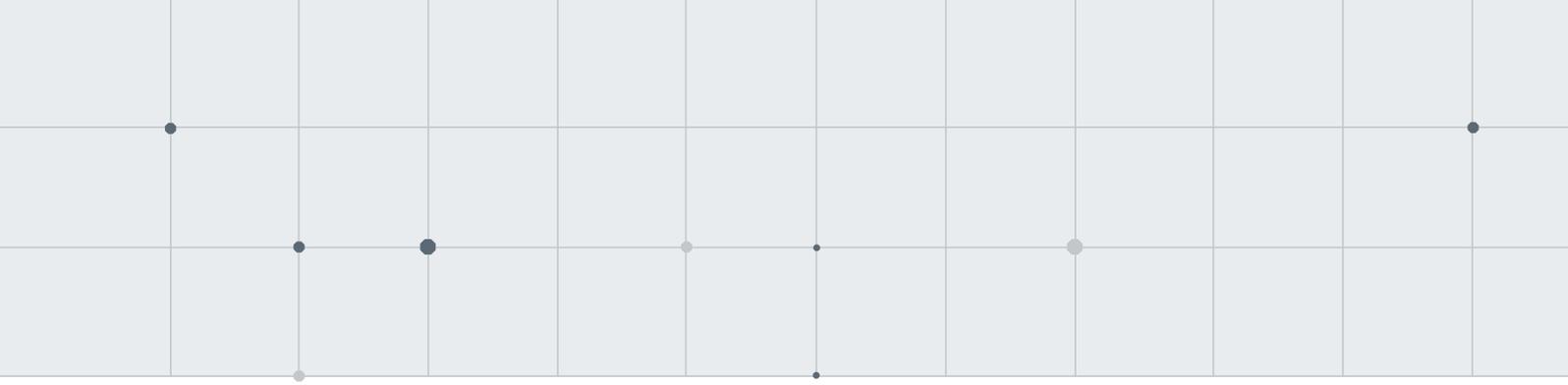
triBalance proposal

The triBalance proposal is a .csv file that contains one row per new transaction proposed. All the primary economic terms, such as currency, counterparty, expiry date, rate index, etc. are specified for each transaction. This is the file that should be used for primary verification of the proposal before acceptance is submitted between counterparties.

Three additional proposal annex files are also published to help verify and analyze the results.

1. A **.pdf summary report** containing the high-level IM reduction numbers per counterparty and overall.

2. A **.csv IM impact report** containing the IM impact in each of the nodes in the SIMM tree.

3. A **.csv sensitivities report in CRIF** providing the risk sensitivities for all the new transactions proposed in the triBalance proposal.

Acceptance

The e-mail notification each participant receives when a triBalance proposal is available includes Annexes to communicate proposal acceptance status.[2]

Annex A: Proposal accepted by participant

Annex B: Additional time requested by participant for verification

Annex C: Proposal rejected by participant

A list of participants' e-mail addresses is included next to Annex A, B and C. When all participants have sent Annex A to each other, the triBalance transactions are considered executed. The e-mails and the main triBalance proposal .csv file together constitute the trade confirmation.

Trade booking

The most common process to book any new triBalance transactions is to feed an internal bulk booking tool the triBalance proposal .csv file, or just book the transactions manually.

TriOptima also supports STP trade booking via MarkitWire. Routing information, including BIC, MW id, traders' details, MW user address etc., must be provided to TriOptima before it is possible to go live. Testing the connection is also required, typically first in UAT followed by production.

Security above all

DATA SECURITY	ISO 27001 certified since 2009
LEGAL CERTAINTY	Robust legal framework
24/5 SERVICE	Our triReduce / triBalance team is working for you around the clock in Tokyo, Singapore, Stockholm, London and New York
CONTROL	Stringent controls to protect all participants in compression and optimization runs
INTEGRITY	16 years of experience in delivering fair and impartial compression results for more than 260 regular clients

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[2] *TriOptima is prevented from administering the acceptance process due to regulation.*
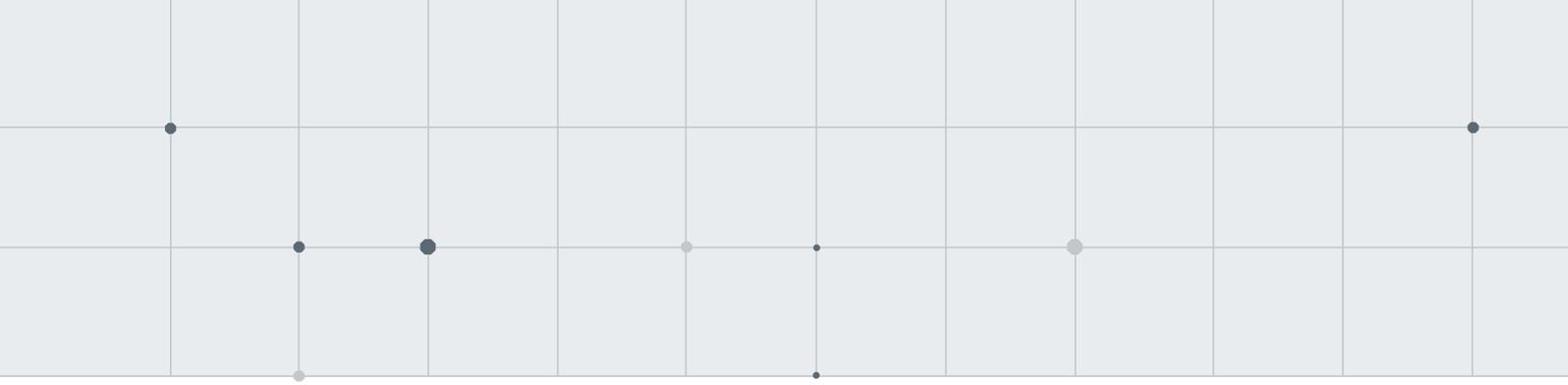
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