Rotman School of Management
UNIVERSITY OF TORONTO

Rotman
INTERACTIVE TRADER

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INTERNATIONAL TRADING COMPETITION

2026

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About RITC

A WARM WELCOME FROM THE ROTMAN COMMUNITY

The Rotman International Trading Competition (RITC) is a one-of-a-kind event hosted annually by the Rotman School of Management at the University of Toronto, in the heart of one of North America's largest financial centres. Now in its 22nd year, RITC has grown into the world's largest simulated market challenge – bringing together teams of students and faculty advisors from 35+ leading universities around the globe.

The competition is structured around the Rotman Interactive Trader (RIT) market simulator platform – an electronic, order-driven exchange that matches buyers and sellers in real time plus RIT Decision Cases that run on that platform. Each decision case places teams into a realistic market environment where they must identify risks and opportunities, design and execute strategies, and manage portfolio and risk objectives under uncertainty. Throughout the event, participants will be challenged by a wide range of market regimes, changing information, and evolving constraints.

For RITC 2026, we are excited to introduce a new Merger Arbitrage case, expanding the competition's coverage of event-driven trading and the practical mechanics of deal risk, spreads, timing, and execution. We are also refreshing and modernizing two cornerstone experiences: a revamped Volatility Trading case and an updated Algorithmic Market Making case – both redesigned to better reflect today's market microstructure, real-world decision tradeoffs, and the skills students need to operate in fast-moving environments.

We are excited to welcome everyone to Toronto. RITC 2026 is designed to capture the full energy of an in-person competition, bringing together participants from around the world for an immersive experience of live trading, team collaboration, and community-building at Rotman. We look forward to the conversations, connections, and competitive spirit that only an in-person event can deliver.

This Case Package provides an overview of the content and structure of RITC 2026. We're thrilled to have you with us – welcome, and best of luck!

Case Summaries

SOCIAL OUTCRY CASE

The opening event of the competition gives participants their first opportunity to connect with sponsors, faculty members, and other teams in this fun start of the Rotman International Trading Competition. Participants will be trading against each other and against experienced professionals from the industry, trying to make their case against the professors, and showcasing their outcry skills by making fast and bold trading decisions based on select news information.

LIQUIDITY RISK CASE

The Liquidity Risk Case challenges participants to put their critical thinking and analytical abilities to test in an environment that requires them to evaluate the liquidity risk associated with large tender offers. Participants will be faced with multiple tender offers throughout the case. This will require participants to make rapid judgments on the profitability, subsequent acceptance and execution, or rejection, of each offer. Profits can be generated by taking advantage of price differentials between market prices and prices offered in the private tenders. Once any tender has been accepted, participants should aim to efficiently close out their large positions to maximize returns and minimize liquidity and market risks.

VOLATILITY TRADING CASE

The Volatility Trading Case gives participants the opportunity to generate profits by implementing options strategies to trade volatility. The underlying asset of the options is a non-dividend paying Exchange Traded Fund ("ETF") called RTM that tracks a major stock index. Participants will be able to trade shares of the ETF and 1-month call/put options at 10 different strike prices. Information including the ETF price, option prices, and news releases will be provided. Participants are encouraged to use the provided information to identify mispricing opportunities and construct delta-hedged options trading strategies accordingly.

GBE Energy ELECTRICITY TRADING CASE

The GBE Energy Electricity Trading Case provides the opportunity for participants to work in a role-based team environment to engage in an electricity trading market controlled by a strict regulatory policy. Participants are required to forecast supply and demand for electricity and execute strategies accordingly while reacting to prevailing market events. Each team will participate in a closed supply and demand market for electricity by producing it using power plant assets and distributing it to customers and will also have access to a forward market. Through the full cycle of electricity markets, participants will need to dynamically formulate their role-based strategies and optimally perform trade executions.

MERGER ARBITRAGE CASE

The Merger Arbitrage Case immerses participants in an event-driven equity market shaped by corporate merger and acquisition (M&A) activity. Participants will trade shares associated with five announced potential deals, each consisting of a target and an acquirer, with deal structures that include all-cash offers, stock-for-stock exchanges, and mixed consideration. Throughout the case, news releases will update market perceptions regarding the likelihood of deal completion, and participants are expected to interpret these updates to price deal spreads, construct hedged positions, and manage downside risk from deal delays or failure.

ALGORITHMIC MARKET MAKING CASE

The Algorithmic Market Making Case is designed to challenge participants' programming skills by developing algorithms using the RIT API to automate trading strategies and react to changing market conditions driven by news releases. Throughout the case, these algorithms will need to provide liquidity while managing risk from sudden price movements. Participants must balance profit-seeking market making activities with strict position limits. Due to the high-frequency nature of the case, participants are encouraged to develop algorithms that can adapt to rapid changes in market dynamics using their selected programming languages.

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Social Outcry Case

Rotman International Trading Competition 2026

OVERVIEW

The objective of the Social Outcry Case is to allow participants to interact ("break the ice") and to recognize how far financial markets have evolved technologically. The Social Outcry will be an exciting way for participants, professors, and sponsors to interact with one another. Participants will be ranked based on their profits at the end of the case. Participants' performance in the Social Outcry Case will not count towards their final scoring in RITC.

DESCRIPTION

Each participant will start the session with a neutral futures position. Participants are allowed to go long (buy) or go short (sell). All trades will be settled at the closing spot price and the trading heat for the Social Outcry Case will be 30 minutes.

MARKET DYNAMICS

Participants will trade futures contracts on an index, the RT100. The futures price will be determined by the market's transactions while the spot price will follow a stochastic path subject to influence from qualitative news announcements displayed on a screen. News announcements will be displayed one at a time, and each news release will have an uncertain length and effect. Favourable news will result in an increase in the spot price while unfavourable news will cause a decrease in the spot price. These reactions may occur instantly or with lags. Participants are expected to trade based on their interpretation and expectation of market reactions to the news information.

TRADING LIMITS AND TRANSACTION COSTS

There are no trading commissions for the Social Outcry Case. Participants are allowed to trade a maximum of 5 contracts per trade/ticket. The contract multiplier of RT100 futures is 10. There are no limits to the net position that participants can have.

RULES AND RESPONSIBILITIES

The following rules apply throughout the Social Outcry Case:

- Market agents are RITC staff members at the front of the outcry pit collecting tickets.
- Once parties have verbally committed to a trade, they are required to transact.
- All tickets must be filled out completely and legibly, and verified by both parties. Illegible tickets will be ignored by the market agents!
- Both transacting parties are responsible for making sure that the white portion of the ticket is received by the market agent. Both trading parties must walk the ticket up to the market agent for the ticket to be accepted. The transaction will **not** be processed if the white portion is not submitted or is damaged.
- Only the white portion of the ticket will be accepted by the market agent; trading receipts (pink and yellow portions) are for the participants' records only.
- RITC staff reserve the right to break any unreasonable trades.

- Any breaches of the above stated rules and responsibilities are to be reported to RITC Staff immediately.
- All communications must be done in English.

POSITION CLOSE-OUT AND CASE SCORING

Each participant's trades will be settled at the close of trading based on the final spot price. The ranking is based on the total profit and loss (P&L) from the trading session. There are no commissions or fines in the Social Outcry Case.

Example:
Throughout the trading session, one participant has made the following trades:

Buy 2 contracts @ 998
Sell 5 contracts @ 1007
Buy 1 contract @ 1004

The market closed with the spot price at 1000. The P&L for this participant is calculated as follows:

2 long contracts @ 998
$P\&L$: $(1000 - 998) \times 2 \times \$10 \ = \ \$40$

5 short contracts @ 1007
$P\&L$: $(1000 - 1007) \times (-5) \times \$10 \ = \ \$350$

1 long contract @ 1004
$P\&L$: $(1000 - 1004) \times 1 \times \$10 \ = \ -\$40$

The participant has made a total P&L of $350.

COMPLETE TRANSACTION AND OUTCRY LANGUAGE EXAMPLE

To find the market, participants simply yell "What's the market". If someone wants to make the market on the bid side, they can answer "bid 50" meaning they wants to buy at a price ending with 50 (e.g. 950 or 1050), whichever is closest to the last trade. If someone wants to make the market on the ask side, they will yell "at 50" meaning they wants to sell at a price ending with 50 (e.g. 950 or 1050), whichever is closest to the last price. Note that so far, no quantity has been declared; only two-or three-digits representing price are required when calling the bid or ask. To complete a trade, someone willing to transact at that price can simply answer "bought two" to the person selling. The seller's response must then be: "sold two" (or any other quantity below 2, but not 0, at the seller's discretion). Please note that the "market maker" (participant announcing the price) gets to decide the quantity traded up to a maximum of the quantity requested by the "market taker" (participant taking the price). **The maximum limit on size per contract is 5**. After the

negotiations are complete, the buyer and seller will fill out a trade ticket which must be given to the ticket taker, who will accept the white portion of the ticket to properly submit the trade.

A complete transaction could run as follows:

Trader 1	"What's the market?"
Trader 2	"Bid 70, at 72" or "70 at 72", (bid 1070, ask 1072, this trader wants to buy and sell)
Trader 3	"At 71" (the new market is 1071)
Trader 1 to Trader 3	"Bought 5" (they wants to buy 5 contracts at 1071)
Trader 3 to Trader 1	"Sold 3" (Although trader 1 wanted to buy 5 contracts, trader 3 only wants to sell 3 contracts so trader 1 must accept the three contracts).
Trader 1 or Trader 3	They fill out the trade ticket with initials from both trader 1 and trader 3. The white portion of the ticket is submitted to the market agent by **both** traders (both traders walk the ticket up to the front of the trading floor to the market agent). Trader 1 (Buyer) keeps the yellow portion of the ticket and trader 3 (Seller) keeps the pink portion of the ticket.

There will be a brief outcry tutorial and demonstration before the Social Outcry on the first day of the competition.

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Liquidity Risk Case

Rotman International Trading Competition 2026

This 'Liquidity Risk Case' has been adapted from the copyrighted 'Liability Trading 3 (LT3) Case', with permission from the authors who developed it for the RIT Market Simulator platform (for details: https://rit.rotman.utoronto.ca). All rights reserved.

OVERVIEW

The Liquidity Risk Case challenges participants to put their critical thinking and analytical abilities to test in an environment that requires them to evaluate the liquidity risk associated with tender offers. Participants will be faced with multiple tender offers throughout the case. This will require participants to make rapid judgments on the profitability, subsequent acceptance and execution, or rejection, of each offer. Profits can be generated by taking advantage of price differentials between market prices and prices offered in the private tenders. Once any tender has been accepted, participants should aim to efficiently close out their large positions to maximize returns and minimize liquidity and market risks.

DESCRIPTION

There will be 2 heats and teams will allocate 2 team members for each heat. Each participant may compete in only one of the 2 heats. Each heat will consist of 5 independent sub-heats, with each sub-heat representing one month of calendar time. Each heat may involve up to four stocks with different volatility and liquidity characteristics.

Parameter	Value
Number of sub-heats	5
Trading time per sub-heat	10 minutes (600 seconds)
Calendar time per sub-heat	1 month (20 trading days)

Tender offers will be generated by computerized traders and distributed at random intervals to random participants. Participants must subsequently evaluate the profitability of these tenders when accepting or bidding on them. Order submission using the RIT API will be enabled. Data retrieval via Real-time Data (RTD) Links and the RIT API will be enabled.

MARKET DYNAMICS

There are five sub-heats, each with unique market dynamics and parameters as shown below.

SUB-HEAT 1		
Securities	**RITC**	**COMP**
Start Price	$50	$40
Commissions	$0.02	$0.02
Tender Offer Window	30 Seconds	30 Seconds
Volatility	Low	Medium
Liquidity	Medium	High

SUB-HEAT 2		
Securities	**TRNT**	**MTRL**
Start Price	$15	$30
Commissions	$0.01	$0.01
Tender Offer Window	30 Seconds	30 Seconds
Volatility	High	Low
Liquidity	Medium	Low

SUB-HEAT 3			
Securities	**BLU**	**RED**	**GRN**
Start Price	$10	$25	$30
Commissions	$0.04	$0.03	$0.02
Tender Offer Window	30 Seconds	30 Seconds	30 Seconds
Volatility	High	Low	Medium
Liquidity	High	Medium	Medium

SUB-HEAT 4			
Securities	**WDY**	**BZZ**	**BNN**
Start Price	$12	$18	$24
Commissions	$0.02	$0.02	$0.03
Tender Offer Window	20 Seconds	20 Seconds	20 Seconds
Volatility	Medium	High	Medium
Liquidity	High	Medium	Medium

SUB-HEAT 5				
Securities	**VNS**	**MRS**	**JPTR**	**STRN**
Start Price	$20	$75	$35	$50
Commissions	$0.02	$0.02	$0.02	$0.02
Tender Offer Window	20 Seconds	20 Seconds	20 Seconds	20 Seconds
Volatility	High	Medium	Low	High
Liquidity	Medium	High	Medium	Medium

During each sub-heat, participants will occasionally receive one of three different types of tender offers: private tenders, competitive auctions, and winner-take-all tenders. Tender offers are generated by the server and randomly distributed to random participants at different times. Over the course of each sub-heat, every participant will receive the same number of tender offers and face comparable profit potential, although offer prices and quantities may vary. As a result, no participant has a systematic advantage in overall profit opportunities. No trading commission is charged on tender offers.

Private Tenders are routed to individual participants and are offers to purchase or sell a fixed volume of stocks at a fixed price. The tender price is influenced by the current market price.

Competitive Auction offers are sent to all participants at the same time. Participants will be required to determine a competitive, yet profitable, price to submit for a given volume of stocks from the auction. Any participant that submits an order that is better than the base-line reserve price (hidden from participants) will automatically have their order filled, regardless of other participants' bids or offers. If accepted, the transactions will occur at the price that the participant submitted.

Winner-Take-All Tenders request participants to submit bids or offers to buy or sell a fixed volume of stocks. After all prices have been received, the tender is awarded to the participant with the single highest bid or single lowest offer. The winning price, however, must meet a base-line reserve price (hidden from participants). If no bid or offer meets the reserve price, then the trade will not be awarded to anyone (e.g. if all participants bid $2.00 for a $10.00 reserve price stock, nobody will win).

CALCULATION OF THE PROFIT OR LOSS OF TRADERS

The prices generated by RIT for this case follow a random-walk process using a return drawn from a normal distribution with a mean of zero. That is, at any point in the case simulation, the probability that the price will go up is equal to the probability that the price will go down. This means that participants cannot predict the future price of the stocks without "taking a bet". Therefore, the RITC scoring committee will consider trading stocks for reasons other than reducing the exposure associated with accepting a tender offer to be equivalent to speculating (taking a bet) on the price movement. These types of trades will be flagged as "speculative trades".

Participants will have time to think about the tender offer before they choose to accept it or decline it and the time may be different for each security. For example, one may receive a tender offer at time $t = 0$ and will have until $t = 30$ to decide whether to accept or decline. Any trades for that security made by a participant during this time without accepting or declining the tender offer will be considered as "*front-running*"[1] since the participant had the advance knowledge of a pending institutional order.

This case is designed to reward teams for identifying tender opportunities, accepting them, and efficiently closing out resulting positions, while managing liquidity, market, and execution risk. To reinforce this objective, the RIT system applies automatic, real-time penalties to trading activity flagged as speculative or front-running, and to any tender-related exposure that is not properly closed out by the end of the sub-heat.

[1] Front-running is the unethical and illegal practice of trading a security for your own account while taking advantage of the information contained in the pending orders from your institutional clients.

Automatic fines (real-time in RIT)
The system applies the following fine schedule, aggregated across all stocks for the entire iteration:

- $1 per share for flagged speculative/front-running shares up to 5,000 shares
- $2 per share for any additional flagged shares beyond 5,000 shares
- $10 per share for any shares that remain uncovered at the end of the iteration

These fines are incorporated directly into your real-time P&L in RIT, so your displayed performance reflects both trading outcomes and any applicable penalties throughout the case.

TRADING LIMITS AND TRANSACTION COSTS

Each participant will be subject to gross and net trading limits of 250,000 and 150,000 shares, respectively. The gross trading limit reflects the sum of the absolute values of the long and short positions across all stocks, while the net trading limit reflects the sum of long and short positions such that short positions negate any long positions. Trading limits will be strictly enforced and participants will not be able to exceed them.

The maximum order size is 10,000 shares and commissions are specified in the table above.

POSITION CLOSE-OUT

Any open position will be closed out at the end of each sub-heat based on the last traded price. This includes any long or short position open in any security. Computerized market makers will increase the liquidity in the market towards the end of trading to ensure the closing price cannot be manipulated.

KEY OBJECTIVES

Objective 1
Evaluate the profitability of tender offers by analyzing market liquidity. Participants should accept tenders that are expected to generate positive profits while rejecting unattractive tender offers.

Objective 2
Submit competitive, yet profitable, bids and offers for competitive auction and winner-take-all tenders to maximize potential profits while managing liquidity and market risk.

Objective 3
Use a combination of limit orders, market orders, and marketable limit orders to mitigate liquidity and market risks from holding open positions. There is a chance that the market may move away from your transaction prices, so maintaining large open positions may result in losses.

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Volatility Trading Case

Rotman International Trading Competition 2026

This 'Volatility Trading Case' has been adapted from the copyrighted 'Options Trading 3 (OP3) Case', with permission from the authors who developed it for the RIT Market Simulator platform (for details: https://rit.rotman.utoronto.ca). All rights reserved.

OVERVIEW

The Volatility Trading Case gives participants the opportunity to generate profits by implementing options strategies to trade volatility. The underlying asset of the options is a non-dividend-paying Exchange Traded Fund (ETF) called RTM that tracks a major stock index. Participants will be able to trade shares of the ETF and 1-month call/put options at 10 different strike prices. Information including the ETF price, options prices, and news releases will be provided. Participants are encouraged to use the provided information to identify mispricing opportunities and construct options trading strategies accordingly.

DESCRIPTION

There will be 2 heats and teams will allocate 2 team members for each heat. Each participant may compete in only one of the 2 heats. Each heat will consist of 8 independent sub-heats, with each sub-heat representing one month of calendar time.

Parameter	Value
Number of trading sub-heats	8
Trading time per sub-heat	300 seconds (5 minutes)
Calendar time per sub-heat	1 month (20 trading days)

News will be released during each sub-heat. Order submissions using the RIT API will be enabled. Data retrieval via Real-time Data (RTD) Links and the RIT API will also be enabled.

MARKET DYNAMICS

Participants will be able to trade RTM and 20 separate options contracts on RTM at the beginning of the case. All options are European, so early exercise is not allowed.

Call Ticker	Strike Price	Put Ticker
RTM1C45	45	RTM1P45
RTM1C46	46	RTM1P46
RTM1C47	47	RTM1P47
RTM1C48	48	RTM1P48
RTM1C49	49	RTM1P49
RTM1C50	50	RTM1P50
RTM1C51	51	RTM1P51
RTM1C52	52	RTM1P52
RTM1C53	53	RTM1P53
RTM1C54	54	RTM1P54

All securities are priced by market-makers who will always quote a bid-ask spread of 2 cents (i.e. \$49.99×\$50.01 for the RTM). The bids and asks are for very large quantities (there are no liquidity constraints in this case).

The price of RTM follows a random-walk and the path is generated using the following process:

$$P_{\mathrm{RTM,t}} = P_{\mathrm{RTM,t-1}} \times (1 + r_{\mathrm{t}}), \text{where } r_{\mathrm{t}} \sim N(0, \sigma_{\mathrm{t}})$$

The price of the stock is based on the previous price multiplied by a return that is drawn from a normal distribution with a mean of zero and standard deviation (volatility) on an annualized basis.

Your analysts have developed a very effective model to forecast the realized volatility of the underlying security RTM; they will be sending you weekly updates. The market maker quotes prices for options using the Black-Scholes pricing model and a variance risk premium equal to zero. Therefore, in equilibrium the implied volatility associated with an options price will be equal to the realized volatility of the underlying security.

However, it has been observed in this market that the volatility forecasts made by the market maker are often less informed than those provided by the informed analysts. Therefore, after a discrete change in the realized volatility of the underlying, the market maker's volatility forecast embodied in the quoted options price will not accurately reflect the volatility of the underlying security (RTM). Nevertheless, as time goes on, the market maker learns about the underlying volatility – at least until a new shock to the realized volatility occurs.

Your task is to look for mispricing opportunities in the options markets and profit from that mispricing. When mispricing occurs, you should take a position in the options and at the same time trade the underlying security to hedge your delta exposure in order to build a delta neutral portfolio.

For example, if a call option has an implied volatility that is 5% greater than the analysts' forecasted realized volatility of the ETF, the option is considered overpriced. In this case, you should write call options and then hedge the delta exposure by trading the underlying asset appropriately.

For ease of computation, one trading year is assumed to be 240 days ($20 \text{ days } \times 12 \text{ months}$). The case represents one month (20 days) of calendar time. The trading period is divided into 4 weeks, with $t = 1 \ldots 75$ being week one, $t = 76 \ldots 150$ being week two, and so on. At the beginning of each week, the volatility of RTM (σ_t) will shift and the new value will be provided to participants. In addition, at the middle of each week (e.g. $t = 37$) an analyst estimate of next week's volatility value will be announced.

Sample News Release Schedule

Time	Week	Release
1	Week 1	The analysts have informed you that the realized volatility of RTM for this week will be 18%
1	Week 1	The delta limit for this sub-heat is 10,000 and the penalty percentage is 1%
37	Week 1	The analysts have informed you that the realized volatility of RTM next week will be between 28% and 33%
75	Week 2	The analysts have informed you that the realized volatility of RTM for this week will be 29%
…	…	…
225	Week 4	The analysts have informed you that the realized volatility of RTM for this week will be 26%

The focus of this case is on trading volatility without being exposed to price changes of the underlying security, RTM. Participants are therefore required to manage their portfolio's delta exposure. Recognizing the transaction costs and impracticality of perfect delta hedging (i.e. keeping the portfolio's delta at zero at all times), the RITC scoring committee will allow the portfolio's delta to be different from zero but it is required to stay between $-delta\ limit$ and $+\ delta\ limit$. Please note that $delta\ limit$ is an integer number greater than 1,000 that will be announced at the beginning of a sub-heat via a news release in RIT. For example, the following news could be released: "The delta limit for this sub-heat is 5,000 and the penalty percentage is 0.5%". According to that news, any participant that has a portfolio delta greater than 5,000 will be penalized at the penalty percentage of 0.5% according to the penalties explained below.

For every second that a participant exceeds the limit ($\pm delta\ limit$), participants will be charged a penalty according to the following formula:

$$Penalty\ for\ second\ t = (|Portfolio's\ Delta\ at\ time\ t| - Delta\ Limit) \times x$$

where, $delta\ limit$ is the limit imposed for each sub-heat and x is the fine rate set for each sub-heat, which will be released at the beginning of each sub-heat. Penalties will be calculated and incorporated directly into your real-time P&L in RIT, so your displayed performance reflects both trading outcomes and any applicable penalties throughout the case.

TRADING LIMITS AND TRANSACTIONS COSTS

Each participant will be subject to gross and net trading limits specific to the security type as specified below. The gross trading limit reflects the sum of the absolute values of the long and short positions across all securities in each security type; the net trading limit reflects the sum of long and short positions such that short positions negate any long positions. Trading limits will be enforced and participants will not be able to exceed them.

Security Type	Gross Limit	Net Limit
RTM ETF	50,000 Shares	50,000 Shares
RTM Options	2,500 Contracts	1,000 Contracts

The maximum trade size will be 10,000 shares for RTM and 100 contracts for RTM options. Transaction fees will be set at $0.01 per share traded for RTM and $1.00 per contract traded for RTM options. As with standard options markets, each contract represents 100 shares (purchasing 1 option contract for $0.35/option will actually cost $35 plus a $2 commission, and will settle based on the exercise value of 100 shares).

POSITION CLOSE-OUT

Any outstanding position in RTM will be closed at the end of trading based on the last-traded price. There are no liquidity constraints for the options nor RTM. All options will be cash-settled based on the following upon expiration:

$$\text{Call Option Payout} = \max\{0, S - K\},$$
$$\text{Put Option Payout} = \max\{0, K - S\},$$

where,

S is the last price of RTM,
K is the strike price of the option.

KEY OBJECTIVES

Objective 1

Build a model to forecast the future volatility of the underlying ETF based on known information and given forecast ranges. Participants should use this model with an options pricing model to determine whether the market prices for options are overvalued or undervalued. They should then trade the specific options accordingly.

Objective 2

Use Greeks to calculate the portfolio exposure and hedge the position to reduce the risk of the portfolio while profiting from volatility differentials across options.

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GBE Energy Electricity Trading Case

Rotman International Trading Competition 2026

OVERVIEW

The GBE Energy Electricity Trading Case provides the opportunity for participants to work in a role-based team environment to engage in an electricity trading market controlled by a strict regulatory policy. Participants are required to forecast the supply and demand of electricity, and execute strategies accordingly while reacting to prevailing market events. Each team will participate in a closed supply and demand market for electricity by producing it using power plant assets and distributing it to customers, and will also have access to a forward market. Through the full cycle of electricity markets, participants will need to dynamically formulate their role-based strategies and optimally perform trade executions.

DESCRIPTION

The GBE Energy Electricity Trading Case will comprise 2 heats. Each team (4 team members) will compete together in a single assigned heat, with half of the participating teams assigned to the first heat and the remaining teams assigned to the second heat. Each heat will consist of 4 independent sub-heats with 4 team members competing together. Each sub-heat will be 15 minutes long and represent 5 trading days of calendar time. Order submission using the RIT API will be disabled. Data retrieval via Real time data (RTD) links and the RIT API will be enabled.

Parameter	Value
Number of trading sub-heats	4
Trading time per sub-heat	15 minutes (900 seconds)
Calendar time per sub-heat	5 trading days during the first week of August

TEAM ROLES

In this case, each participant will have 1 of 3 specific roles:

- Producer (one per team)
- Distributor (one per team)
- Trader (two per team)

Example:

The team ROTMAN will have 4 trader-IDs (ROTMAN-1, ROTMAN-2, ROTMAN-3, ROTMAN-4), and roles have been assigned according to the list below.

Trader-ID	Role
ROTMAN-1	Producer
ROTMAN-2	Distributor
ROTMAN-3 and ROTMAN-4	Trader

Producers

The Producers own a solar power plant and a natural gas power plant. Each day, Producers will decide how much electricity to produce the next day. For example, day 3 starts at minute 6:01 (6 minutes and 1 second in the simulation); Producers have to decide by the end of day 3 (by minute 9:00 in the simulation) how much electricity to produce over day 4 (which starts at minute 9:01 in the simulation). The decision is made on day 3 and electricity will be produced and delivered the day after (day 4).

Producers will have access to the electricity forward and spot markets. There is one security traded on each market, ELEC-F on the forward market and ELEC-dayX on the spot market. ELEC-F is a forward contract written on the commodity ELEC-dayX with a contract size of 500 MWh[2] and delivery over the next day (day X). For example, if a Producer sells 1 contract of ELEC-F today (day 1), the Producer will have to deliver 500 MWh of electricity (ELEC-day2) to the counterparty the next day (day 2). ELEC-dayX is the electricity spot, where "X" is the day in the simulation. For example, ELEC-day2 is electricity spot on day 2, ELEC-day3 is electricity spot on day 3, etc. ELEC-dayX can be traded on the spot market on each respective day; 1 contract of ELEC-dayX is equal to 100 MWh.

Since electricity cannot be stored, and it has to be disposed[3] in case it is not delivered, Producers should sell the electricity by the end of the day it is produced, either with a forward contract from sale of the previous day, or on the spot market during the day it is produced. For example, if on day 1 the Producers decide to produce 2,000 MWh of ELEC-day2, they will have to deliver 2,000 MWh of electricity on day 2. They can sell 3 contracts of electricity on the forward market on day 1 so that, on day 2, they will deliver 1,500 MWh of ELEC-day2 (recall that each ELEC-F contract size is 500 MWh). On day 2, Producers can also sell 500 MWh of ELEC-day2 spot (which is 5 contracts of ELEC-day2). Combining the 1,500 MWh delivered through the forward contract with the 500 MWh traded spot, the Producers ensured they did not have any excess MWh of electricity that they had to dispose. If they are able to sell only 1,500 MWh of electricity on the forward market and they did not make any trades on the spot market, Producers will have produced 500 MWh more than they sold and they will have to dispose the excess electricity spot on Day 2 (ELEC-day2) of 500MWh.

The solar power plant generates electricity every day depending on how many hours of sunshine there will be during the day. That is, it is possible to produce more electricity using the solar power plant when there are no clouds. The following equation shows the amount of electricity produced by the solar power plant in relation to the number of hours of sunshine:

$$ELEC_{\text{solar}} = 6 \times H_{\text{day}}$$

[2] MWh (megawatt per hour) is the unit of measure of electricity.

[3] Disposing electricity means that Producers will be forced to dump the electricity and will not be able to carry it over to the next day. It's equivalent to selling the electricity for $0.

where $ELEC_{\text{solar}}$ is the number of contracts of electricity produced by the solar power plant over the day;
H_{day} is the number of hours of sunshine over the day.

There is no cost for producing electricity using the solar power plant.

Producers cannot shut down the solar power plant but they will be provided with weather forecasts of how many hours of sunshine are expected the following day. Hence, they will be able to forecast how much electricity will be produced by the solar power plant. The weather forecasts received on day 1 will provide information about the weather on day 2. There will be an initial report at the beginning of each day followed by an update at 12:00pm each day (1 minute and 30 seconds after the start of the day in the simulation) and then there will be the final update in the evening (30 seconds before the end of the day in the simulation). The final update will provide Producers with the correct estimates of the number of hours of sunshine the next day. In other words, in the evening, Producers will know exactly how many hours of sunshine there will be the next day.

Producers will have to decide whether to utilize the natural gas power plant based on the expected solar output and the expected demand for electricity. Indeed, if there is strong demand for electricity, Producers can make additional profits by utilizing the natural gas power plant and selling the electricity on the ELEC-F or ELEC-dayX spot market.

In order to produce electricity using the natural gas power plant, Producers have to buy natural gas spot (NG) and then use the natural gas power plant to transform it into electricity. Each NG contract is for 100MMBtu (million British Thermal Unit). The natural gas power plant is able to convert 800 MMBtu into 100 MWh (that is 8 contracts of NG into 1 contract of ELEC-dayX, where X is the following day). For example, Producers can buy 8 contracts (800 MMBtu) of NG on day 1 and then lease and use the natural gas power plant on day 1. On day 2, they will receive 1 contract (100MWh) of ELEC-day2. There is no cost for the Producers to operate this facility. Producers will decide to operate the natural gas power plant today but the electricity will be delivered the day after since it takes time to convert natural gas into electricity.

In addition, the Ministry of the Environment and Climate Change (MECC) has developed policies that discourage Producers from producing more than they are able to sell. Indeed, for each contract of electricity (ELEC-dayX) that is not delivered by the end of day X and needs to be disposed, the MECC will charge a fee of $20,000. The fee will be collected by MECC at the end of each day. For example, if on day 1 a Producer has decided to produce 20 contracts (2,000 MWh) of ELEC-day2 (by combining the solar and natural gas power plants production) but only 3 contracts (1,500 MWh) of ELEC-F were sold on day 1 and no ELEC-day2 spot was sold over day 2, there is an excess of 5 contracts (500 MWh) of ELEC-day2 and MECC will charge $100,000 (=5 contracts x $20,000/contract) over day 2.

Distributors

Distributors carry the electricity from the Producers to their customers (individual consumers and families). Distributors are able to sell electricity for $70/MWh to the customers but they have to buy the electricity from either the forward or the spot market.

Distributors have seen that, historically, the demand for electricity from customers during the month of August is strongly correlated with the temperature. When the temperature is high, consumption of electricity is also high because air conditioning systems tend to be turned on for longer periods of time due to the higher/longer demand for AC. Similarly, when temperatures are lower than average, the consumption of electricity is also lower than average.

Distributors have developed the following model to forecast the consumption of electricity by customers based on the average temperature over the day:

$$ELEC_{\text{customers}} = 200 - 15 \times AT + 0.8 \times AT^2 - 0.01 \times AT^3$$

where

$ELEC_{\text{customers}}$ is the number of contracts of electricity demanded by the Distributors' customers;
AT is the average temperature (in degrees Celsius) expected next day;
AT^2 is AT to the power of 2 and AT^3 is AT to the power of 3.

Distributors will receive news during the case. This news contains the weather forecasts and will provide information about the expected average temperature for the next day. The weather forecasts received on day 1 will provide information about the weather on day 2. There will be an initial report at the beginning of each day followed by an update at 12:00pm each day (1 minute and 30 seconds after the start of the day in the simulation) and then there will be the final update in the evening (30 seconds before the end of the day in the simulation). The final update will provide Distributors with the correct estimates of the average temperature for the next day. In other words, in the evening Distributors will know exactly what the average temperature will be the next day.

Distributors will have to buy electricity in the ELEC-F or ELEC-dayX markets in order to provide it to their customers. Distributors are strongly encouraged not to buy more electricity than what is needed to satisfy their consumers; otherwise, for each contract of electricity in excess that has to be disposed, they will be charged by the Ministry of the Environment and Climate Change (MECC) the same fee that is applied to the Producers.

In addition, the contractual agreement between the Distributors and their customers includes a clause that will charge a penalty to the Distributors in case they do not meet the demand for electricity from the customers. For example, if the total electricity demanded by the customers is 3,000 MWh (30 contracts) and the Distributors are only able to buy 2,500 MWh (25 contracts) from the ELEC-F and ELEC-dayX markets, there will be 500 MWh (5 contracts) of excess demand for

which they will be charged a penalty. The penalty will be calculated according to the following formula at the end of each day:

$$\text{penalty} = \$20{,}000 \times ED = \$20{,}000 \times 5 = \$100{,}000$$

where,

ED is the excess demand (expressed in number of contracts) which is the difference between demand for electricity from customers and the electricity that the Distributors bought in the ELEC-F and ELEC-dayX markets.

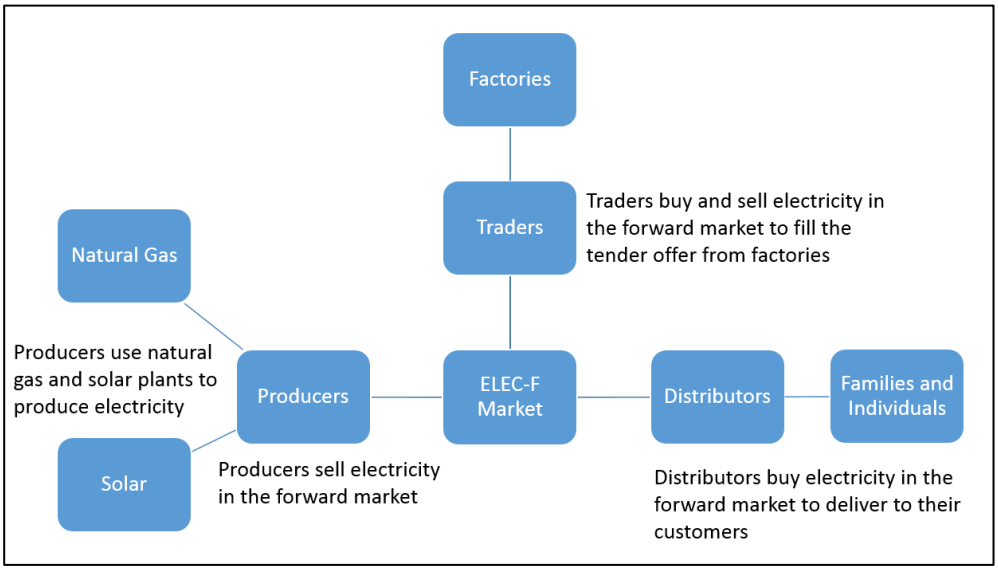
Traders

During the trading period, Traders will receive institutional orders from some clients who wish to buy or sell large quantities of electricity for the following day. These clients are large factories that intensively use electricity and find it more convenient to buy from the Traders rather than the Distributors. Traders act as the "shock absorber" for the market. They balance the supply and demand and help markets achieve equilibrium. Traders have access to the ELEC-F and ELEC-dayX markets.

Traders will receive "The Factory Tender Report" which describes the expected institutional orders activity via News.

The interaction between different market participants, including their profit maximization objectives and teamwork, is what will largely influence the overall profits of each team. Thus, participants have to optimize the dynamics of each role.

The chart below will summarize the three roles that we have described above.



MARKET DYNAMICS

Producers, Distributors, and Traders will be able to trade the securities according to the table below:

Security	Description	Contract Size	Accessibility	Shortable
ELEC-dayX	Electricity spot on day "X"	100 MWh	Producers, Distributors, Traders	Yes
ELEC-F	Forward for delivery of electricity the day after	500 MWh	Producers, Distributors, Traders	Yes
NG	Natural Gas spot	100 MMBtu	Producers	No

Producers will be able to utilize the following assets:

Asset	Description	Ratio	Conversion Period
NG_POWER_PLANT	Power plant for the production of electricity using natural gas	From 800 MMBtu to 100 MWh	End of day
SOLAR_POWER_PLANT[4]	Solar Panels for the production of electricity	$6 \times H_{\text{day}}$	End of Day

Producers will be limited to using 10 natural gas power plants at a time. The natural gas power plant can convert, at a maximum, 80 contracts of NG to 10 contracts of ELEC-dayX. Producers can decide to convert less than 80 NG contracts into ELEC-dayX.

The electricity spot market

The electricity spot market is a market where the prices are controlled by the Regulatory Authority for Electricity (RAE). RAE is an independent entity that regulates, controls and monitors the electricity market. Since electricity cannot be stored and has to be delivered immediately, RAE sets the electricity prices and all market participants will be forced to trade at those prices imposed by the authority.

The RAE will issue a "Price and Volume Bulletin" every day with the forecasted prices for the next day that have been calculated using the expected state of the electricity system, the Producers' offers, and the Distributors' and Traders' demand. The RAE will also have information on the

[4] Please note that the solar power plant will produce electricity every day, which will be distributed as endowment to the Producers in RIT Client. The solar power plant cannot be controlled by Producers and it will not be available in the RIT Client under the module "Assets".

volume of electricity that will be available the next day and will provide this information to the participants. An example "Price and Volume Bulletin" is provided below:

"Given the expected supply and demand in the market, the Regulatory Authority for Electricity board expects that the price for tomorrow will be between $10.00 and $25.00.

There will be 200 contracts available in the entire ELEC market, 100 contracts for buying and 100 contracts for selling. There is a total of 28 Producers, 28 Distributors and 56 Traders in the market.

Please note that the RAE will charge a bid-ask spread of 1 cent."

The RAE issues 2 bulletins per day. The second one will be more accurate than the former since the RAE will have more information to evaluate the supply and demand at noon.

Note that, in the example above, there are only 100 contracts available for buying and 100 contracts available for selling on the spot market. Once participants have bought/sold all the contracts available in the ELEC-dayX market, they will not be able to change their ELEC-dayX position. Participants will be penalized for any open position of ELEC-dayX according to the fines explained above and in the section "POSITION CLOSE OUT" below.

Participants are encouraged to buy/sell electricity on the forward market by trading the security ELEC-F. Waiting until the next day to trade ELEC-dayX on the spot market is much riskier because the volume available to buy/sell will be limited. If participants have any excess electricity in their accounts by the end of the day, they will have to dispose of it.

Please also note that there will be an ELEC-dayX spot market for days 2 through 5 only, as no electricity is produced for delivery on day 1. On day 5, it is possible to produce electricity for day 6 and it is also possible to buy ELEC-F for delivery of electricity on day 6; the settlement of any outstanding position of ELEC-day6 is discussed in the section "POSITION CLOSE OUT" below.

The following is a simplified example of the case:
Assume that on day 1 Producers knew that they would produce 1,500MWh (15 contracts) of electricity for day 2 using the solar power plant (there is no cost for producing electricity using the solar power plant) and also decided to produce 2000 MWh (20 contracts) of electricity using the natural gas power plant at a cost of $14.875/MWh. The average cost for the 3,500 MWh (35 contracts) of electricity produced is $8.5/MWh [=(1,500MWh x $0 + 2,000MWh x $14.875)/(1,500MWh + 2,000MWh)].

On day 1, Distributors have bought 2 contracts (1,000 MWh) of ELEC-F from the Producers and 5 contracts (2,500 MWh) of ELEC-F from the Traders at a price of $40/MWh. Traders initially bought 5 contracts (2,500 MWh) of ELEC-F from the Producers for $25/MWh.

Profit generated by each member (per MWh).

Producers:

Average Selling Price per MWh = $\frac{1000\text{MWh} \times \$40 + 2500\text{MWh} \times \$25}{3500\text{MWh}} \approx \$29.286$

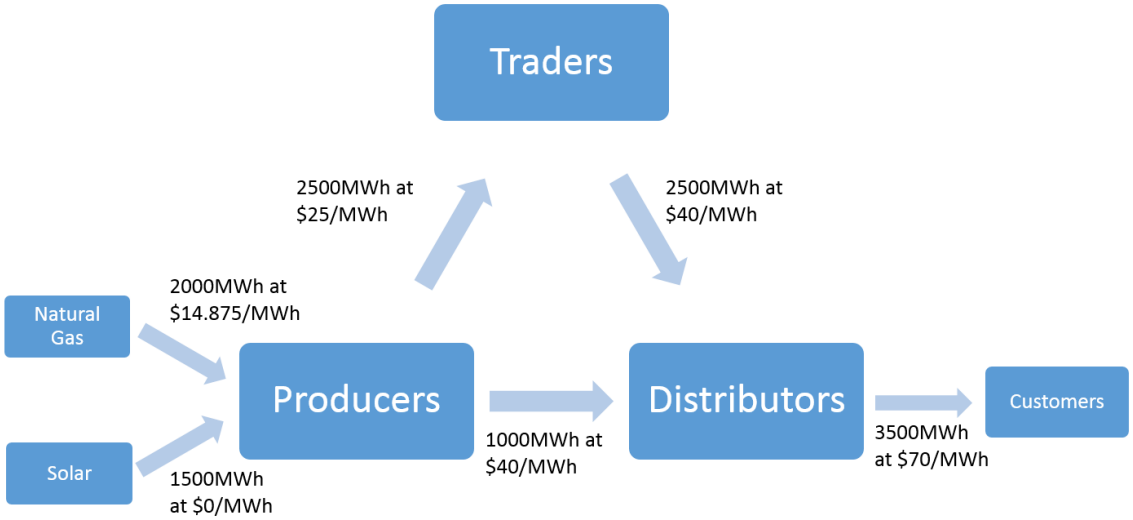
Profit = Average Selling Price per MWh – average cost per MWh = $\$29.286 - \$8.50 = \$20.786$

Distributors:

Profit = Selling price to customers – cost of buying electricity = $\$70 - \$40 = \$30$

Traders:

Profit = Selling price to Distributors – cost of buying electricity = $\$40 - \$25 = \$15$



In the example above, participants were able to trade electricity exclusively on the forward market and they did not need to do any spot transactions. If any of them had an open position of ELEC-day2 at the beginning of day 2, they could trade ELEC-day2 spot in order to close their position. The price at which they could trade will be imposed by the Regulatory Authority for Electricity as explained above.

The following is an example with a spot transaction.

Assume that on day 1 Producers knew that they would produce 1,500 MWh (15 contracts) of electricity for day 2 using the solar power plant (there is no cost for producing electricity using the solar power plant) and also decided to produce 2,000MWh (20 contracts) of electricity using the natural gas power plant at a cost of $14.875/MWh. The average cost for the 3,500 MWh of electricity produced is $8.5/MWh [=(1,500MWh x $0 + 2,000MWh x $14.875)/(1,500MWh + 2,000MWh)].

On day 1, Distributors bought 2 contracts of ELEC-F (each contract is for 500MWh so Distributors bought 1,000 MWh of electricity) from the Producers at a price of $40/MWh. Traders did not buy or sell any ELEC-F contract.

At the end of day 1, Producers will have 2,500MWh of unsold electricity (3,500 MWh produced – 1,000MWh sold to Distributors). At the beginning of day 2, the Regulatory Authority for Electricity declares that the price for ELEC-day2 for the day will be $20/MWh. To avoid penalties, the Producers will sell the remaining 2500MWh of ELEC-day2 at the spot price of $20/MWh.

Profit generated by each member (per MWh).

Producers:

Average Selling Price per MWh = $\frac{1000\text{MWh} \times \$40 + 2500\text{MWh} \times \$20}{3500\text{MWh}} \approx \$25.71$

Profit = Average Selling Price per MWh – average cost per MWh = $\$25.71 - \$8.50 = \$17.21$

Distributors:

Profit = Selling price to customers – cost of buying electricity = $\$70 - \$40 = \$30$

Traders' profits are zero because they did not trade.

TRADING/POSITION LIMITS AND TRANSACTION COSTS

The maximum trade size will be 10 contracts for the security ELEC-F and 80 contracts for the security NG. Producers, Distributors and Traders will be allowed to have at maximum a net position of 300 contracts of ELEC-dayX. Producers will be allowed to have at maximum a net position of 80 contracts of NG. Producers, Distributors and Traders will be allowed to have at maximum a net position of 60 contracts of ELEC-F.

There are no transaction costs to trade ELEC-F and NG. The ELEC-F market will allow participants to submit only rounded integer quotes.

POSITION CLOSE OUT

Each outstanding position of ELEC-day2 through ELEC-day5 will be closed out at a distressed price of $0 at the end of days 2 through 5 respectively. The fee of $20,000/contract from the Ministry of the Environment and Climate Change will be applied to all long positions of ELEC-day2 through ELEC-day5 at the end of days 2 through 5 respectively. A penalty of $20,000/contract will also be applied to all short positions of ELEC-day2 through ELEC-day5 at the end of days 2 through 5 respectively.

At the end of the case (end of day 5), any outstanding positions in ELEC-day6 will be closed at the final RAE price announced during day 5. No fines will be applied to long or short positions of ELEC-day6.

KEY OBJECTIVES

Objective 1
Design a model to calculate the effect of news releases on the supply and demand for electricity. Use this information to make a decision on the optimal level of production of electricity (for Producers' role), the optimal quantity to be delivered to customers (for Distributors' role) and the optimal trader activity to fill the tender offers from factories (for Traders' role).

Objective 2
Maximize profits as a team of Producers, Distributors, and Traders by communicating and sharing private news information with each other.

Note: Since this simulation requires a large number of participants in order to establish supply/demand, practice sessions for this case will be organized and held at specified times (please refer to the "Important Information" section above). After organized practice sessions are completed, cases will be run iteratively for model calibration purposes ("trading skillfully" cannot be practiced unless there are 20+ users online).

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Merger Arbitrage Case

Rotman International Trading Competition 2026

OVERVIEW

The Merger Arbitrage Case immerses participants in an event-driven equity market shaped by corporate merger and acquisition (M&A) activity. Participants will trade shares associated with five announced potential deals, each consisting of a target and an acquirer, with deal structures that include all-cash offers, stock-for-stock exchanges, and mixed consideration. Throughout the case, news releases will update market perceptions regarding the likelihood of deal completion, and participants are expected to interpret these updates to price deal spreads, construct hedged positions, and manage downside risk from deal delays or failure.

DESCRIPTION

There will be 2 heats and teams will allocate 2 team members for each heat. Each participant may compete in only one of the 2 heats. There will be 5 independent sub-heats. Each sub-heat is 10 minutes long and represents six months of calendar time.

Parameter	Value
Number of trading sub-heats	5
Trading time per sub-heat	600 seconds (10 minutes)
Calendar time per sub-heat	6 months (120 trading days)

News will be released during each sub-heat. Order submissions using the RIT API will be enabled. Data retrieval via Real-time Data (RTD) Links and the RIT API will also be enabled.

MARKET DYNAMICS

Participants will be able to trade 10 stocks representing five live M&A deals (five targets and five acquirers). All deal terms (cash offer prices and exchange ratios) are announced at the beginning and remain fixed throughout the sub-heat. Each target's price reflects the market's evolving assessment of the probability-weighted combination of (i) the deal value (the target's value if the deal closes) and (ii) the standalone value (the target's value if the deal fails).

The standalone value is not provided. Participants can infer a standalone value at $t = 0$ using the announced deal terms, the analyst's initial completion probabilities (p_0), and the starting prices. Once inferred, this standalone value is treated as fixed throughout the case. Each acquirer's price reflects the expected impact of the transaction, including potential synergies, financing costs, and dilution effects.

Deal structures vary across transactions. As a result, the relationship between target and acquirer prices differs by deal: in all-cash deals, the primary driver of the target's price is the market's perceived likelihood of completion; in stock-for-stock and mixed consideration deals, the target's value is also sensitive to the acquirer's price, creating additional hedging considerations.

Tradable Securities and Deal Terms

Participants will be able to trade the following securities from the start of each sub-heat:

Deal	Industry	Target (Ticker)	Acquirer (Ticker)	Deal Structure	Deal Terms*	Starting Prices (Target / Acquirer)
D1	Pharmaceuticals	Targenix (TGX)	Pharmaco (PHR)	All-cash	$50 per share	$43.70 / $47.50
D2	Cloud Software	ByteLayer (BYL)	CloudSys (CLD)	Stock-for-stock	0.75 CLD per BYL	$43.50 / $79.30
D3	Energy / Infrastructure	GreenGrid (GGD)	PetroNorth (PNR)	Mixed	$33 + 0.20 PNR	$31.50 / $59.80
D4	Banking	FinSure (FSR)	Atlas Bank (ATB)	All-cash	$40 per share	$30.50 / $62.20
D5	Renewable Energy	SolarPeak (SPK)	EastEnergy (EEC)	Stock-for-stock	1.20 EEC per SPK	$52.80 / $48.00

**Deal Terms* are announced deal values (cash offer prices and stock exchange ratios) for the target company's price and will not change over time.*

Information and News Releases

News releases are the primary driver of changing deal perceptions throughout the sub-heat. For each deal, news items will fall into five general categories:

1. Regulatory / Antitrust (REG): Approvals, extended reviews, remedies, litigation risk
2. Financing / Capital Markets (FIN): Funding conditions, credit spreads, refinancing, leverage concerns
3. Shareholder / Board Actions (SHR): Proxy advisor recommendations, voting/tender dynamics, activism
4. Strategic Alternatives / Competing Bids (ALT): Topping bids, rival interest, renegotiation risk
5. Process / Timing / Conditions (PRC): Timeline updates, deadline extensions, procedural developments

Not all news items are equally informative. Some updates are clearly positive or negative, while others are ambiguous and require interpretation. At any time, a target's value can be viewed as a probability-weighted combination of its deal value and its standalone value. Positive news typically increases the market's estimated completion probability and moves the target toward the deal value; negative news does the opposite. Participants may choose to trade based primarily on qualitative interpretation of the news or develop quantitative tools to translate news into probabilistic updates and pricing signals.

Practice Case Note: The practice case is designed to help teams become familiar with the market dynamics and news flow. The competition environment may include additional news items not seen in practice, while preserving the same general structure and categories.

Analyst Guidance on Probability-Based Deal Dynamics

Analyst Anchors at $t = 0$ (initial completion probabilities)

To help teams establish a common starting point, your analyst team has produced initial "anchor" estimates of each deal's completion likelihood at the beginning of the sub-heat ($t = 0$). These estimates are intended to be a baseline for interpreting subsequent news. Teams may trade purely based on qualitative interpretation of headlines or use these anchors to translate news into probability updates and the intrinsic target prices.

Deal	Target / Acquirer	Initial Completion Probability p_0
D1	TGX / PHR	70%
D2	BYL / CLD	55%
D3	GGD / PNR	50%
D4	FSR / ATB	38%
D5	SPK / EEC	45%

Additionally, your team's analyst group has conducted preliminary work to help structure how news may translate into evolving deal likelihood during the sub-heat. In particular, they suggest thinking about deal outcomes as probabilistic and subject to revision as new information arrives. Based on historical deal behaviour and transaction characteristics, the analysts propose that the market impact of a news release depends primarily on: (i) its direction and severity, (ii) the category of information, and (iii) the deal's sensitivity to that category of risk. The parameters below provide an illustrative framework for how news may affect deal likelihood and, in turn, the intrinsic value of the target and acquirer securities.

1) Baseline impact by direction and severity (probability points)

Direction	Small	Medium	Large
Positive	+0.03	+0.07	+0.14
Negative	-0.04	-0.09	-0.18
Ambiguous	±0.00 to ±0.03	±0.00 to ±0.05	±0.00 to ±0.07

Ambiguous news reflects uncertainty: its directional implication may be positive or negative depending on the content and market interpretation.

2) Category Multipliers (relative influence)

Category	Multiplier
REG	1.25
FIN	1.00

SHR	0.90
ALT	1.40
PRC	0.70

3) Deal-specific Sensitivity Multipliers

Deal	Notes	Multiplier
D1	Pharma cash	1.00
D2	Tech stock-for-stock	1.05
D3	Energy mixed	1.10
D4	Banking cash	1.30
D5	Renewable stock	1.15

News Examples

News Example 1: Positive regulatory signal (D4 Banking, highest sensitivity)

"Regulators indicate remedies framework is acceptable in principle; parties continue constructive discussions."

This news item shall be considered positive / medium severity, which has +0.07 additional point to the current probability. Given that this news is regulatory category in nature which has 1.25 multiplier and D4 deal category with 1.30 multiplier, the probably update from this news should be:

$$\Delta p = 0.07 \times 1.25 \times 1.30 = 0.11375$$

This single news item increases completion probability by +11.375 percentage points (illustrative). In other words, if the current deal probability before the news was $p = 0.38$, then:

$$p_{\text{new}} = 0.38 + 0.11375 = 0.49375$$

Since the intrinsic target price (P_T^*) is the probability-weighted combination of the deal value and the standalone value:

$$P_T^* = p \times K + (1 - p) \times V$$

where,
$p = probability\ of\ the\ deal\ closing\ successfully$
$K = deal\ value\ (offer\ price)$
$V = standalone\ value$

Using the initial completion probability (p_0) and the starting price (P_0),

$$V = \frac{P_0 - p_0 \times K}{1 - p_0} = \frac{\$30.50 - 38\% \times \$40}{1 - 38\%} \approx \$24.68.$$

Accounting for the new probability ($p_{new} = 0.49375$) from above, the updated intrinsic target price should be:

$$P_T^* = p \times K + (1 - p) \times V = 0.49375 \times \$40 + (1 - 0.49375) \times \$24.68 \approx \$32.24.$$

News Example 2: Negative financing shock (D3 Energy mixed, medium-high sensitivity)

"Credit conditions deteriorate; lenders seek repricing discussions and the timeline becomes less certain."

This news item shall be considered negative / large severity, which has -0.18 additional point to the current probability. Given that this news is financing category in nature which has 1.00 multiplier and D3 deal category with 1.10 multiplier, the probably update from this news should be:

$$\Delta p = -0.18 \times 1.00 \times 1.10 = -0.198.$$

This single news item reduces completion probability by -19.8 percentage points (illustrative). In other words, if the current deal probability before the news was $p = 0.50$, then:

$$p_{new} = 0.50 - 0.198 = 0.302.$$

TRADING LIMITS AND TRANSACTION COSTS

Each participant will be subject to gross and net trading limits of 100,000 and 50,000 shares, respectively. The gross trading limit reflects the sum of the absolute values of the long and short positions across all stocks, while the net trading limit reflects the sum of long and short positions such that short positions negate any long positions. Trading limits will be strictly enforced and participants will not be able to exceed them. The maximum order size is 5,000 shares and commissions are set at $0.02 per share.

POSITION CLOSE-OUT

Any open position will be closed out at the end of each sub-heat based on the last traded prices. Note that deal outcomes may or may not resolve within a sub-heat; if a deal resolves before the end of trading, the market price will be equal to the realized outcome.

KEY OBJECTIVES

Objective 1

Interpret news releases and assess evolving deal likelihood to identify mispricing opportunities in deal spreads.

Objective 2

Construct and manage merger arbitrage positions appropriate to each deal structure (cash vs. stock vs. mixed), including hedging acquirer exposure where relevant.

Objective 3

Manage risk across multiple simultaneous deal situations, including adverse news shocks, deal delays, and deal failure risk.

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Algorithmic Market Making Case

Rotman International Trading Competition 2026

OVERVIEW

The Algorithmic Market Making Case is designed to challenge participants' programming skills by developing algorithms using the RIT API to automate trading strategies and react to changing market conditions driven by news releases. Throughout the case, these algorithms will need to provide liquidity while managing risk from sudden price movements. Participants must balance profit-seeking market making activities with strict position limits. Due to the high-frequency nature of the case, participants are encouraged to develop algorithms that can adapt to rapid changes in market dynamics using their selected programming languages.

DESCRIPTION

There will be 12 heats with 1 team member competing in each heat. Only one team member shall trade to represent the team for all heats. Each heat will be 5 minutes long and represent one trading week (5 trading days), with each minute representing one full trading day.

Parameter	Value
Number of trading heats	12
Trading time per heat	5 minutes (300 seconds)
Calendar time per heat	One trading week (5 days)

Order submission using the RIT API will be enabled. Data retrieval via Real-time Data (RTD) Links and the RIT API will also be enabled. **All trades must be executed by a trading algorithm**. Participants will not be allowed to trade manually through the RIT User Application once the heat begins. Participants are allowed to modify their algorithms in response to prevailing market conditions and competition from the algorithms of other teams. They will have 2 minutes between each heat to re-load their algorithms. A base template algorithm will be provided to participants and can be directly modified for use in the competition. However, participants are strongly encouraged to create their own algorithms.

MARKET DYNAMICS

This case involves four stocks with the following details.

Ticker	SPNG	SMMR	ATMN	WNTR
Security type	Stock	Stock	Stock	Stock
Quote currency	CAD	CAD	CAD	CAD
Starting Price	$25	$25	$25	$25
Fee/share (Market orders)	$0.02	$0.02	$0.02	$0.02

Rebate/share (Limit/Passive orders)	$0.01	$0.02	$0.015	$0.025
Max order size	10,000	10,000	10,000	10,000

Your desk is market-making in four stocks, and you expect a volatile week. After each market close (i.e., every minute), your team anticipates a potential news release that may affect these stocks. While the news will not be provided to you directly, your analyst team has indicated that these releases will be the primary driver of price movements throughout the week.

The magnitude and direction of each stock's reaction to a given news event may differ from minute to minute. Some stocks may react more strongly than others, and correlations among stock movements may vary over time.

Given this potential volatility, the Chief Risk Officer (CRO) has imposed an aggregate position limit to control overnight market risk exposure. This limit will be announced at the beginning of the week (i.e., at the start of each heat) and is calculated based on your aggregate position across all four stocks:

$$Aggregate\ Position\ Limit = |Position_{\mathrm{SPNG}}| + |Position_{\mathrm{SMMR}}| + |Position_{\mathrm{ATMN}}| + |Position_{\mathrm{WNTR}}|$$

Penalty for Exceeding Limit: $10 per share for every share above the limit, assessed immediately at each market close (i.e., every minute).

Example: If your aggregate position limit is 15,000 shares and you hold:

- Long 12,000 shares of SPNG
- Short 3,000 shares of SMMR
- Long 7,000 shares of ATMN
- Long 6,000 shares of WNTR

Your aggregate position = | 12,000 | + | -3,000 | + | 7,000 | + | 6,000 | = 28,000 shares
You are 13,000 shares over the limit, incurring a penalty of 13,000 × $10 = $130,000

This penalty structure encourages aggressive market making (providing liquidity on both sides) while penalizing excessive directional risk-taking and suboptimal position management.

TRADING/POSITION LIMITS AND TRANSACTION COSTS

In addition to the aggregate position limit for every market close, each trader will be subject to gross and net trading/position limits during trading in each heat. The gross limit reflects the sum of the absolute values of the long and short positions across all securities, and the net limit reflects the sum of long and short positions such that short positions negate any long positions. Anyone who exceeds the trading/position limits will incur a penalty of $5 per share.

The maximum trade size will be 10,000 shares per order for each stock. Transaction fees will be set at $0.02 per share for each security on all market orders filled. A rebate will be provided for all submitted limit orders that are filled.

POSITION CLOSE-OUT

Any non-zero position of stocks will be closed out at the end of trading based on the last traded price for each stock.

KEY OBJECTIVES

Objective 1

Develop an algorithmic market making strategy that continuously quotes bid and ask prices to profit from the bid-ask spread while managing inventory risk. Your algorithm should provide liquidity to the market while avoiding excessive position accumulation.

Objective 2

Manage total exposure across all four stocks, potentially by flattening positions as they approach the Limit, balancing long and short positions across different stocks, and implementing risk controls that prevent excessive position accumulation.

Finance Research and Trading Lab

Rotman

Scoring Methodology

Rotman International Trading Competition 2026

OVERVIEW

The scoring and ranking methodology is designed to translate absolute performance into relative performance by the use of a ranking system. This ranking system is designed to discourage participants from "betting the house" in one sub-heat and generating very large absolute profits that will result in a clear win of the entire competition. Instead, participants' absolute performance in each sub-heat is converted into a series of ordinal ranks which are subsequently converted into a final case ranking. These case rankings are mapped to case scores and then combined under the following weights:

Case	Weight
Liquidity Risk Case	20%
Volatility Trading Case	20%
GBE Energy Electricity Trading Case	20%
Merger Arbitrage Case	20%
Algorithmic Marketing Making Case	20%

The scoring system is not intended to be extremely complex. However, throughout the trading competition there will be over 2,000 separate trading results. These results must then be averaged and ranked over several iterations to compute a final ranking and score. This document describes that process.

The purpose of the system is to reward consistently high performance (i.e. a team that places 8th, 5th, and 10th will have a higher final score than a team that places 1st, 10th, and 35th).

Liquidity Risk Case, Volatility Trading Case and Merger Arbitrage Case

For each sub-heat, the final profits and losses (P&L)[5] of all participating members of a team are summed to form a dollar value of the team P&L. The teams are then ranked for each sub-heat by the dollar values of the team P&L with 1st place given to the team with the highest dollar value. In the event of a tie, the teams that have tied will be given the same rank. The teams below the tie will be given a rank based on the number of teams that have scored better than them. Therefore, if three teams tied for 2nd place, the ranking for the top five teams would be 1st, 2nd, 2nd, 2nd, and 5th.

Each team's sub-heat ranks are then averaged. Teams are then ranked based on their average sub-heat rank to determine their final case rank. The team with the lowest average will be ranked first.

This case ranking is then mapped to a point score where the lowest rank (best score) is given a score of n+1, where n is the number of teams below you plus the teams that tied with you (i.e. the first place team out of 39 teams will get a score of 39, the last place team will get a score of 1). To continue the above example, if you are tied for 2nd place with three other teams, you will get a score of 38.

[5] Adjusted for the relevant case-specific penalties as described in each case.

GBE Energy Electricity Trading Case

The final P&L of each team member will be summed to form a dollar value of the team P&L. The teams are then ranked for each sub-heat by the dollar values of the team P&L, with first place awarded to the team with the highest dollar value. In the event of a tie, the teams that have tied will be given the same rank. The teams below the tie will be given a rank based on the number of teams that have scored better than them. Therefore, if three teams tied for 2nd place, the ranking would be 1st, 2nd, 2nd, 2nd, and 5th.

Based on the above, each team's sub-heat ranks will be averaged and then the resulting averages will be ranked to determine their overall case rank. The team with the lowest average will be ranked first. This case ranking is then mapped to a point score where the lowest rank is given a score of n+1, where n is the number of teams below you plus the teams that tied with you.

Algorithmic Market Making Case

Only one member from each team will be required to participate in the Algorithmic Market Making Case. The final P&L[6] of the participating team member will become the team P&L, which will be then ranked for each heat with first place awarded to the team with the highest dollar value. In the event of a tie, the teams that have tied will be given the same rank. The teams below the tie will be given a rank based on the number of teams that have scored better than them. Therefore, if three teams tied for 2nd place, the ranking would be 1st, 2nd, 2nd, 2nd, and 5th.

Based on the above, each team's heat ranks will be averaged and then the resulting averages will be ranked to determine the final case rank. The team with the lowest average will be ranked first. This case ranking is then mapped to a point score where the lowest rank is given a score of n+1, where n is the number of teams below you plus the teams that tied with you.

Final Score

The final case scores are then multiplied by their case-weights to form a final weighted score. This final weighted score is used to rank teams, where the highest score is the best score. In the case of two or more teams having the same final weighted score, those teams will be ranked based on the variance of their final case scores. The team with the lowest variance will be ranked ahead of the others. For example, if the top 3 teams have the following scores:

[6] Adjusted for the relevant case-specific penalties as described in the case package.

Team	Final Case Scores					Final Weighted Score
	Liquidity Risk Case	Volatility Trading Case	GBE Energy Electricity Trading Case	Merger Arbitrage Case	Algorithmic Marketing Making Case	
Team 1	28	25	27	21	25	25.2
Team 2	27	27	21	22	23	24
Team 3	27	23	25	24	21	24

Team 1 will be ranked first as it has the highest weighted score. Team 2 and Team 3 have the same final weighted score and will be ranked based on the variance of their case scores. The variance for Team 2 is 8 while the variance for Team 3 is 5, therefore Team 3 will be ranked second while Team 2 will be ranked third.

Final Rank	Team
1	Team 1
2	Team 3
3	Team 2

Two (or more) teams that have the same score and the same variance will tie. In the event of a tie, the teams that have tied will be given the same rank. The teams below the tie will be given a rank based on the number of teams that have scored better than them. Therefore, if three teams tied for 2nd place, the ranking would be 1st, 2nd, 2nd, 2nd, and 5th.

Awards

The top five ranking teams will receive the following cash prizes:

- 1st place team: $5,000 CAD
- 2nd place team: $2,500 CAD
- 3rd place team: $1,500 CAD
- 4th place team: $1,000 CAD
- 5th place team: $500 CAD