



# University Trading Challenge

An Open Competition for Graduate/Undergraduate Students in Finance and Economics

## 2016 Competition Files

Philadelphia PA | London UK



November 4th | December 9th

**A CapitalWave Event**

*Technology Enabled Learning™*

# GOLD Corporate Sponsors



The CFA Society of Philadelphia (<http://www.cfaphil.org>), is part of the CFA Institute which is the global association of investment professionals that sets the standard for professional excellence and credentials. The organization is a champion for ethical behavior in investment markets and a respected source of knowledge in the global financial community. The end goal: to create an environment where investors' interests come first, markets function at their best, and economies grow. CFA Institute has nearly 134,000 members in 151 countries and territories, including 126,800 CFA charter holders, and 145 member societies. For more information, visit [www.cfainstitute.org](http://www.cfainstitute.org).



CapitalWave Inc. (<http://www.capitalwave.com>) is a firm that breaks away from the stodgy corporate delivery of training. Simply because something worked long ago (or even yesterday) does not insure that it is an effective way to deliver training today and in the future. Participants in both corporate and university training demand more, much more than is currently offered.. They are looking for things that engage them, excite them and involve them. At CapitalWave we create "technology based learning" platforms that provide the experiential environment that Generation-X and Y and Millennials demand.



International Treasury Services EMEA (<http://www.itreasuryservices.com>) is a leading Professional Services company, specializing in Learning and Development Consultancy. We work with corporate clients and universities to build, design and delivery engaging and interactive financial programmes. Integrating sophisticated technical business simulations, the delegate experience, results in them being better prepared for the workplace or ready to apply their knowledge to their workplace resulting in greater performance and achievement of business goals. International Treasury Services EMEA is based in London, UK.

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## **ABOUT UNIVERSITY TRADING CHALLENGE**

The University Trading Challenge was originally envisioned in late 2010. We were aware of a few competitions targeting the graduating students seeking employment in the financial and capital markets. A couple of them were good, but targeted towards “the quant” or were so difficult as to what they were attempting to achieve that no one could understand them, the rest of the competitions were (at best) so-so.

We were asking each other: “so where are the competitions for the bulk of those seeking careers in the financial markets? Where are the competitions that would allow for graduating students to show-case their talents? Where are the programs that allowed for different universities to highlight their unique academic programs?”

In response to those questions, we created the University Trading Challenge.

### **UNIVERSITY TRADING CHALLENGE STRATEGY**

Our goal is to be the preeminent provider of student based competitions for graduate and undergraduate University students seeking careers in the Financial and Wealth industries. Our overall strategy is to compete in each relevant geographic market, using our core competencies in the development and delivery of simulation platforms to advance the understanding of students of the scope and breathe of the financial markets. We believe that we have the capacity and global reach to deliver these student competitions worldwide and delivering value to those institutions that seek to reach these influential future leaders.

### **UNIVERSITY TRADING CHALLENGE VALUES**

University Orientation: We strive to...

- Embodied our programs to always meet our ACE principles: Achieving Competitive Excellence
- Provide tools that will allow for students to familiarize them with order-driven markets
- Allow students to understand the liquidity of markets and the impact of trading costs
- Provide a realistic interface and environment for understanding Sales & Trading, Portfolio Management and Construction, as well as the Risk impacts on markets from the news.
- To provide a simulated market platform that measures the Trader analytics’ and metrics that govern the risk/reward of Trading and Portfolio Management

Risk Taking: We strive to...

- Foster innovation and creative thinking for students looking at careers in the financial markets
- Provide a safe environment to allow these high-performing students to explore alternative strategies
- Give student the ability to learn from their successes and mistakes
- Encourage and reward informed risk taking by the participating students and universities

Results Oriented: We strive to...

- To provide a simulated market platform that measures the Trader with Analytics and Metrics that govern the risk/reward of Trading and Portfolio Management
- Provide communication and presentation opportunities that simulate the real financial markets

**UNIVERSITY TRADING CHALLENGE IS A BRAND OF CAPITALWAVE INC.**

CapitalWave Inc. is committed to “Developing Technology Enabled Learning Simulations” for both commercial and investment banks, corporate treasuries, other financial institutions and Universities.

Delivering solutions is different from delivering programs or courses. We work hard to insure our programs are applicable, relevant and engaging. We expect that those who use our simulations walk away with something that is applicable to their jobs today. We will leave the ‘educationally interesting programs’ but lacking relevancy to other development firms.

## **BENEFITS TO PARTICIPANTS / STUDENTS**

Programs like ours show students new ways of thinking about things while their minds are most open. Most students from the participating universities' finance and economic programs go on to work at major investment banking firms in London and New York. Many of them take on roles directly involving trading and hedging decisions. Even graduates who go on to work on the corporate side influence trading decisions.

As a student participant in the UTC, you will:

- Feel a real sense of daily life as a trader
- Sharpen your financial acumen
- Experience the true competition of the finance world
- Demonstrate your financial skills
- Meet and interact with students from other universities
- Enjoy unique learning opportunities during a fun and memorable event

# COMPETITION RULES

## **1) Who is eligible to Compete**

Both graduate as well as high potential undergraduate students.

## **2) Registration**

We are currently in the phase of registration. University Team Leaders can fill out the registration form to reserve a spot for a team from their institution.

They must be students of an accredited university, but they can be in any program. (MBA, Undergrad, Masters, etc.)

## **3) Team Compositions**

Teams can be comprised anyway that students and faculty organize. For example, a team may be comprised of just undergraduate students and another team of graduate students. A Team must consist of 3 students.

### Team Member Requirements

Each Team Member must be a currently enrolled in an undergraduate or graduate program at the time of the competition. An individual is ineligible to be a Team Member if that individual has: 1) Previously participated as a Team Member in the UTC Challenge, 2) has or is no longer a matriculating university student.

## **4) Competition Weighting & Participation Requirements**

### Trading Challenge (25% of the competition results)

The Real Market Trading Challenge will start on October 4th. Team members will need to select a Team Leader to trade the predetermined portfolio via an online interface. Rules for trading are available by clicking here. This portfolio challenge will use the “Real News Trading Simulator” from CapitalWave for students to trade with and for results. For this particular challenge, the students will compete both individually AND as a team. The results for both will be tabulated to determine placement.

### Portfolio Challenge (25% of the competition results)

For the Portfolio Management Challenges, individual Team members will be given a trading screen to participate in a trading simulation. Each simulation will provide each student the opportunity to trade a limited number of securities over a simulated trading day. Student

Trader results will then be measured on the quality of their trading, using standard trader analytics of: Profitability, RaRoc, Sharpe Ratio, Sortino Ratio and Portfolio Alpha/Beta. This challenge will use the CapitalWave “Portfolio Management Simulator” which will be available at the event.

*Investment Banking Challenge (25% of the competition results)*

Each Team will make each Presentation to a panel of Judges. Teams may utilize their Faculty Adviser as a resources, but may not enlist the help of any other professionals in preparing or evaluating the presentations. Each Presentation can include the use of PowerPoint or other presentation software. The teams cannot hand the judges any printed material before the Presentations. All Presentation material must be submitted at time of Registration on the November 4th 2016.

The Presentation must be in English. Each Presentation is limited to 9 minutes, however and additional 5-7 minutes will be provided to answer questions posed by the Judges. Only Judges are permitted to pose questions to a Team during a Presentation. Each Presentation will be timed and the time-keeper will provide a one-minute warning and an announcement when time has expired. When the timekeeper announces that time has expired, Teams must immediately conclude their Presentation.

Teams may not listen to other Presentations prior to their own Presentation. A separate room should be reserved for Teams to wait before their allotted Presentation time.

*Treasury Challenge (25% of the competition results)*

Teams are asked to be a Treasury for a Major Fortune 100 company. They are specifically tasked with managing the currency risk for a part of the company. They are to trade a basket of currencies with the sole purpose to both hedge the corporate risk as well as generate profits from currency trading. For more information, please refer to the Rules for the competition. Only Team Members may participate in the Investment Banking Presentations.

*Participation Requirements*

All teams are encouraged to participate in all of the UTC Challenges. In the event that a particular team is unable to participate in all challenges, they acknowledge that they cannot be listed as either individual challenge or competition winners. If a particular team fails to compete in a challenge, their score for that challenge will be zero.

### **5) Contest Judging**

For the Portfolio and Sale & Trading Challenges, any determination of errors in order entry, execution and eligibility shall be determined by UTC to be final with the regards to the contest standings.

### **6) Consent to Publication of Ranking and Results**

Entry to the contest constitutes permission for the University Trading Challenge to post the university's and trader's information, including, without limitation, name, perform and relative ranking, on the University Trading Challenge website and to use all information for purposes of advertising and promotion without compensation to the universities or contestants.

### **7) Prohibited Use of Contest for Promotional Purposes**

Contestants acknowledge that the University Trading Challenge name and that of the contest are copyrighted and are the sole property of CapitalWave Inc. Contestants shall not, either alone or in concert with others, use their participation in the contest for promotional purposes unless approved in advance in writing by the University Trading Challenge. If a contestant violates this provision, the contestant may be disqualified from competition in the contest for future contests at the University Trading Challenge's sole discretion. If determined by University Trading Challenge to be in violation, the contestant agrees to pay all legal fees and damage incurred by University Trading Challenge, including those to enforce this provision.

### **8) Indemnification**

All issues and question concerning the construction, validity, interpretation and enforceability for the rights and obligations of the contestants and University Trading Challenge in connection with the contest shall be governed by and construed in accordance with the substantive laws of the State of New York, without regard to choose of law rules.

### **9) Postponement, Cancellation, Acceptance and Removal**

University Trading Challenge reserves the right to modify the contest terms, to postpone the contest commencement date or to cancel the contest if, in its sole discretion, it determines that such action is reasonable and necessary. University Trading Challenge may reject any contestant's application for any reason. Furthermore, University Trading Challenge has the right to remove or bar any contestant from the contest for any reason in its sole discretion, including, without limitation, barring any contestant who would or might: bring disrepute to the contest; or who has violated any rule, law or regulation pertaining to futures trading; or has

attempted to benefit from any collusive or other trading irregularity. University Trading Challenge will review and monitor all participants throughout the contest in the interest and fairness of all participants. Minimum participation required; we reserve the right to cancel the contest if minimum participation is not reached. In the event that the contest is cancelled, entry fees will be refunded and no prizes will be awarded. University Trading Challenge reserves the right to cancel the contest at any time and will make honest efforts to notify all contestants. No Refunds; exception: in the case of contest cancellation, refunds will be available for entry fee.

### **10) Conflicts of Interest**

All participants in the University Trading Challenge, including Hosts, Teams, Team Members, Faculty Advisers, and Judges have an obligation to avoid actual or potential conflicts of interest with their participation. A conflict of interest may exist when a participant or participant's family member or close friend is involved in activities that may impact the participant's ability to perform their role fairly and impartially. A conflict may be actual or perceived.

## COMPETITION STRUCTURE

In the realistic and intensely educational competition, teams of 3- students go head-to-head in competitive situations in four (4) distinct challenges: 1) Trading Challenge, 2) Portfolio Challenge, 3) Treasury Challenge, and 4) Investment Banking Presentation. Each competition area highlights products or strategies exclusive to the capital markets. See below for details on each of segment and their competition results weighting.

### **TRADING CHALLENGE – 25% of the Competition Results**

Teams (and individuals) compete over a 30-day period using CapitalRNTS (Real News Trading Simulation) software. Each team starts with a base portfolio containing equities, fixed income contracts, Forex, metals, Agri's, and index contract (values are based on opening prices recorded by global exchanges). Teams follow the news and learn how it affects price change across each instrument. They can modify their positions daily and monitor the up-to-the-minute leader board online.

### **INVESTMENT BANKING PRESENTATION CHALLENGE – 25% of the Competition Results**

Each team is given the 'AQOEO Exploration' case-study and data set, with the task of formulating a financial strategy as a solution. From the 4-person team, 2 members of the team will give a 10-minute presentation outlining the solution, while the other 2 will field questions from the judges.

### **PORTFOLIO CHALLENGE – 25% of the Competition Results**

In the 100-minute competition, teams compete on-site at the Challenge location using CapitalPMS (Portfolio Management Simulator). This intense simulation provides students an opportunity to act as a Portfolio Management team for the

### **TREASURY CHALLENGE – 25% of the Competition Results**

In this 100-minute competition, teams compete on-site at the Challenge location using CapitalFTS (Forex Trading Simulator). This intense simulation provides students an opportunity to act as a Trader managing the Forex Desk for one of corporate treasury department.

## COMPETITION TIMELINE

The timeline example below is provided to show timing for the key elements (beginning, endings, etc.) of each of the Challenge's components:

Announcement of the Challenge:	August 1st 2015
Team Registration:	September 7th – October 3rd
Trading Challenge:	October 4th – November 3th, 2016
Investment Banking Challenge:	November 4th 2016
Portfolio Challenge:	November 4th 2016
Treasury Challenge:	November 4th 2016
Competition Day:	November 4th 2016
Awards Ceremony:	November 4th 2016

# COMPETITION AGENDA

## Competition Day Agenda

8:30- 9:15 Registration for students and teams

9:20- 9:45 Welcome. Rules and Agenda for the day

9:45-10:15 First Speaker – TBD

10:15-10:30 Break

10:30-11:00 Portfolio Management Simulator Training

11:00-12:30 Portfolio Management Challenge

10:30-12:30 Investment Banking Presentation Challenge

12:30-1:30 [Lunch – provided by the University Trading Challenge](#)

1:30-2:00 Second Speaker – TBA

2:00-2:30 Forex Trading Simulator Training

2:30-4:00 Treasury Challenge

2:00-4:00 Investment Banking Presentation Challenge

4:00-4:15 Break

4:15-4:45 Final Speaker – John Donato, CapitalWave Inc.

4:45-5:15 Award Ceremony

# TRADING CHALLENGE

The Real Market Trading Challenge will start October 12th and finish on November 12th. Student teams representing different universities, over 20 trading days using the CapitalRNTS (Real News Trading Simulation), manage a base portfolio consisting of equity, fixed income, currency, metal, agri, and index contracts valued based on opening prices recorded by global exchanges.

The purpose of the competition is to have the participants focus on the impact of news and how it relates towards the price volatility of the various instruments.

The objective of this challenge is to help participants develop interest, understanding and analysis of financial market news. The participants in each team are encouraged to have discussions of the daily events/news in the financial markets and then make their trading decisions based on those discussions.

The competition will be divided into two parts.

1. There will be a main team competition, with a team leader executing the transaction for the team after their internal discussions and group decisions are made.
2. Additionally, there will be an individual competition taking place simultaneously in which each individual student is invited to participate to the exact same game but with his/her own account.

The latter will allow students to create and manage their own portfolios independent of the team decisions. At the end of the 24 trading days profit results will show two different winners, one in the team category and another one in the individual category.

## **Real News Trading Simulator (RNTS)**

The Real News Trading Simulation (RNTS) is an interactive and dynamic Investment Simulation designed to get participants to understand the role of news in investment and portfolio decisions. Individuals or Teams are allowed to strategize and invest in the limited but strategically important securities for the duration of the simulation. To play the simulation, individuals or teams need to take positions (long or short) in the markets listed in up to a maximum size of the limits given for each instrument. Individuals or teams will have a number of opportunities to change their position for the duration of the game. All trades are done at the prevailing market prices and a running profit and loss is kept.

## DESCRIPTION OF THE TRADING GAME

Name of Game= “UTC 16 US RNTS Competition”

Start Date = 4<sup>th</sup> October 2016

End Date = 3<sup>rd</sup> November 2016

Trading days= 23 – No Trading on Weekends

Trading Period = 9:30am to 4:00pm EST

The Game will be divided into two parts:

Team competition

Individual competition

Platform = Real News Trading Simulator (RNTS): <http://utc16.capitalrnts.com/>

## RULES AND CONDITIONS

- Each student participating in a team needs to be registered in the RNTS before 12 pm EST October 4<sup>th</sup>. *With each team’s registration, all participants will automatically be registered.*
- Each team has to choose a team leader.
- PRIOR to the day the competition starts, *October 4<sup>th</sup>*, the team leader needs to create a team, using the registered team name and insure that all team members in it.
- The team leader will be executing the transactions for the team. The other members of the team cannot execute transactions for the team.
- Positions can be long or short in any amount up to the maximum of the trading limit.  
The limit for each security can be found placing the cursor on the  symbol next to the security name in the first column of the trading table.
- Each team and individuals are able to trade any of the instruments once every 4 hour (this is a new rule this year 2015 –allowing you to modify your individual position in a specific instrument no more than 2x a day).
- Prices will be updated on a regular basis throughout the available trading period. There is no attempt to match the markets in terms of times open. For example, forex trading will NOT be available 24/5, rather, only during the predesigned trading period.
- All trades will take place at the market prices supplied – it should be noted that the prices in the RNTS are delayed market prices. In the past, a few enterprising student teams took advantage of the pricing arbitrage. To reduce this loophole, like any good exchange, we are instituting trading limits defined by time. Instruments can be traded once every 60 minutes of the trading day. Limit and stop orders can be filled within that restriction, but all traders will not be allowed to make multiple trades on instruments within a short period.
- Profit & Loss standings will be updated throughout each trading day and available for all traders and teams to see.

## WINNING THIS CHALLENGE

Teams will be ranked and measured and RANKED by a variety of metrics, including Profit & Loss, but also including: VaR, RaROC, Sharpe Ratio, Sortino Ratio, Treynor Ratio and the Information Ratio. Traders/Teams will only be able to view their P&L standings daily.

**WINNING IS DETERMINED BY USING THE TEAM'S P&L AND ADJUSTING THE TEAM 'TRADING RISK' BASED ON THEIR SHARPE RATIO, VAR, RAROC, SORTINO AND TREYNOR RATIOS. HIGHER P&L DOES NOT NECESSARILY INDICATE THAT THE TEAM IS IN FIRST PLACE.**

**WARNING: Excessive Risk strategies penalize a team's ranking!**

For More Information on any of these analytics:

VaR: [http://en.wikipedia.org/wiki/Value\\_at\\_risk](http://en.wikipedia.org/wiki/Value_at_risk)

RaROC: [http://en.wikipedia.org/wiki/Risk\\_adjusted\\_return\\_on\\_capital](http://en.wikipedia.org/wiki/Risk_adjusted_return_on_capital)

Sharpe Ratio: [http://en.wikipedia.org/wiki/Sharpe\\_ratio](http://en.wikipedia.org/wiki/Sharpe_ratio)

Sortino Ratio: [http://en.wikipedia.org/wiki/Sortino\\_ratio](http://en.wikipedia.org/wiki/Sortino_ratio)

Treynor Ratio: [http://en.wikipedia.org/wiki/Treynor\\_ratio](http://en.wikipedia.org/wiki/Treynor_ratio)

Information Ratio: [http://en.wikipedia.org/wiki/Information\\_ratio](http://en.wikipedia.org/wiki/Information_ratio)

## NEWS DISCUSSIONS

To help the news discussion process we encourage participants to think about the following issues:

- What news stories are important?
- How those stories may influence the market?
- Which market participants are most likely to be impacted?
- How market participants will try and make money from the different circumstances?

## MARKET NEWS INFORMATION WEB RESOURCES:

The simulation platform will provide you with updated news articles both on the traded securities as well as general business news.

General Market news is available via the News Tab.



Specific Instrument news is available via the small graphic icon: 

Security	Cost Basis	Current Price	Take Profit/Stop Loss	Mul.	Comm.	Quantity Traded	Current Balance	Current P/L	Conv.(\$)	Current P/L (\$)	Strategy	Action
EUR/USD 	1.1356	<span style="color: green;">▲ 1.1358</span>	- -	10	10 \$		100	0.20	1.00	0.20	Hold ▼	Confirm Clear
Google Inc 	646.6700	646.6700	- -	1	10 \$		200	0.00	1.00	0.00	Hold ▼	Confirm Clear
Deutsche Bank AG 	0.0000	25.7400	- -	1	10 \$	<input type="text"/>	-	0.00	1 \$ = 0.8805 €	0.00	... ▼	Confirm Clear
Natural Gas Mar 16 	0.0000	2.8710	- -	10000	10 \$	<input type="text"/>	-	0.00	1.00	0.00	... ▼	Confirm Clear

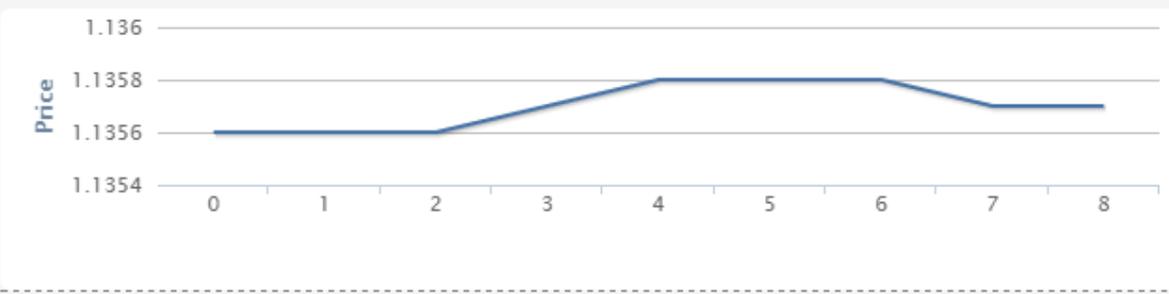
By clicking that icon, relevant market news will be shown as well as the instrument's price path.

**EUR/USD - Y! Finance News and Charts** ✕

**Instrument News**

1. [European markets close: Equities sink](#)
2. [AUD/USD, EUR/USD Triangles Eye Continuation Targets](#)
3. [Market Climbs A Wall of Worry](#)
4. [Why the US \\$ will fall & stay lower for longer](#)
5. [European stocks post biggest gain since January](#)
6. [Ferrovial awarded another section of the S7 Expressway in Poland for 307 million euro](#)
7. [EUR/USD Tests Short Term Trendline and Fibonacci Resistance](#)
8. [EUR/USD Elliott Wave 3 Lower?](#)
9. [European markets close: UK rates 'can stay low'](#)
10. [Euro Outlook Mixed, Although Crowd's Net-Short Position Lingers](#)

**Chart**



X-axis	Price
0	1.1356
1	1.1356
2	1.1356
3	1.1357
4	1.1358
5	1.1358
6	1.1358
7	1.1357
8	1.1357

Security Limit for EUR/USD is 250000

Market trading has the following options:

- Buy**
- Sell**
- Hold**
- Close**

As well as these trade options:

Limit and Stop Order Option	Stop Loss Trading Option
<div style="border: 1px solid #ccc; padding: 10px;"> <div style="background-color: #333; color: white; padding: 5px; display: flex; justify-content: space-between; align-items: center;"> <span>Advanced Trading Options</span> <span>✕</span> </div> <p style="text-align: center; margin-top: 10px;">EUR/USD</p> <p>Price: 1.1357</p> <p>Transaction Type: <span style="border: 1px solid #ccc; padding: 2px 5px;">---</span> Strategy: <span style="border: 1px solid #ccc; padding: 2px 5px;">---</span></p> <hr/> <p>Limit Order</p> <p>Quantity: <input style="width: 50px;" type="text"/> @ Limit Price: <input style="width: 50px;" type="text"/></p> <hr/> <p>Stop Order</p> <p>Quantity: <input style="width: 50px;" type="text"/> @ Stop Price: <input style="width: 50px;" type="text"/></p> <hr/> <div style="text-align: right; margin-top: 20px;"> <span style="border: 1px solid #ccc; padding: 5px 10px; margin-right: 10px;">Submit</span> <span style="border: 1px solid #ccc; padding: 5px 10px;">Cancel</span> </div> </div>	<div style="border: 1px solid #ccc; padding: 10px;"> <div style="background-color: #333; color: white; padding: 5px; display: flex; justify-content: space-between; align-items: center;"> <span>Advanced Trading Options - Take Profit and Stop Loss</span> <span>✕</span> </div> <p style="text-align: center; margin-top: 10px;">EUR/USD</p> <p>Price: 1.1358</p> <p>Current Position: <span style="color: green;">100</span></p> <hr/> <p>Market Order: Take Profit / Stop Loss</p> <p><input type="checkbox"/> Take Profit: <input style="width: 50px;" type="text"/></p> <p><input type="checkbox"/> Stop Loss: <input style="width: 50px;" type="text"/></p> <p style="font-size: small; margin-top: 5px;"><i>Take Profit and Stop Loss have effect only over the Market Order. It does not affect while order is still pending nor your Limi/Stop position.</i></p> <hr/> <div style="text-align: right; margin-top: 20px;"> <span style="border: 1px solid #ccc; padding: 5px 10px; margin-right: 10px;">Submit</span> <span style="border: 1px solid #ccc; padding: 5px 10px;">Cancel</span> </div> </div>

**GAME ANALYTICS:**

Here are the primary data points for the instrument set:

Analytics	
Risk Free Rate	1.00%
Min Accept Return	0.50%
VaR Time Horizon	252
VaR Confidence Level	90%
Benchmark Index	S&P 500

**INSTRUMENTS THAT WILL BE TRADED**

Security Name	Type	Code	Trading Limit	Multiplier	Current Value	FX/Rate	FX/Rate	USD Value	
EUR/USD	Currency	EURUSD=X	20	100,000	1.1177	EUR	0.8916	2,235,400	2.72%
GBP/USD	Currency	GBPUSD=X	15	100,000	1.2844	GBP	0.7772	1,926,600	2.35%
Coffee Dec 16	Agri	KCZ16.NYB	50	375	148.45	USD	1.0000	2,783,438	3.39%
Corn Dec 16	Agri	CZ16.CBT	10	1,000	336.50	USD	1.0000	3,365,000	4.10%
Lumber Dec 16	Agri	LBX16.CME	10	1,000	338.30	USD	1.0000	3,383,000	4.12%
Orange Juice Mar 17	Agri	OJH17.NYB	150	150	192.50	USD	1.0000	4,331,250	5.28%
Brent Crude Mar 17	Energy	BZF17.NYM	25	2,000	51.24	USD	1.0000	2,562,000	3.12%
Crude Oil Jan 17	Energy	CLF17.NYM	25	2,000	49.45	USD	1.0000	2,472,500	3.01%
Natural Gas Aug 17	Energy	NGU17.NYM	50	10,000	3.00	USD	1.0000	1,499,000	1.83%
Alibaba Group Holding Inc.	Equity	BABA	30,000	1	105.36	USD	1.0000	3,160,800	3.85%
Apple Inc.	Equity	AAPL	30,000	1	112.83	USD	1.0000	3,384,900	4.12%
Bank of America	Equity	BAC	150,000	1	15.65	USD	1.0000	2,347,500	2.86%
Barclays	Equity	BARC.L	10,000	1	165.70	GBP	0.7772	1,287,820	1.57%
Deutch Bank	Equity	DBK.DE	250,000	1	11.57	EUR	0.8916	2,578,953	3.14%
Facebook Inc.	Equity	FB	25,000	1	128.10	USD	1.0000	3,202,375	3.90%
Glencore	Equity	GLEN.L	10,000	1	214.70	GBP	0.7772	1,668,648	2.03%
Go Pro Inc.	Equity	GPRO	100,000	1	16.68	USD	1.0000	1,668,000	2.03%
Pearson plc	Equity	PSO.NL	2,000	1	759.56	GBP	0.7772	1,180,652	1.44%
Royal Mail plc	Equity	RMG.L	3,500	1	493.60	GBP	0.7772	1,342,691	1.64%
Tesla Motors Inc.	Equity	TSLA	15,000	1	215.00	USD	1.0000	3,225,002	3.93%
Vodafone Group	Equity	VOD.L	10,000	1	212.50	GBP	0.7772	1,651,550	2.01%
Volkswagen AG	Equity	VOW.DE	20,000	1	129.15	EUR	0.8916	2,303,003	2.81%
10yr Bund Dec 15	Fixed Income	BUND.F	30	1,000	165.43	EUR	0.8916	4,424,922	5.39%
10yr Gilt Dec 15	Fixed Income	BG01.L	30	1,000	99.34	GBP	0.7772	2,316,211	2.82%
10yr US T-Note Dec 15	Fixed Income	TYZ16.CBT	30	1,000	131.00	USD	1.0000	3,930,000	4.79%
FTSE	Index	^FTSE	25	25	6,994.66	GBP	0.7772	3,397,656	4.14%
S&P 500 Index	Index	^GSPC	25	100	2,160.22	USD	1.0000	5,400,550	6.58%
Copper Dec 16	Metal	HGF16.CMX	50	25,000	2.36	USD	1.0000	2,950,000	3.59%
Gold Dec 16	Metal	GCO16.CMX	25	100	1,141.70	USD	1.0000	2,854,250	3.48%
Platinum July 17	Metal	PLN17.NYM	25	100	1,053.40	USD	1.0000	2,633,500	3.21%
Silver Dec 16	Metal	SIZ16.CMX	50	5,000	19.05	USD	1.0000	4,761,250	5.80%
Portfolio Value:								<b>82,066,421</b>	100.00%

The prices on these securities are as of: October 3<sup>rd</sup>, 2016  
 They will be updated continually at the start of this challenge.

# INVESTMENT BANKING CHALLENGE

## PRESENTATION CHALLENGE

In order to successfully complete this challenge, each Team will need to deliver a short PowerPoint presentation.

Team Presentations must:

1. Identify the potential risks faced by the company.
2. Develop a hedging solution for those risks that the group believes need to be hedged.
3. Provide a graphical scenario analysis showing the impact of the hedges across a number of positive and negative market outcomes.
4. Develop a proposal for funding the new mine project in Australia.

Each team will be allocated up to 15 minutes to make their 'pitch' to the client. The PowerPoint presentation should take 8-9 minutes, leaving time for questions.

The client pitch is to be made by two of the team members with the other one team members answering the follow-up questions. UTC Presentation Judges Scoring Rubric – See Addendum A

## OVERVIEW

The group project is designed to test the Team’s ability to:

- Identify the different types of market and business risks faced by an international company
- Develop hedging strategies for the identified risks using cash market and derivative products
- Present a client proposal in a clear and well-ordered fashion

## Client Overview

Nocesi Mining Inc. (Delaware Corporation) is a NASDAQ listed mining company that specializes in finding and developing gold mining prospects across the globe.

Existing fully operational mines in Canada and South Africa currently produce 150,000 ounces of gold per year.

	Gold Output (Ounces)	Production Cost per Ounce
Canada	100,000	CAD 707
South Africa	50,000	ZAR 5300
Australia (New Mine)	80,000 (starting in 6 months)	AUD 745

Production costs per ounce include cash costs, government royalties and the marginal cost per ounce of mining and ore processing.

They recently discovered a significant prospect in Australia and are now at the stage of bringing it into production. They require AUD 375 million in order to develop the project and forecast that full gold production would commence in 6 months’ time.

The company has 312 million shares issued in the public market, and currently trades at USD 3.23 / share. The company is rated BB for medium term (5-10 year) senior debt.

The management of Nocesi Mining Inc. believes gold prices will likely stabilize around current levels and stay within 10% over a 12-month time horizon, and 20% over a 2 year horizon. They are concerned about the prospects for rising interest rates and extreme currency movements.

**Nocesi Mining Inc. Balance Sheet**

<b>Consolidated Balance Sheet (USD '000)</b>		
	June 30 2016	June 30 2015
<b>ASSETS</b>		
Current Assets		
Cash and Cash Equivalents	23,810	16,070
Trade and Other Receivables	6,560	6,426
Inventory	20,390	11,966
Other Current Assets	1,502	1,517
	52,262	35,979
Non-Current Assets		
Loan due from related party	5,914	3,035
Property, plant and equipment	479,477	432,377
Other Assets	4,478	4,247
<b>TOTAL ASSETS</b>	<b>542,131</b>	<b>475,638</b>
<b>LIABILITIES</b>		
Current Liabilities		
Trade payables	37,437	53,584
Other Current Liabilities	32,543	39,415
	69,690	92,999
Non-Current Liabilities		
Long Term Debt	161,562	136,318
Other liabilities	17,768	11,848
Site reclamation obligations	5,148	4,464
	164,478	152,630
<b>EQUITY</b>		
Issued Share Capital	555,690	458,504
Warrants	0	3,561
Accumulated Deficit	-268,017	-232,056
	287,673	230,009
	542,131	475,638

**Note on Liabilities**

The long term debt is primarily comprised of a \$150 million floating rate bank loan with interest set at 6 month USD LIBOR plus 150 basis points, and 5 years remaining to maturity.

**KEY MARKET DATA**

Market	Current Rate
Spot Gold	USD 1320
USD/ZAR	13.625
USD/CAD	1.3125
AUD/USD	0.7730

LIBOR Interest Rates				
	USD	CAD	AUD	ZAR
3 month	0.84%	0.89%	1.80%	7.36%
6 month	1.23%	1.01%	2.01%	7.97%
12 month	1.55%	1.09%	2.12%	8.44%
Interest Rate Swaps (Semi-annual / 6 mo. LIBOR)				
2 year	0.77%	0.84%	2.14%	7.45%
3 year	1.03%	0.84%	2.24%	7.5%
4 year	0.70%	0.86%	2.33%	7.63%
5 year	1.31%	0.90%	2.46%	7.70%
7 year	2.08%	0.98%	2.72%	7.90%
10 year	2.60%	1.20%	2.98%	8.15%

Gold Futures	
GCY00 (Cash)	1,320.37
GCX16 (Nov '16)	1,323.10
GCZ16 (Dec '16)	1,324.90
GCG17 (Feb '17)	1,329.20
G CJ17 (Apr '17)	1,332.90
GCM17 (Jun '17)	1,334.30
GCQ17 (Aug '17)	1,338.80
GCV17 (Oct '17)	1,342.10
GCZ17 (Dec '17)	1,343.90
GCG18 (Feb '18)	1,344.10
G CJ18 (Apr '18)	1,346.20
GCM18 (Jun '18)	1,348.30
GCZ18 (Dec '18)	1,354.00
GCM19 (Jun '19)	1,359.80
GCZ19 (Dec '19)	1,365.60
GCM20 (Jun '20)	1,370.40
GCZ20 (Dec '20)	1,376.70
GCM21 (Jun '21)	1,388.70
GCZ21 (Dec '21)	1,401.70
GCM22 (Jun '22)	1,414.70

<b>ANNUALIZED CURRENCY OPTION VOLATILITIES</b>			
Maturity	USD/CAD	USD/ZAR	AUD/USD
1 month	5.9%	12.2%	9.3%
2 month	6.3%	11.8%	9.4%
3 month	6.4%	11.5%	9.6%
4 month	6.6%	11.8%	9.9%
5 month	6.7%	11.8%	10.0%
6 month	6.8%	11.9%	10.2%
9 month	6.7%	11.7%	10.2%
12 month	6.7%	11.7%	9.9%

<b>GOLD OPTIONS</b>						
	<b>Call Options</b>			<b>Put Options</b>		
<b>Strike</b>	<b>3 Month</b>	<b>6 Month</b>	<b>12 Month</b>	<b>3 Month</b>	<b>6 Month</b>	<b>12 Month</b>
<b>1100</b>	228.40	237.50	255.40	1.30	4.10	14.70
<b>1125</b>	204.00	214.20	234.30	1.80	6.00	18.50
<b>1150</b>	179.70	191.50	214.00	2.50	8.20	23.00
<b>1175</b>	156.20	169.50	194.40	3.90	11.20	28.40
<b>1200</b>	133.30	148.40	175.70	6.10	15.00	34.60
<b>1225</b>	111.70	128.60	157.90	9.50	20.20	41.70
<b>1250</b>	91.60	110.10	141.40	14.30	26.60	50.10
<b>1275</b>	73.60	93.60	126.40	21.80	35.00	59.90
<b>1300</b>	58.00	78.60	112.50	30.10	45.00	70.90
<b>1325</b>	44.60	65.90	99.70	42.00	57.30	83.00
<b>1350</b>	35.10	55.00	88.10	56.80	71.30	96.20
<b>1375</b>	26.10	45.80	77.60	73.60	87.00	110.60
<b>1400</b>	20.30	37.90	68.20	92.50	104.00	126.10
<b>1425</b>	15.30	31.80	59.70	112.80	122.80	142.50
<b>1450</b>	12.20	26.60	52.10	134.20	142.60	159.80
<b>1475</b>	9.10	22.40	45.50	156.60	163.30	178.00
<b>1500</b>	7.40	18.80	39.50	179.50	184.70	197.00

**Assumptions:**

Assume all interest rate swap rates are Semi-annual. The swap rates are for maturities 2 years – 10 years.

# PORTFOLIO CHALLENGE

On the day of the live event – November 4<sup>th</sup>, each team will participate in a Portfolio Challenge using the Portfolio Management Simulator. The simulation will last 100 minutes. Each team will manage a portfolio of investments for the ULTRA INVESTMENT MANAGEMENT COMPANY, a Long/Short strategy hedge fund firm **domiciled in Japan with an Asian Specific Investment Strategy**, with offices globally.

## WINNING THE CHALLENGE

To win this challenge, the total Profit & Loss for each time will be adjusted based on their risk level of trading as calculated by RaROC and Sharpe Ratio. This adjusted calculus will determine this particular challenge winner.

For More Information on any of these analytics:

VaR: [http://en.wikipedia.org/wiki/Value\\_at\\_risk](http://en.wikipedia.org/wiki/Value_at_risk)

RaROC: [http://en.wikipedia.org/wiki/Risk\\_adjusted\\_return\\_on\\_capital](http://en.wikipedia.org/wiki/Risk_adjusted_return_on_capital)

Sharpe Ratio: [http://en.wikipedia.org/wiki/Sharpe\\_ratio](http://en.wikipedia.org/wiki/Sharpe_ratio)

Sortino Ratio: [http://en.wikipedia.org/wiki/Sortino\\_ratio](http://en.wikipedia.org/wiki/Sortino_ratio)

Treynor Ratio: [http://en.wikipedia.org/wiki/Treynor\\_ratio](http://en.wikipedia.org/wiki/Treynor_ratio)

Information Ratio: [http://en.wikipedia.org/wiki/Information\\_ratio](http://en.wikipedia.org/wiki/Information_ratio)

## PURPOSE

The purpose of the challenge is for each team to: communicate, develop real-world strategies and deal with unknown and potentially volatile market circumstances. Each team will have to collectively and consensually decide how to allocate their portfolio. Each member of the team will trade and execute their own trades.

## INVESTMENT SIZE

Each team will be given the following:

- \$1,000,000,000
  - \$250,000,000 – allocated to each team member
- You are able to take both LONG and SHORT positions
- You are only able to take short positions up to 20% of the market value of your portfolio
- You are unable to purchase on Margin
- There is only one price per trading period
- There are no commission costs

## SIMULATION ANALYTICS

### Analytics

Imputed Interest Rate	2.50%
Risk Free Rate	2.00%
Min Accept Return	3.00%
VaR Time Horizon	252
VaR Confidence Level	90%
Benchmark Index	S&P 500

## TIMINGS

- 8 Trading Periods
- Each trading period will be 8 minutes
- A final period will be used to determine the final
- All trading periods will have various video and online news releases
- You are able to use the trading period to discuss your plan of action for your team's portfolio
- Once you have made your investment plan, each trader will execute their trades.

## INSTRUMENTS

These are all of the instruments that will be available to trade in the Portfolio Challenge. All instruments with the EXCEPTION of the INDEXs are traded in USD. The Index securities are representative of each market and are traded in the local currency. For example, the SET Index (Thailand) is traded in the Thai Bhat. Because these indexes are dominated in their local currency, there is a potential currency risk for each index.

ID	Name	Base Currency
ORDI	All Ordinaries Index (AUS)	AUD
CHNA	China SSE Index	IDR
DAX	DAX Index	EUR
DJIA	Dow Jones Industrial Index	USD
FTSE	FTSE 100 Index	GBP
KLCI	FTSE Malaysia KLCI Index	MYR
JCI	JCI Index (Indonesia)	IDR
KSPI	KOSPI Index (Korea)	KWR
QQQ	NASDAQ Comp. Index	USD
NIKK	Nikkei 225 Index	YEN
PSEI	PCOMP Index (Philippines)	PHP
RUT	Russell 2000 Index	USD

SPY	S&P 500 Index	USD
SETI	SET Index (Thailand)	THB
SING	Straits Times Index (SGD)	SGD
TSEC	TSEC Taiwan Weighted Index	TWD

**LIST OF INSTRUMENTS** – See Addendum B

**LEARNING THE PLATFORM**

We will send separately a schedule of times when you can have access to the Portfolio Management Simulator to learn more about it.

# TREASURY CHALLENGE

On the day of the live event – November 4<sup>th</sup>, each team will participate in a Treasury Challenge using the Forex Trading Simulator. The simulation will last 90 minutes. Each team will manage the cash investments for the SUNSHINE TRADING COMPANY, a global trading firm domiciled in the United Kingdom, with offices globally.

## WINNING THE CHALLENGE

To win this challenge, the total Profit & Loss for each time will be adjusted based on their risk level of trading as calculated by Sharpe Ratio. This adjusted calculus will determine this particular challenge winner. You are getting USD from the US and the purpose needs to repatriate to GBP.

## PURPOSE

The purpose of the challenge is for each team to: communicate, develop real-world strategies and deal with unknown and potentially volatile market circumstances. Each team will have to collectively and consensually decide how to allocate their portfolio. Each member of the team will trade and execute their own trades.

## INVESTMENT SIZE

Each team will be given the following:

- \$200,000,000
  - \$50,000,000 – allocated to each team member
- You are able to purchase on Margin - margin to 4:1
- Prices are 'continually updated'
- There are no commission costs

## SIMULATION ANALYTICS

### Analytics

Imputed Interest Rate	2.50%
Risk Free Rate	2.00%
Min Accept Return	3.00%
VaR Time Horizon	252
VaR Confidence Level	90%
Benchmark Index	USD Index

## **INSTRUMENTS**

You will be given 6-9 currency pairs to trade. The final list will not be available until the day of the competition.

## **LEARNING THE PLATFORM**

We will send separately a schedule of times when you can have access to the Forex Trading Simulator to learn more about it.

# Addendum A

## IB Challenge Judges Rubric

Judging Items		Suggested Point Values				1	2	3	4	5	6	7	8	9	10
		Excellent	Very Good	Good	Fair										
<b>Content</b> e.g. relevance of information, appropriate length and level of detail	Content	20	15-19	12-14	0-12										
<b>Organization</b> e.g. structure of presentation, use of all team members, timing		20	15-19	12-14	0-12										
<b>Communication</b> e.g. appropriately pitched to audience, proper use of jargon, for all team members	Delivery	15	11.5 – 14	9 – 11.5	0 – 9										
<b>Physical Behaviour</b> e.g. good eye contact and appropriate physical gestures vs. unnecessary and nervous movements		10	7.5 – 9	6 – 7.5	0 - 6										
<b>Visuals</b> e.g. legible, simple, clear and appropriate for topic and for audience, good graphics	Material	15	11.5 – 14	9 – 11.5	0 – 9										
<b>Responses to the questions</b> e.g. on the point, not defensive, within time limit, consultative to team, nominated spokesperson or responses shared among team	Articulate	20	15-19	12-14	0-12										
<b>TOTAL SCORE (100 Points Possible)</b>															

### Judging Criteria

Overall Rating	Evidence as noted by Judge	Overall Rating	Evidence as noted by Judge
<b>Excellent</b>	Exceptional, exceptionally high level of understanding, can see opportunities and relate theory and research to commercial environment	<b>Good</b>	Meets requirements/Development needed. Has ability to develop ideas with prompting. Has grasped the basic concepts.
<b>Very Good</b>	Exceeds Requirements, understands all areas of the topic, can relate theory and research to commercial environment	<b>Fair</b>	Below Requirements. Struggled with both the ideas and exercises. Appears uninterested in assignment material.

### Tiebreaking Judge's Official Ballot

#### Name of University Team

First Place: \_\_\_\_\_  
 Second Place: \_\_\_\_\_  
 Third Place: \_\_\_\_\_  
 Fourth Place: \_\_\_\_\_  
 Fifth Place: \_\_\_\_\_

\_\_\_\_\_  
 (Signature of Judge)

\_\_\_\_\_  
 (Judge's Name; Please Print)

\_\_\_\_\_  
 (Date)

### Judge's Code of Ethics

Judges will consciously avoid bias of any kind in placing all contestants.  
 They will not consider any team's university affiliation.  
 They will demonstrate the utmost objectivity.

# Addendum B

List of all of the instruments that will be traded  
in the Portfolio Management Simulation, with  
price histories



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