

# WQU Capstone

## Assignment: Group Formation & Topic Selection

This form **must be submitted in your online course room immediately after the course begins**. Failure to submit your group formation and topic selection will result in cancellation from the course at the start of Week 2. If you are proposing your own topic, you are required to send this form to Student Support using the Help Center chatbot prior to the M1 deadline for instructor approval.

Full Legal Name	Silverio J. Vasquez
Email Address	sjv2112@columbia.edu

Name of group member(s) (*If working alone, input "Solo")	Solo
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Select your track/topic from the dropdown menu	14. OTHER (not listed) ▾
If response above is "Other", insert your proposed topic here	A macro-oriented fixed-income relative value trading strategy with hierarchical risk parity portfolio optimization

This section **is required** to provide additional information regarding your topic as this will help instructors determine if they would be a good fit to mentor your group for the duration of the project. If you opted to propose your own topic, this information will be used for approval purposes (ie. whether you have access to necessary data, etc.).

Data sources: Bloomberg & FRED for macro data, Yahoo Finance for stock and ETF prices, and DataBento for futures data if Bloomberg does not have

Goal: Develop a macro-oriented fixed-income relative value trading strategy. The strategy will be a combination of alpha strategies trading spreads, e.g., Italian yields less Bund yields, SOFR versus Euribor futures, etc.

Steps: Each strategy will depend on a couple/few linear and non-linear classification models, e.g., Random Forest, SVC, Logit, etc. The model signals will either be averaged or aggregated via XGBoost (to be determined). The various strategies will be combined via a portfolio optimization technique. Currently thinking of comparing MVO and HRP.

**Statement of integrity:** By typing my name in the text box below, I confirm that I am willingly entering into group formation with the students listed above and have confirmed the common interest in the topic for this project. I understand that failure to collaborate effectively with the other students of the group will result in grades of 0 and automatic isolation. If I am proposing my own topic I am required to submit this form to the Help Center chatbot prior to the course start date for instructor approval.

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Full Legal Name	Silverio J. Vasquez
Date Submitted	6/11/2024