

# 2022 Internship Project Report

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It has four business segments:

1. Investment Banking
2. Global Markets
3. Asset Management
4. Consumer and Wealth Management

**About Global Markets:**

The Global Markets Division enables our clients to buy and sell financial products, raise funding and manage risk. We make markets and facilitate client transactions in fixed income, equity, currency and commodity products.

We make markets in and clear client transactions on major stock, options and futures exchanges worldwide. Through our global sales force, we maintain relationships with our clients, receiving orders and distributing investment research, trading ideas, market information and analysis.

**Title of the project:**

1. PRISM: A global transactional workflow to manage hedging
2. Proforma Report

**Introduction:**

An index is a method to track the performance of a group of assets in a standardized way. Indexes typically measure the performance of a basket of securities intended to replicate a certain area of the market. Indices are usually issued by index providers, and contain various securities which represent a particular section of the market. Goldman Sachs provides exposure to clients over various indices across the globe, maintaining volatility in the market.

Indices are subject to change over its lifecycle, due to the index provider changing the composition of the index, and also due to movement of securities in the market such as merger & acquisition, split, and various other corporate actions. To ensure that the client gets exposure of the current composition of the index, appropriate changes are required in the inventory of securities maintained by Goldman Sachs.

**Objective:**

The objective of the PRISM project is to add an UI component to the PRISM workflow, wherein the trader can view the aggregated quantity of each underlying security, over all the index orders, to be able to hedge the total order easily. The UI also should report the underlying securities on the basis of region, enabling the trading desk to be able to easily find out the magnitude to be traded for a particular region.

The objective of the Proforma Report project is to report the changes in composition of the indices in the previous day due to changes issued by the index provider, as well as report the predicted changes in the indices due to some corporate actions over the underlying securities of the indices. The changes are reported in order of the amount of the change, so that the trading desk is appropriately informed of the changes they need to make to hedge the risk of Goldman Sachs.

**Methodology:**

In PRISM project, the steps followed were:

- Break all the swap orders on indices to its underlying securities
- Aggregate same securities over all orders into one basket and calculate the total notional amount on the security
- Display the aggregated quantity on the UI part, with an option to easily decompose the aggregated securities into the base orders
- Provide filters on the aggregated securities on the basis of region & market

In Proforma Report, the steps followed were:

- Add composition change table to report the composition change on all indices
- Iterate on all underlying securities for every index to compare composition from the previous day.
- Iterate over all securities of the index to check for any corporate actions on the security.
- Add a corporate actions table to report predicted corporate actions on indices over next 4 days.

**Key learnings:**

The 10-week internship at Goldman Sachs has definitely exceeded my expectations and has indeed been an exciting experience for me. It has helped me to understand how my projects have an impact at an organizational level and has strengthened my knowledge on various financial and technical concepts.

During my internship, I got an opportunity to learn about swap orders and indices. I got to know how global markets work & how indices are traded across the globe. I also got to work on hedging and got exposure of how trades are executed. In short, it was a wonderful experience learning from the experts in the industry.

This industrial experience has also helped improve my interpersonal skills like communication and teamwork. The social networking dinner was a great opportunity to meet and network with the leaders and fellow interns. The Community Team Works project taught me the importance of volunteering and giving back to the society.

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