15.999 Internship

Deliverable

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**Cross-Cultural Work Experience: Insight and Observation**

This summer I was working at PanAgora Asset Management, a Boston based quantitative asset manager. My supervisors are Mike Chen, head of sustainable investments and Sean Chen, associate portfolio manager. Overall, the experience was fantastic: I finished two projects successfully; I experienced how asset management works in US; I improved my coding, research, and communicational capacities; and they gave me high remarks. Unfortunately, they don’t typically follow interns, but Mike offered a reference letter for me which should help my later full-time job applications.

In the meanwhile, I also had the chance to experience the difference in quantitative research & general workplace culture between China, where I came from, and the United States. This paper is supposed to list some of my observations and my further reflections on these differences, and hopefully could help people understand more about both the United States asset management / quantitative research workplace and that of China. The structure of this paper is as follows: section I shortly summarized PanAgora Asset Management; section II introduced my role during the summer and the team I was working with; section III discusses the technology and skills I used / improved throughout the summer; section IV discusses the difference that I experienced between China and the United States as an intern, with respect to evaluation criteria and communication styles.

1. About Panagora Asset Management

PanAgora is a large Boston based quantitative asset management company with more than $40 billion dollar worth of asset under management. Currently they have 3 research teams: dynamic equity, stock selectors, and multi-asset. Both dynamic equity and stock selectors invest global equities in a quantitative manner; they are quite similar to each other, while stock selectors’ strategy are more likely to come from fundamental research. Multi-asset team invest all kinds of asset classes, but only in index fund or ETFs only; in other words, they do not select securities within an asset class.

As they introduced to me, PanAgora only works with institutional investors, with a total number around 165 all over the world. And each team works very independently: they manage their own trading books & funds and have their own clients that are not supposed to share with other teams. The clients are very loyal and stable, which PanAgora was very proud of and creates value for them from my perspective. However they do share utilities and support teams in PanAgora, such as IT and HR.

1. The Sustainable Investment Team I work with

I was working with sustainable investment team of dynamic equity group. It was a small team about four or five researchers & portfolio managers, and mostly I reported to associate portfolio manager Sean Chen and head of sustainable investment Mike Chen.

It is a very proud team, and they regard themselves as a leader in sustainable investments. From my perspective, I believe they have two major advantages over other ESG funds in the market: First, they have a very clear investment ideology and well-defined framework. A lot of ESG funds or self-claimed ESG funds are cheap copycats or market followers, joining the market to earn high management fees without having a well-defined investment target. PanAgora sustainable investment team tries to invest in the firms/factors that have both ESG and alpha potential, and they have a nice model to evaluate and combine the contributions to both ESG and excess returns. They published a lot of research papers & articles to the market, especially Mike Chen. It makes research harder; you need to find a factor that is ESG-related, and also creates alpha returns. The most common such factors come from “G” (Governance): when the corporate management governs its employees and its asset in a sustainable way, it will create positive value that is sometimes hidden for most investors and leave acute investors the chance to invest and earn excess returns by identifying them. Second, they have strong technology in machine learning, especially in NLP. Some of the members in the team are PhDs (including Mike), and they have many years of experience in machine learning and NLP. Mike said he was one of the earliest researchers to construct sentiment analysis from Glassdoor employee reviews and make investment accordingly.

Overall, Mike is a very nice and easy-going manager, but he is also very rigorous and excited about research. Sean is a bit more serious, but he also taught me and shared a lot about how he thought was the best way to do research. The communication experience was overall great and I did not experienced anything unhappy.

1. Technologies that I used

During the summer I worked on site in the office, and they gave me a corporate PC to work on. The team makes quantitative investment, so I conduct quantitative investment research as well. For most of the time I was using python in Spyder (an IDE), and the experience was smooth as I was quite familiar with python before the internship. They have great infrastructure to support researchers and interns: the PCs have high specs; they have a huge and easy-to-use SQL database including prices, risks, rates, and their factor values; they have virtual machines & IP switching technology to do web-scraping; most importantly, they have what they call “backtest machines” that takes factor values as input and analyze in every details (correlation, IC, alpha, Sharpe Ratio, risk exposures, IC and alpha breakdowns, …).

1. Compare with China Quantitative Research / Asset Management

Luckily, prior to MFin, I had the chance to intern in China as quantitative researcher on both the buy-side and sell-side. They are both very different to what I experienced this summer.

To start, they have different evaluation criteria. PanAgora is much more patient and research-oriented: they emphasize the right procedures & details in research and not so particular about the result. The logic behind this is that: projects are quite random, and the true results are sometimes independent with research capacities. if you are a good researcher having the capacities of conducting robust research, you will beat others in the long run. However in China it was more result-oriented, at least when I was still there. They wanted to see pretty results with high alpha/Sharpe Ratio in back-test, instead of double-checking the process was correct. They also evaluated employees & interns based on this. It could be more efficient, but it could not select the best researchers, and some people even manipulate data or ignore important steps only to show better results.

Secondly, ­they have different communication styles. In China supervisors are like “teachers”; they even preferred to be called like “teacher + last name”. Like teachers, they assign “homework” to “students (interns)”; they walked to your seat and check out how you finished your homework several times a day. In other words, interns could not decide the direction of project. Communications are more hierarchical: they asked about when the job can be done, or what was the result, and paid less attention to how interns reflect about it. At PanAgora, supervisors respect interns’ discretion more. I spent two weeks brainstorming / discussing the research proposal with supervisors, which turned out to me very important active learning experience. During the process, they also cared about my opinions, and also if I could learn something from the work. There were multiple times that I significantly influenced the target of the work which made me feel achieving, compared with simply finishing the task. Also, they value the project presentation more than China asset managers. In China, most investors are not sophisticated and they want to see eye-caching returns instead of understanding the philosophy behind; which affects how asset managers present their results and conduct research. At PanAgora, we spent a whole week to clarify the logic of the project, to select important results, and to prepare straightforward slides. And at the final presentations, senior managers were eager to understand the logic and showed their interests in my research.