My study objectives at the MS program in Mathematical Finance at Questrom School of Business is to gain what? and break through deadlocked Japan’s asset management. From my unique experience that I looked at various institutional investors from both inside as a buy-side quant and outside as a provider of quantitative funds, I am convinced that quantitative analysis has the power to solve the issue.

The 2008 Financial Crisis made me interested in studying financial engineering at Keio University. I devoted myself to research in a discrete-time multi-period optimization model for Asset Liability Management (ALM). I noted its potential to influence companies’ crucial decision making, which led me to my career as a quant for the Dai-ichi Life Insurance Company in year.

My secondment to Japan Post Insurance Co., Ltd., from year to year shaped my thoughts... Japan Post, Japan’s biggest life insurance company, which used to be public insurance services, has started to diversify its portfolio, especially Alternative Investment since year. As the number of portfolio companies increased, its management became complicated, and building a new framework based on quantitative analysis was urgently needed. AM One, where I belong, one of the most prominent asset managers in Asia as one of the group companies of Daiichi-life, planned to acquire a mandate by revealing risk characteristics of a customer’s portfolio based on Factor Analysis and suggesting the fund complementing lacking factors.

I was given the mission to achieve both Japan Post’s and AM One’s purposes as the sole dispatch member of the Multi-Asset Fund Investment Team in Japan Post. This opportunity was a turning point for me to apply my quantitative skills to business creation. I started to construct a multi-asset and multi-style factor analysis framework, of which the standard model has academically or practically not existed. However, as the only person who knew every stakeholder’s bottom lines, I firstly should provide the optimal model for them through negotiations. Japan Post expected the model intuitive and easy to interpret. On the other hand, AM One valued alignment with the designed investment strategy based on profitability. Also, the most challenging matter was selling cutting edge products like Risk Premia to Japan Post. I should persuade highly conservative investors by utilizing quantitative analysis. I stimulated their potential needs and made them recognize the necessity of Risk Premia by giving new perspectives on portfolio management, which was different from traditional asset-based analysis. Based on the results of simulation and scenario analysis, I showed that their portfolio was biased toward specific factors; therefore, factor diversification enabled them to stabilize investment performance. During the both processes, my coordination skills to promote relationship building between Japan Post and AM One greatly helped to move forward the project. I tried to be familiar with customers’ inside information such as investment philosophy, decision process, and corporate culture, by communicating with related departments. Such information deepened my understanding of their risk appetite up to the entire company’s one. In the weekly meetings at AM One, I also showed the direction of the project, for example, investment strategy fitted to Japan Post.

In the end, I introduced the new portfolio management framework considering the aspect of factor diversification to the CIO of Japan Post and suggested adopting AM One’s fund to improve their current investment situation. As a result, we obtained the investment mandate of 500 million dollars, and now I work as a fund manager of the Risk Premia fund at AM One. I lead the project to expand this consulting sales framework into other Japanese investors. Furthermore, I applied this analysis to Dai-ichi’s portfolio and wrote a thesis discussing business opportunities of Factor Investing, which won a prize in the Dai-ichi’s in-house research paper competition.

This unique experience also made me note Japan’s deadlocked situation; Japan’s investors are bound hands and feet with outer circumstances: Historic low-interest rate, which has been pushed further into negative territory, makes it challenging for financial institutions to earn a stable return, and the constraints on risk capital imposed by financial regulations deprive them of flexibility.(以下のブルーの箇所と呼応していることが必要　本日のお話ですと、個々に２つのチャレンジ（以下）を掲載することが必要

Furthermore, in the case of insurance companies, constraints on ALM caused by Japan-specific characteristics of the life insurance market makes the situation worse. For instance, Japan Post’s huge assets, which equal to or larger than global leading institutional investors like CalPERS and CalSTRS, are still under inefficient management.（1）三國さんの今回の改善で手を付けられなかった残った課題を強調するための表現を入れる） I have felt that Japan’s asset management has great potential but has not fully maximized its true value.（この部分をかえることが日本の金融機関を大きく改善させることにつながる）これを解決する課題は2つ　1）投資の考え方が保守的であり、正しいロジックに加えて、提案する分析手法がグローバルで成功していることを証明することで、彼らのマインドを変えることだ

To overcome the situation with the use of quantitative analysis, in the long-term, I will create a successful ALM framework and provide it to long-term investors widely, to maximize investment return under the constraint of limited risk capital. The new framework of Liability Driven Investment (LDI) or Multi-Period Optimization, which has been my biggest interest since college days, will play a key role in realizing an efficient investment. We also have to tackle a structural problem in Japan’s asset management industry by providing insurance companies’ sophisticated ALM system. ( tackle a structural problemとは何？) I believe that a quantitative proposal based on an understanding of customers is powerfully persuasive.

My short-term career goal is to influence conservative Japanese investors,（なぜこれが必要なの　説明が必要）黄色の箇所は上述のブルーと呼応させること by proving that Japanese quantitative investing works in the global market. Now, AM One has decided to expand its business to the United States, leveraging our strengths in quantitative investment, I would like to extend my consulting sales framework into the U.S. market by learning the US’ product-oriented quantitative investing and combining it with Japan’s customer-oriented one.

The MS program in Mathematical Finance at Questrom School of Business gives me the ideal environment for satisfying the requirements. Firstly, I would like to learn Continuous-Time Multi-Period Portfolio Optimization originated from Merton’s Portfolio Problem. The course of *Methods of Asset Pricing I and II* enable me to attain solid comprehension of Stochastic Calculus that is necessary for an in-depth study of continuous-time finance, and *Portfolio Theory* would provide me an opportunity to directly discuss what long-term investment should be made. By combining them with my academically knowledge about Discrete-Time and Simulation-Based Multi-Period Portfolio Optimization, I will find a solution for my long-term career goal. In addition, for my short-term goal, I would like to acquire advanced knowledge of Factor Investing through *Advanced Topics in Investments*. The theoretically rigorous but practical course would give me an idea about what investment risk should be essentially considered. Finally, through *internship* and *industry-sponsored projects* in Boston, where many asset managers are active, I would like to develop my network with asset managers in the US and discuss the difference in the way of thinking about quantitative investment between the US and Japan. For the short-term goal, networking would provide me an environment to polish my idea about how I should adjust my consulting sales framework and expand our business in the US.

For the reasons above, I am convinced that your program would open a door and lead me to a higher stage of buy-side quants. Finally, I’m confident that my unique business experience and facilitation skills would provide my view about applying several models to real business with other classmates who are interested in career in quants finance..