Northeastern

Case Study 3 - One Dataset Many Users

Part 1 - Summary

INFO6105 37364 Data Science Engineering Methods and Tools

March 22, 2019

Project Group 2

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What is Lending Club?

LendingClub uses technology to operate a credit marketplace at a lower cost than traditional bank loan programs, passing the savings on to borrowers in the form of lower rates and to investors in the form of solid returns. They are transforming the banking system because of their peer-to-peer lending model that makes those exact promises.

What is Peer-to-Peer Lending?

Peer-to-peer is essentially non-bank banking marketplace that connects lenders and borrowers. And cuts out the "middleman" which is the banker. In peer-to-peer lending instead of giving one loan to one person, you will be giving microloans to many different people, like Mutual funds, to reduces your risk. There actors involved in P2P lending are:

- **Borrowers**: Peer lending is a simple concept. Borrowers who need money can apply for loans on the LendingClub platform. The borrower then pays the loan back over a three or five-year period. Interest rates range from ~5% to ~30%, depending on the quality of the borrower and many other factors. Rates for borrows are often lower than credit cards and other borrowing facilities rates.
- **Investors**: Investors and institutions, lend small amounts of money (as low as $25) to the borrows to fund loans. Investors can earn up to 28 to 29% or more by investing in the notes.

Who is Tola?

Tola is a risk-taking investor who is intrigued from the market volatility, viewing it as an opportunity to realize a higher return on their investment.

Why should they invest in LendingClub?

Tola should invest in LendingClub for the below mentioned reasons:

1. The number of loans issued is constantly increasing every year
2. Most of the loans (approx. 45.60%) are requested for the purpose of refinancing and paying credit card bills
3. Washington, California, Arizona, Texas, Florida, Georgia, North Carolina, Virginia, Penn, Ohio, Michigan, New York, Illinois are the high performing states with investments more than 50 M$ in LendingClub

Specific insights for Tola

Tola, as a risk-taking investor should focus on the below mentioned insights:

Number of Notes

Tola should concentrate his money in less number of Notes. For example, if the account will hold 4 notes and corresponding loans are fully performing the returns will likely to be high relative to other accounts for a period. However, if one of the corresponding loans doesn't perform well, account value may decline and relatively returns will also be low.

Diverse Profile

If Investor wants earn profit from investing lending club diversification is Key. Purchasing different notes that correspond to different loans or borrowers can help limit the impact of any single charge-off. In fact, 97% of investors who own 100+ Notes of relatively equal size have seen positive returns.

- Diversification chart shows that as the account hold more and more Notes with each note represents a smaller portion of total and their returns may become more stable and consistent.
- Accounts with <100 Notes have been more likely to see negative returns.
- LendingClub investors with more diversified accounts have generally experienced less volatility and more solid returns than investors with more concentrated holdings. Diversification increases when you purchase additional Notes related to different borrower loans.

(How to diversify – Automated Investing? Automated Investing is an easy way to create a diversified investment. You set your investment criteria and Automated Investing will place orders for Notes as matching inventory becomes available. Browse loans- Browse the loans listed on our platform and manually pick the borrowers you want to invest in. You will find credit and loan information in each listing).

Interest Rate

Based on each loan application and credit report, every loan is assigned a grade ranging from A1 to E5 with a corresponding interest rate.

A	B	C	D	E
6-9%	10-13%	14-17%	18-28%	28-29%

Weighted Average Interest Rate: Returns are stable on Notes with lower interest rates because the corresponding loans are expected to have lower charge off rates.

Tola should invest in C and E grades as rate of interest is higher in those grades and there could be some chances that borrowers will default.

Net Annualized Return

Net Annualized Return (NAR) is a measure of return on investment. NAR includes borrower payments received each month, net of service fees, actual charge offs, and recoveries.

Adjusted Net Annualized Return (Adjusted NAR) is a measure of return on investment that allows investors to model the impact of potential losses on Notes in their portfolio

NAR reflects only actual Borrower payments received to date. Therefore, LendingClub believes that it provides a better measure of the performance of your portfolio versus considering only the stated interest rate on the Notes you have purchased. It is not a forward-looking projection of performance.

Please keep in mind that, as you reinvest loan proceeds or make additional Note purchases, such new investments will reduce the average age of the Notes in your portfolio, slowing the decline of your NAR by reducing the impact of maturing Notes. When a loan is charged off, the invested principal is written off and your NAR decreases.

Historical returns are not a promise of future results. LendingClub Notes are not insured or guaranteed, and investors may have negative returns. Individual portfolio results may be impacted by, among other things, the diversity of the portfolio, exposure to any single borrower or group of borrowers, as well as macroeconomic conditions.

Summary

Summarizing our analysis, Tola should focus more on medium to higher interest rates loans since the risk involved is huge which further leads to more returns. Also, focus on the following:

- Loans that typically fall within the grade C through E
- Invest in more than 100 notes with the combination mentioned above