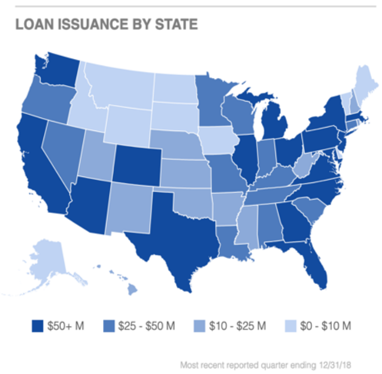
Lending club data analysis

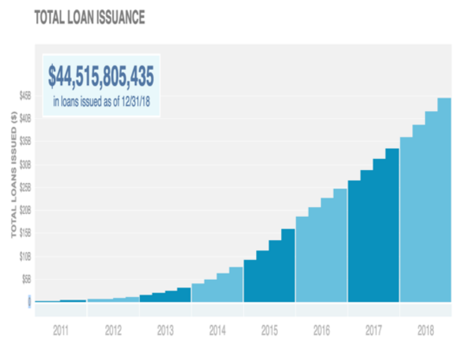
Lending club company information:

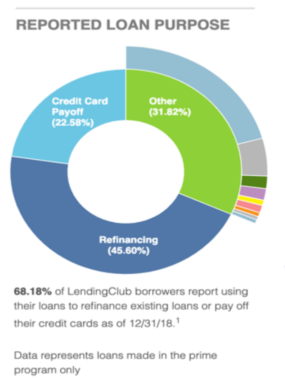
Lending Club is a peer to peer lending company based in the United States, in which investors provide funds for potential borrowers and investors earn a profit depending on the risk they take (the borrowers credit score). Lending Club provides the "bridge" between investors and borrowers.

Distributions analysis:

Based on the data provided by Lending club, we can explore the distribution of the loan amounts and some relations of it.



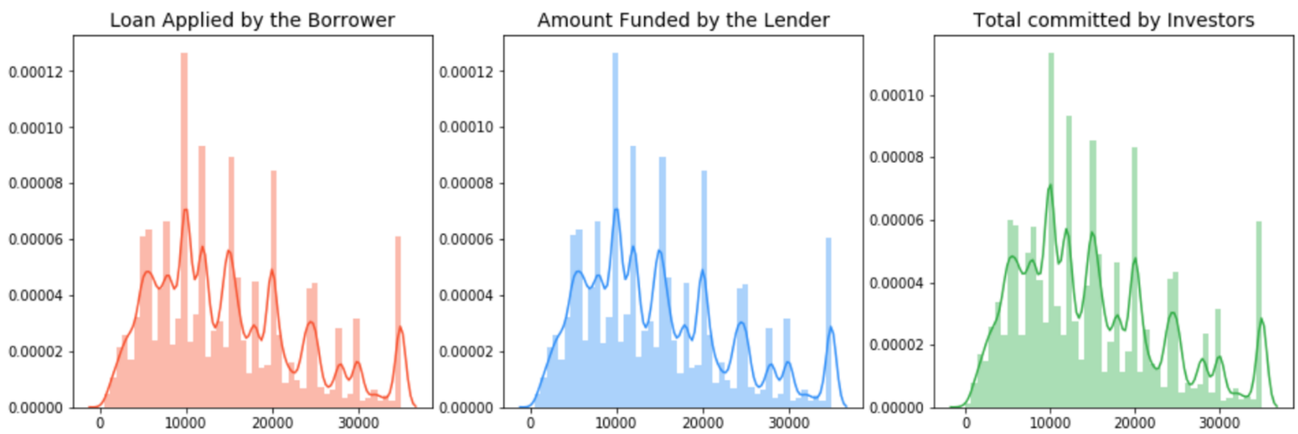




From these data we can conclude some obvious conclusion:

- The **year of 2018** was the year that most loans were issued.
- About 45% of LendingClub borrowers used their loans to **refinance existing loans**.
- Loans were issued in an **incremental manner.**
- The Northwest and East state get the most amount of loans issued.

Now let's take a look situation at Loan applied by the Borrower and Loan funded by the Lender.



From these data we can get a very clear sight:

- The loan applied by the borrower, the amount funded by the lender are **similar distributed.**

This indicate that the qualified borrowers can get the money they had applied for.

Client analysis (arbitrager):

What our clients need?

- Simultaneous purchase and sale of an asset in order **to profit from a difference in price**

It means that our clients need to takes out a loan from Lending club at a low interest and then reinvest that money to earn a higher rate of interest. The borrower gets to pocket the difference. According to the previous analysis, a lot of borrowers in LendingClub used their loans to refinance existing loans. This means that there are a lot of profit in the arbitrager moder.

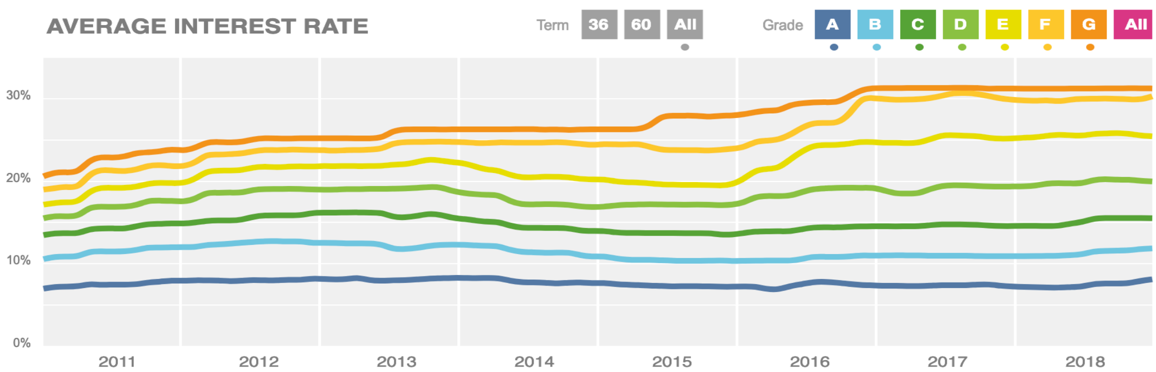
Interest rate analysis:

This is the Loan performance details from the LendingClub and we can see the rate situations from it.

LOAN PERFORMANCE DETAILS

ISSUE DATE START 2007 Q1 ISSUE DATE END 2018 Q2 UNITS Dollar amount

	TOTAL ISSUED	FULLY PAID	CURRENT	LATE	CHARGED OFF (NET)	PRINCIPAL PAYMENTS RECEIVED	INTEREST PAYMENTS RECEIVED	AVG. INTEREST RATE	ADJ. NET ANNUALIZED RETURN[1]
A	$5,109,435,975	$2,912,739,197	$1,063,916,734	$11,641,317	$99,033,542	$3,934,844,379	$421,479,760	7.02%	4.59%
B	$8,246,678,325	$4,295,911,261	$1,767,121,805	$45,796,577	$395,254,966	$6,038,504,963	$1,098,986,457	10.59%	5.72%
C	$8,771,516,575	$3,981,777,068	$2,034,317,107	$87,432,193	$767,083,737	$5,882,683,530	$1,620,344,181	14.08%	6.00%
D	$4,542,159,725	$2,005,970,143	$901,816,543	$58,817,406	$628,109,397	$2,953,416,372	$1,069,769,446	17.98%	5.56%
E	$2,208,813,325	$966,382,373	$318,669,431	$28,346,168	$446,657,835	$1,415,139,888	$659,558,838	21.53%	4.91%
FG	$1,011,552,425	$414,388,024	$127,121,546	$15,286,977	$274,843,797	$594,300,105	$343,647,054	25.97%	2.86%
All	$29,890,156,350	$14,577,168,066	$6,212,963,166	$247,320,638	$2,610,983,274	$20,818,889,238	$5,213,785,737	13.45%	5.43%



The insights from these data:

- Along with the loan grade become lower, the avg interest rate become higher.
- The issued loan amount of low grade loan is less than the high grade loan.
- From 2011 to 2017, the interest rate of low grad loans has an upward trend.

We can see that there are profits between the different interest rate for arbitrager. The qualified borrowers can get the money they had applied for and the interest rate is different from year to year and from the different loan grades.