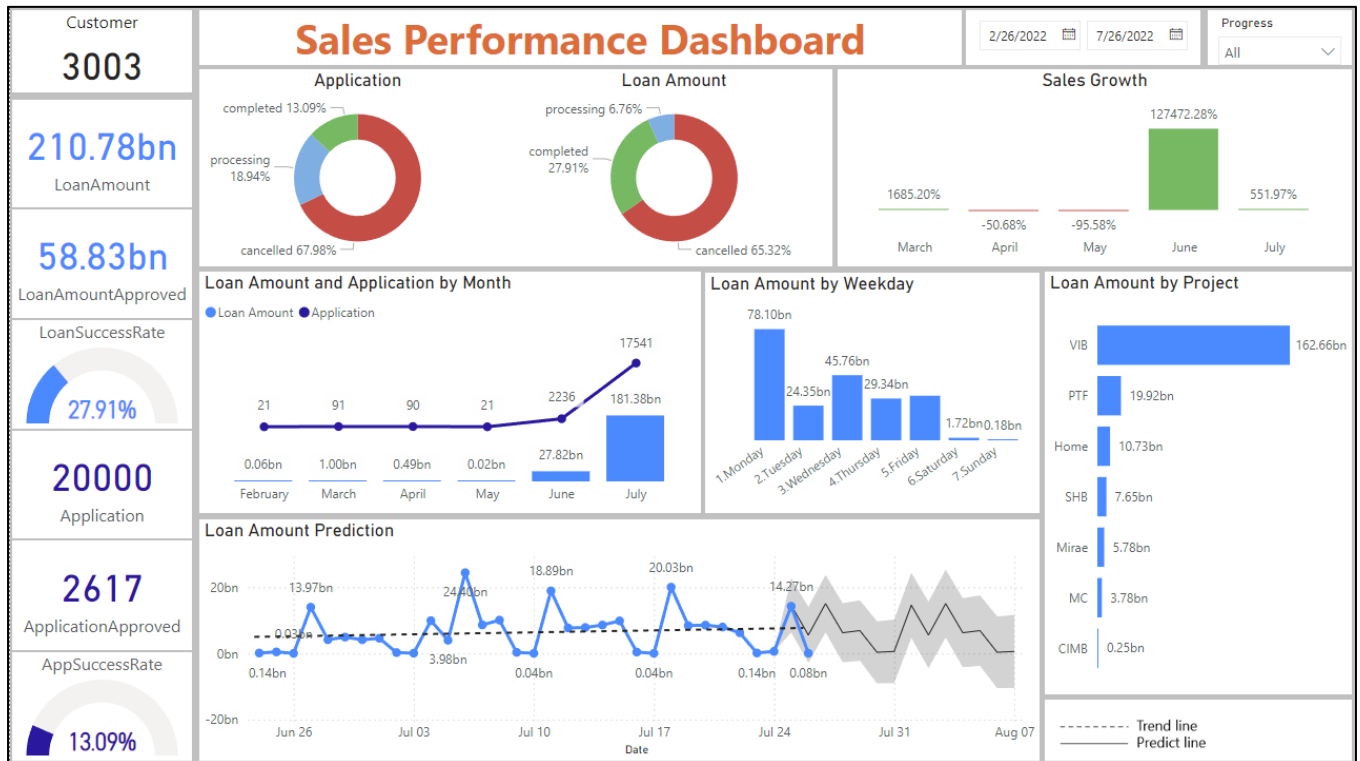# Report
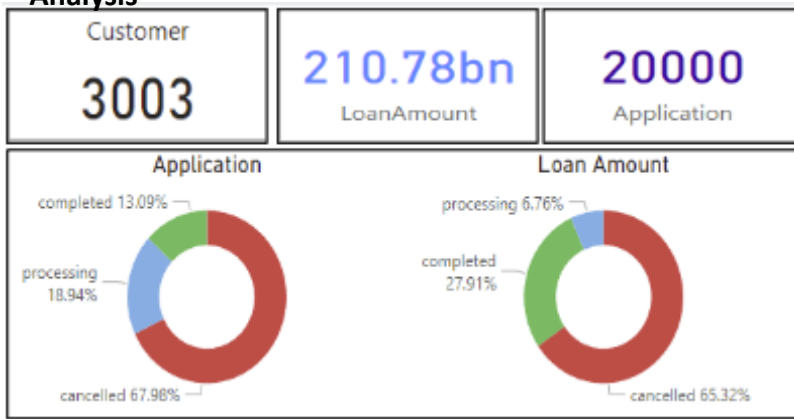
Dashboard Overview
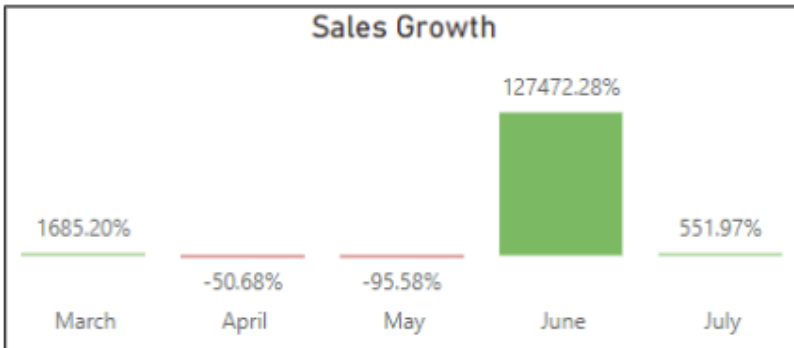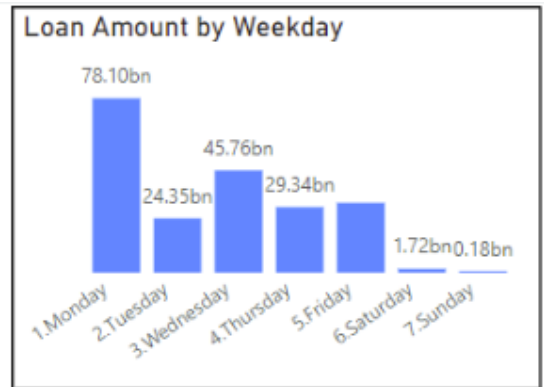

Note:
- Data extracted from 2/26/2022 to 7/26/2022.
- The tables that use the original data are '1.main_app' and '1.DimProjects'
- The data is missing for many days, making the data not continuous. To ensure objectivity, I will analyze based on original data.
- Because the 'id' column is unique, I will remove duplicate values.
- To make the analysis process easier, I made some edits on the data set such as unpivot, adding calculated columns, adding measures, adding dimension tables, , manage relationship between tables.

Analysis

Customer
3003

210.78bn
LoanAmount

20000
Application

Application
completed 13.09%
processing 18.94%
cancelled 67.98%

Loan Amount
processing 6.76%
completed 27.91%
cancelled 65.32%

During this period, there were 3,003 people using the service with 20,000 loan applications, loan amount up to 210.78 billion. However, only 13.09% of the total applications were approved with the amount only accounting for 27.91% of the total loan amount.

Loan Amount and Application by Month
● Loan Amount ● Application

	February	March	April	May	June	July
Application	21	91	90	21	2236	17541
Loan Amount	0.06bn	1.00bn	0.49bn	0.02bn	27.82bn	181.38bn

Loan Amount by Weekday

1.Monday	2.Tuesday	3.Wednesday	4.Thursday	5.Friday	6.Saturday	7.Sunday
78.10bn	24.35bn	45.76bn	29.34bn		1.72bn	0.18bn

Sales Growth

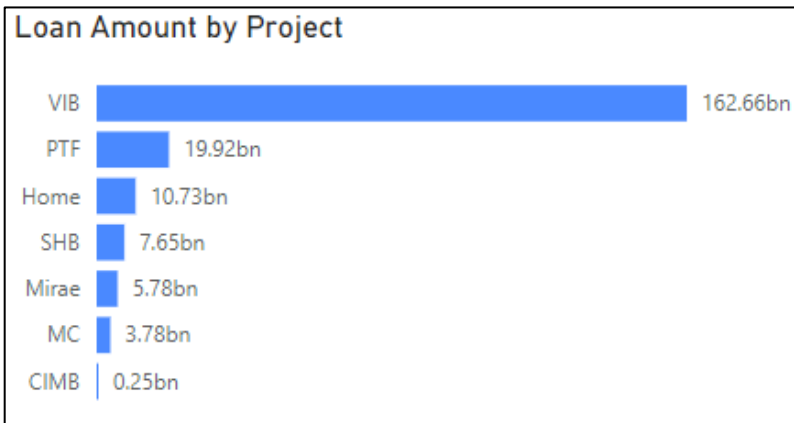| March	April	May	June	July
1685.20%	-50.68%	-95.58%	127472.28%	551.97%

We see that the difference between the month with the highest loan applications (July, 17,541 applications, 181.38 billion loan amount) and the lowest (May, 21 applications, 0.02 billion loan amount) is very high.

The growth between months is inconsistent , alternating between months of positive growth are 2 months of negative growth (May, -95.58%). Unusually, June's growth was explosive with 127472.28% compared to the previous month.

The trend of borrowing money gradually decreases on weekdays, the highest demand is on Mondays and bottoms out on the weekends. It is easy to understand that this is the time when lending institutions do not work.

Loan Amount by Project

Project	Amount
VIB	162.66bn
PTF	19.92bn
Home	10.73bn
SHB	7.65bn
Mirae	5.78bn
MC	3.78bn
CIMB	0.25bn

VIB is the most trusted organization with the amount of loan requests from users being 162.66 billion, reaching 77.17%. on the other hand, users request to borrow CIMB loan of 0.25 billion, less than 1% of the total.

Forecast

LoanAmount and Application by Month and Day
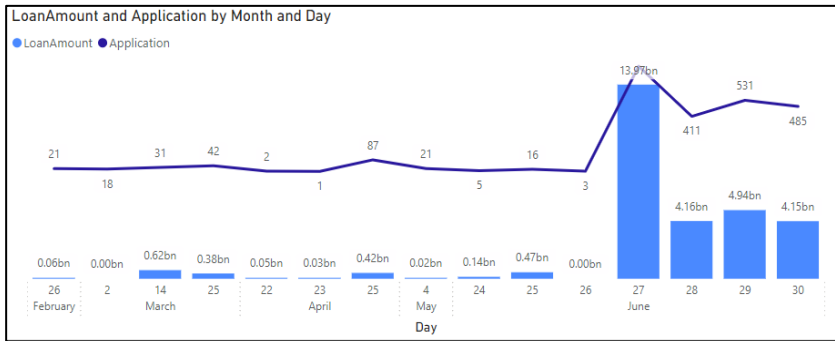
To be able to forecast the next 3 months, it is necessary to have data from previous months including data from those 3 months last year. However, when looking at it, the data is not enough and the data is also not continuous so forecasting for the next 3 months is impossible.

We have continuous data from 6/24/2022 to 7/26/2022. To make sure the predicted values are not too far from reality and inaccurate, so I will use this data to predict loan amount for the next 10 days (30% of the data set).

On 6/26/2022 and 7/24/2022

LoanAmount and Application by Month and Day

have applications but do not generate loan amounts. I will replace the value of 0 loan amount on these 2 days with the average value corresponding to the applications number.

Loan Amount Prediction
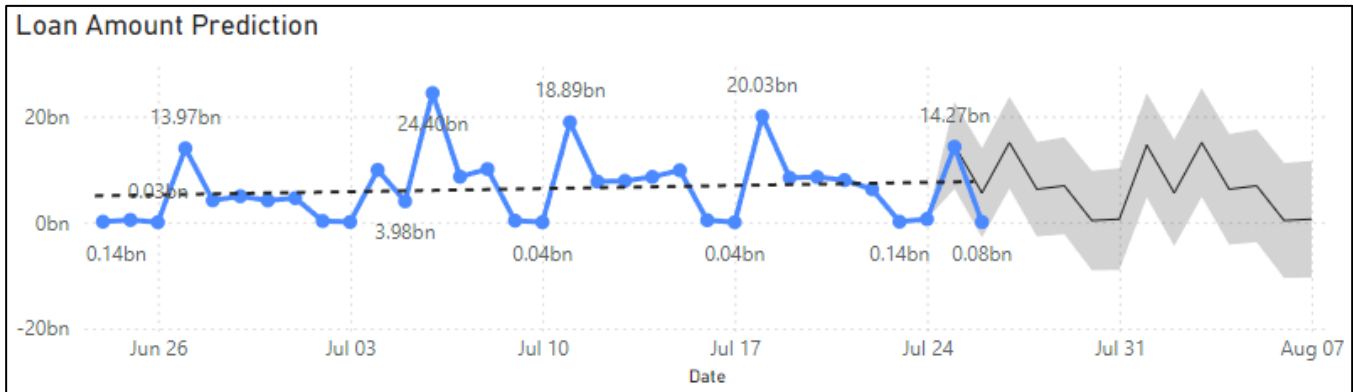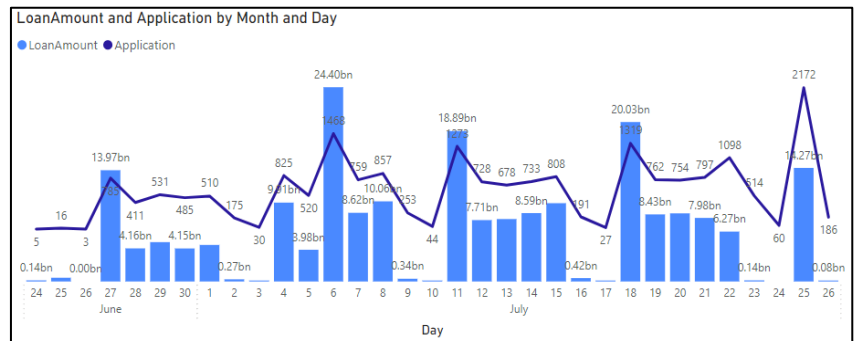
| Date	forecastValue	confidenceHighBound	confidenceLowBound
7/27/2022	15,059,840,062	23,727,811,353	6,391,868,770
7/28/2022	6,259,843,447	15,167,005,597	-2,647,318,704
7/29/2022	6,911,827,133	16,051,922,802	-2,228,268,537
7/30/2022	355,607,060	9,722,845,719	-9,011,631,600
7/31/2022	617,418,316	10,206,420,943	-8,971,584,311
8/1/2022	14,553,192,785	24,360,656,569	4,745,729,002
8/2/2022	5,578,585,183	15,598,074,049	-4,440,903,683
8/3/2022	15,059,840,062	25,286,959,324	4,832,720,800
8/4/2022	6,259,843,447	16,690,460,862	-4,170,773,968
8/5/2022	6,911,827,133	17,542,047,776	-3,718,393,511
8/6/2022	355,607,060	11,181,751,442	-10,470,537,323
8/7/2022	617,418,316	11,636,003,228	-10,401,166,596

I use the trendline and prediction tool in power bi. It's easy to see the trend of loan requests increasing in the near future, and I've exported data predicting loan amounts for the next 10 days into the side table.
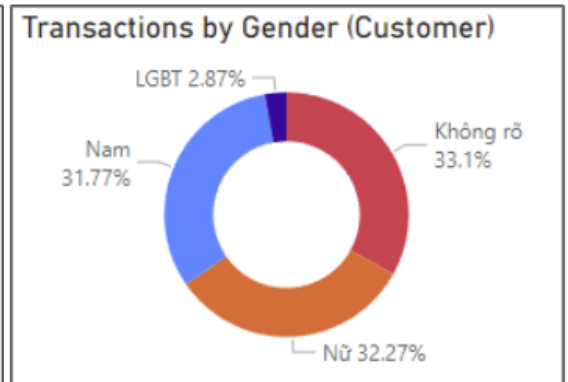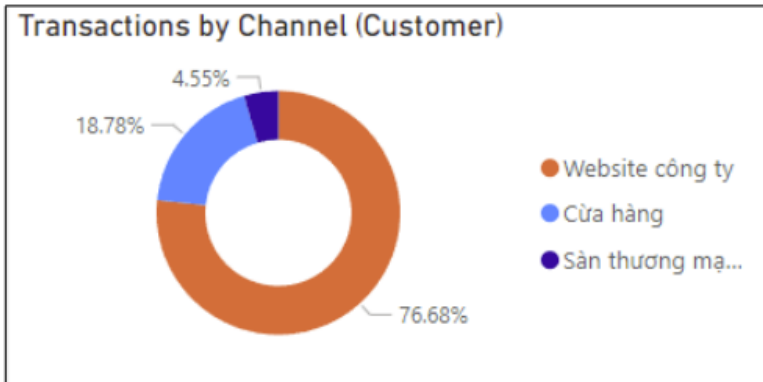
Request

Note:
- Data extracted from 11/1/2019 to 2/8/2020.
- The tables that use the original data are '2.Data' and '2.visitor_information'
- To make the analysis process easier, I made some edits on the data set such as adding calculated columns, adding measures, adding dimension tables, manage relationship between tables.

- Manager 1:
    - Because Manager 1 usually meets every Friday to evaluate and give sales direction, so I provide her with weekly transaction data.

- Manager 2:
    - Use co-hort analysis method to calculate Retention rate

Manager 1

Transactions by Visitor

260.19K Transactions

- Khách vãng lai 45.95%
- Customer 54.05%
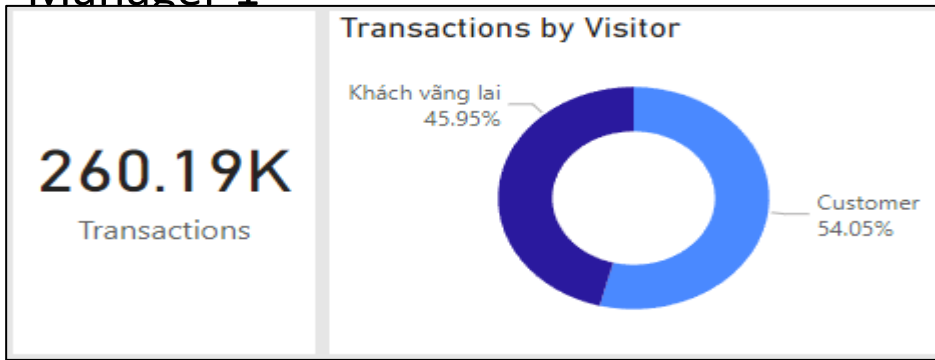
During this period, 260.19K transactions were performed, the number of transactions of "Khách vãng lai" reached 45.95%, and the number of registered customers (Customer) reached 54.05%.

Transactions by Channel (Customer)

- 4.55%
- 18.78%
- 76.68%
- ● Website công ty
- ● Cửa hàng
- ● Sàn thương mạ...

Transactions by Gender (Customer)

- LGBT 2.87%
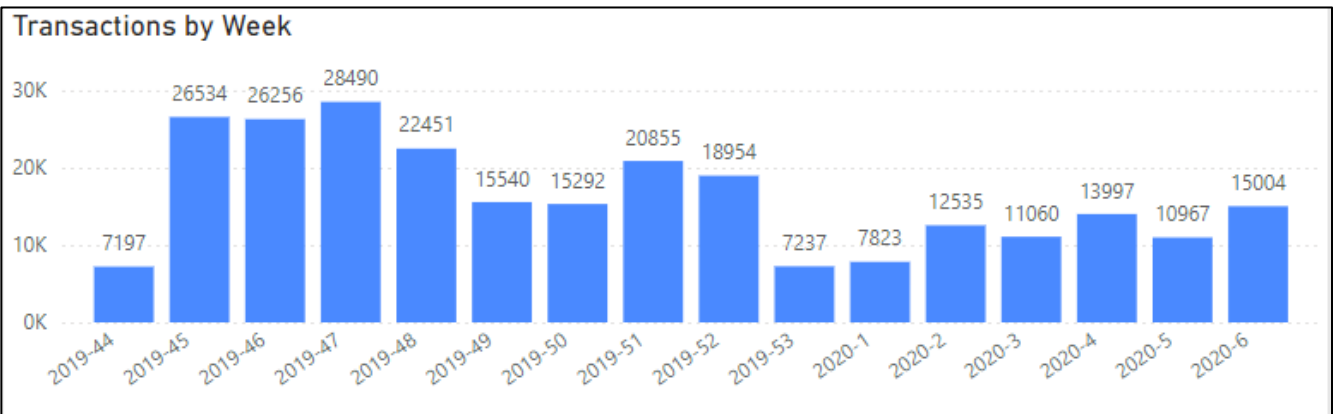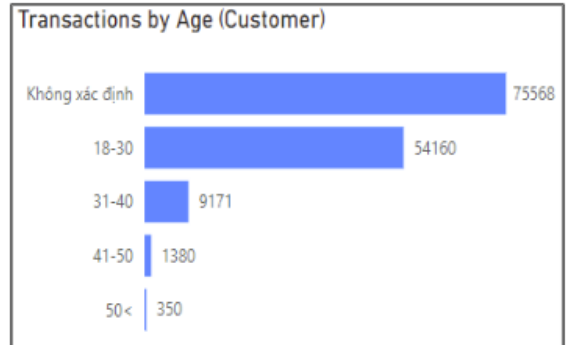- Nam 31.77%
- Không rõ 33.1%
- Nữ 32.27%

Because the identity and number of "Khách vãng lai" cannot be determined, I will conduct an analysis based on Customer.

Among Customer, Nam and Nữ genders have nearly the same number of transactions (about 32%), LGBT reaches 2.87%, the remaining gender has not been determined.

Through channels, the number of transactions arising from 'Website công ty' reached 76.68%, channels 'Cửa

Transactions by Age (Customer)

- Không xác định: 75568
- 18-30: 54160
- 31-40: 9171
- 41-50: 1380
- 50<: 350

hàng' and 'Sàn thương mại điện tử' reached 18.78% and 4.55% respectively.

The age group 18-30 has made 54160 transactions, the number of transactions gradually decreases with increasing age groups, the lowest is >50 making 350 transactions.

Transactions by Week

Week	Transactions
2019-44	7197
2019-45	26534
2019-46	26256
2019-47	28490
2019-48	22451
2019-49	15540
2019-50	15292
2019-51	20855
2019-52	18954
2019-53	7237
2020-1	7823
2020-2	12535
2020-3	11060
2020-4	13997
2020-5	10967
2020-6	15004

The number of transactions peaked in week 2019-47 then gradually decreased until the last weeks of that year.

In 2020, there have been signs of a slight increase, and the cycle of increases and decreases alternating between weeks.
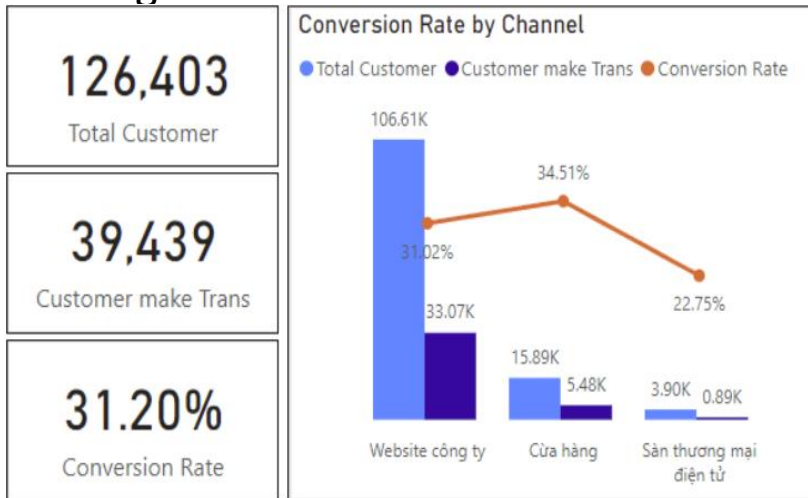
Forecast

Transactions Prediction
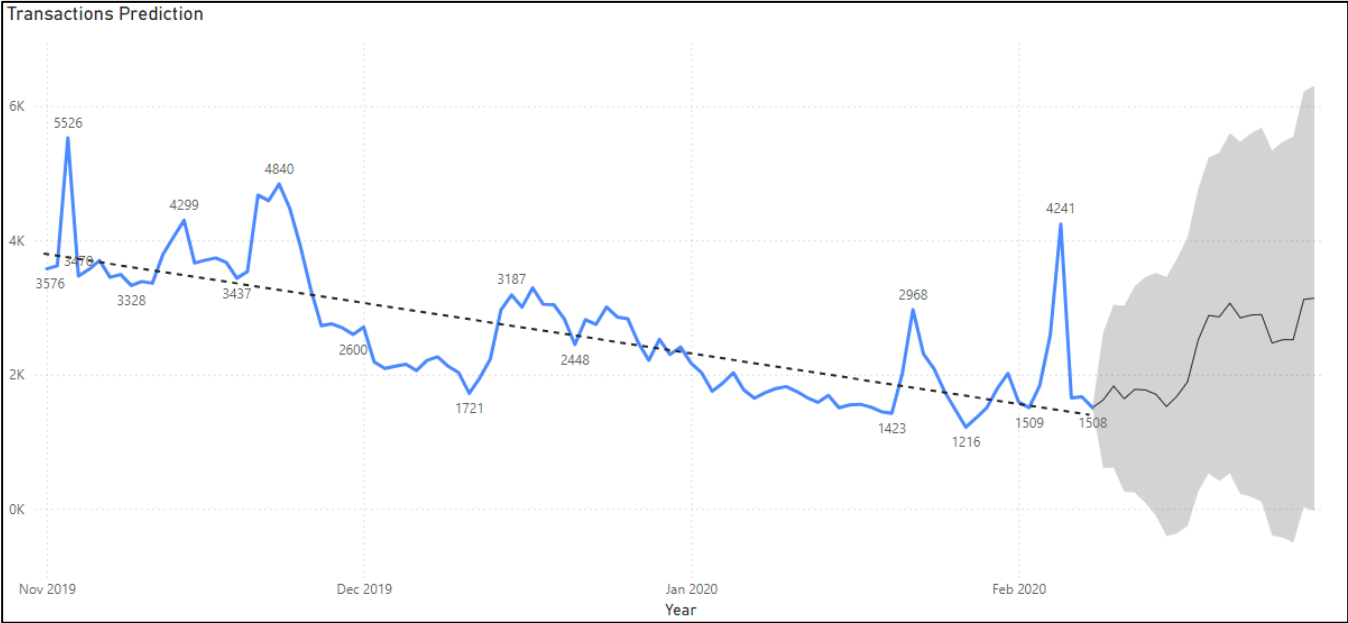
I use the trendline and prediction tool in power bi. It's easy to see the trend of number of transactions, and I've exported data predicting the number of transaction until the end of the month into the side table (**49162** transactions).

Date	forecastValue	confidenceHighBound	confidenceLowBound
2/9/2020	1620	2627	612
2/10/2020	1829	3040	617
2/11/2020	1640	3025	255
2/12/2020	1780	3319	241
2/13/2020	1771	3450	92
2/14/2020	1707	3516	-101
2/15/2020	1525	3454	-404
2/16/2020	1679	3722	-364
2/17/2020	1894	4045	-256
2/18/2020	2513	4766	260
2/19/2020	2882	5233	531
2/20/2020	2860	5304	415
2/21/2020	3065	5600	529
2/22/2020	2845	5468	222
2/23/2020	2888	5595	181
2/24/2020	2895	5684	105
2/25/2020	2470	5339	-399
2/26/2020	2520	5467	-427
2/27/2020	2520	5542	-503
2/28/2020	3121	6217	25
2/29/2020	3138	6306	-30
Total	**49162**		

Manager 2

126,403
Total Customer

39,439
Customer make Trans

31.20%
Conversion Rate

Conversion Rate by Channel

Legend: ● Total Customer ● Customer make Trans ● Conversion Rate

During this period, we had 126,403 customers, of which 39,439 customers made transactions, the conversion rate reached 31.20%.

The 'Cửa hàng' channel achieved the highest conversion rate of 34.51%, the lowest was the 'Sàn thương mại điện tử' channel at 22.75%. Although the 'Website công ty' channel has a significantly higher number of customers (106.61K) than the remaining channels, it only reaches 31.02%.

Daily Conversion Rate
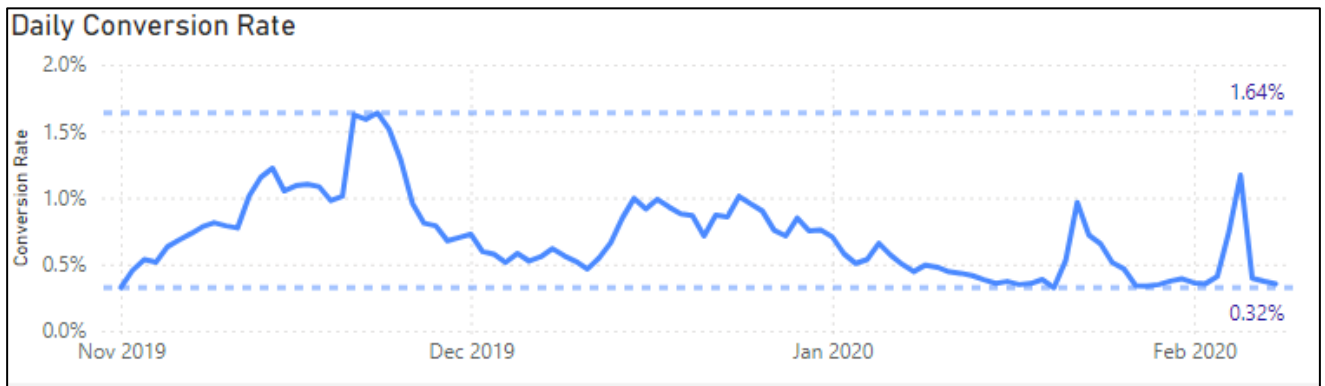
Daily conversion rate fluctuates between 0.32% and 1.64%, highest on 9/23/2019 and lowest on 1/20/2020.

Number of Customer by Month

Legend: ● Customer ● New Customer
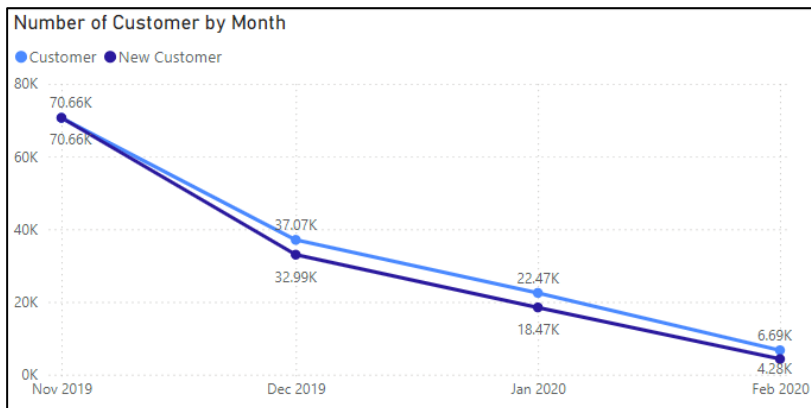
The number of customers returning to use the service has decreased over the months, which is a worrying signal. Another thing is that the retention rate doesn't even reach the double-digit mark, only hovering around 5% - 7%.

Retention rate in the current month is only 6.90%, however this is data as of 2/8/2020, there are still about 20 days until the end of the month for us to find methods to improve the index.

Retention Rate

Month	0	1	2	3
November 2019	100.00%	5.77%	2.49%	0.93%
December 2019	100.00%	6.78%	1.45%	
January 2020	100.00%	6.90%		
February 2020	100.00%			