MBA 614 VBA Final Project
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Executive Summary

The business is for an independent insurance agency selling property and casualty insurance on behalf of several different carriers. For an agency, residual commissions are key for the overall revenue; since the value of a new customer cannot be measured by the first month's commission, customer lifetime value (LTV) is used. This agency is in a startup phase, where retention curves are still unclear and commission contracts are being renegotiated frequently based on historical attrition. The project takes data pulled from the company's servers and calculates the LTV for each new customer, allowing decision makers to see how the company is performing against budget. Using VBA allows the commissions and retention curves to be modified quickly in the spreadsheet without having to modify any formulas.

Implementation

For the project I took the current spreadsheet being used in my job for calculating LTV. Previously, I had calculated an LTV constant based on the given retention curve and commission, then applied that to the premium amount for a given policy. This necessitated the creation of the multiple tabs for each carrier and policy length that are in the final spreadsheet. The drawback was that when a retention curve was modified or if the insurance carrier (i.e. Progressive, Travelers, Esurance) changed the amount or structure for their commissions, both of which happen very often, the constant would need to be updated and then the formulas in the cells would need to be changed as well. Using VBA, I set up a process where the commission amount is passed to the carrier's retention curve, the LTV is calculated, and that value is then returned to the front tab in the LTV column. This allows to be done in about 30 seconds what before had been a very time-consuming process, and maintains the spreadsheet in a simple form, allowing it to be modified as needed in a public folder by anyone.

Difficulties

As the project currently stands, the data must be pulled separately and copy-pasted into the spreadsheet. I work remotely through a VPN connection, and the servers disallow a macro to access the data directly from Excel in every variation I attempted. Once the semester ends I will have time to be in Salt Lake at the main office on a hardline connection, and the IT department reassures me there won't be issues running it on-site. By connecting to the data directly, the amount of data pulled will be limited significantly to perhaps a dozen columns from the current 82 in a full export. This would allow more flexibility as far as time ranges to be viewed, as currently anything more than a week is prohibitive due to limited server bandwidth.

Assistance

I did not have any outside assistance in writing the VBA code. Parts of the spreadsheet were pre-existing from the way the LTV used to be calculated.

Summary

The project cuts out a significant amount of time for me to calculate weekly revenue and report it to the decision makers at my work; previously it took me until Monday each week, whereas this past week I got the numbers to them within 30 minutes of close of business on Saturday.