***Syphone (CLV) Case Study Analysis***

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**Introduction:**

This analysis takes a look into SyPhon, a cell phone provider that provides cell phone services to small and medium sized companies. Typical customers come to Syphone to provide their Sales teams with mobile phones and plans to help drive client engagement. Contracts can cover between 5 and 100 phones and include equipment, support, service, maintenance, and unlimited calls.

**Syphone Background Information:**

Syphone is a cell phone company that is positioned in a highly competitive B2B market. Syphone wants to know what segments are most profitable, and what segment they should position marketing toward. Syphone provides us with customer segment data and customer behavior. Historical data suggests that customers who received larger discounts tend to have lower short-term profitability but exhibit higher long-term loyalty. We will test this hypothesis in our customer lifetime value analysis.

The cell phone provider market is highly competitive with customers who are very price sensitive. SyPhone competes in a marketplace with many service providers having to compete with large resellers. Switching costs between providers remain high as customers would have to return and replace equipment and retrain users. However as contracts come up for renewal customers switching becomes more of a concern.

It is imperative to Syphone’s success that it develops a strategy that is based on concrete actionable data.

Key strategies can be determined from the analyses performed below.

**Analysis Performed and data used:**

To gain a deeper understanding of its financial dynamics and customer profitability, SyPhone embarked on a comprehensive Monte Carlo simulation to forecast Customer Lifetime Value (CLV). This endeavor commenced with the analysis of historical customer sales and behavior data, illuminating the evolution of customer behavior. The resulting insights facilitated the segmentation of SyPhone's customer base into four pivotal categories: Large Accounts, Large Accounts with rebates, Small Customers, and Small Customers with rebates.

This segmentation served as the foundation for constructing a Customer Transition Matrix, which shows the probabilities of a customer transitioning from one segment to another in the following period. This matrix provides valuable insights into customer behavior, offering predictions in customers movement between segments. Leveraging these probabilities, we calculated the expected values associated with each segment.

Subsequently, using the customer segment data, we developed a simulation analysis that portrays the potential trajectories of Syphone’s customer base. By aggregating many simulations we are able to predict future behavioral evolution. This predictive insight serves as a strategic compass, empowering managers to craft marketing strategies geared toward enhancing profitability.

**Question 1:**

**What is the lifetime value of a typical customer in each of the four segments, in current dollar values? Compare these figures to the “Gross margin” figures in the original spreadsheet. What can you learn from this comparison?**

*Figure 1: Customer Lifetime Value Analysis (10% discount rate).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer Segment** | **Customer lifetime value ($)** | **Gross Margin** | **Difference** | **% of gross margin** |
| **Large accounts** | $72,402.60 | $63,000.00 | $9,402.60 | 114.92% |
| **Large accounts, rebate** | $65,714.29 | $36,000.00 | $29,714.29 | 182.54% |
| **Small accounts** | $9,826.92 | $10,800.00 | -$973.08 | 90.99% |
| **Small accounts, rebate** | $10,100.00 | $7,200.00 | $2,900.00 | 140.28% |

Based on our simulation analysis we were able to calculate Customer Lifetime Value for Syphones four customer segments which can be seen in *Figure 1*. The CLV represents the cumulative discounted revenues of each segment overtime, and the model indicates that Syphone’s non-rebate segments make less revenue than compared to a rebate customer in the long run. We were able to conclude CLV was slightly greater than the gross margin with the exception of the ‘Small Accounts without rebates’ segment. While both Large and Small accounts without rebates had higher gross margins, their Customer Lifetime Value was lower as a % of gross margin when compared to accounts with rebates. The model showed Large accounts with rebates to have a CLV greater than 180% of respective gross margin and Small accounts to have a CLV greater than 140% of respective gross margin. From this analysis we can determine that Syphone should target customers with rebates as they present better opportunities for long term growth and potential.

To assess SyPhone's customer retention and overall churn rate, we shift our focus towards the future. We aim to determine the number of customers, out of the current 15,000, who will remain with SyPhone in the next five years. Our analysis will be segmented, allowing us to explore retention and churn rates within distinct customer segments. This approach promises valuable insights into SyPhone's customer retention strategies and their implications for the company's long-term viability.

**Question 2:**

**Of the 15,000 customers SyPhone has today, how many will still be SyPhone customers in five years? What is the overall churn rate after five years? Answer the same questions, segment per segment. Analysis is based on a 10% discount factor**

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*Figure 2: Customer Base Evolution after 5 Years.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer Segment** | **Customers at period N** | **Customers at period N+5** | **Difference** | **Churn Rate** |
| **Large accounts** | 500 | 25 | -475 | 95.00% |
| **Large accounts, rebate** | 2000 | 521 | -1479 | 73.95% |
| **Small accounts** | 5000 | 328 | -4672 | 93.44% |
| **Small accounts, rebate** | 7500 | 1346 | -6154 | 82.05% |
| **Total** | 15000 | 2220 | -12780 | 85.20% |

In five years, Syphone will only have 2220 of its original 15000 accounts, resulting in a churn 85.20%

After five years, of the original 500 Large accounts, only 25 accounts remain, resulting in a churn rate of 95.00%.

After five years, of the original 2000 Large accounts, rebate, only 521 accounts remain, resulting in a churn rate of 73.95%.

After five years, of the original 5000 Small accounts, only 328 accounts remain, resulting in a churn rate of 93.44%.

After five years, of the original 7500 Small accounts, rebate, only 1346 accounts remain, resulting in a churn rate of 82.05%.

From this analysis we noted that across all customer segments, the churn rates are quite high, ranging from 73.95% to 95.00% over the next 5 years. However, Large Accounts with Rebates saw a relatively lower churn rate at 73.95% which was 21 basis points lower than Large accounts without rebates at 95% churn. This could suggest that offering rebates to customers may aid in customer retention. We can see a similar pattern amongst Small Accounts, with Rebate accounts churning less over five years than their

Non-Rebate counterparts with an 11.39 basis point difference from 93.44% to 82.05%. Overall the Churn rate for Syphone over five years was 85.2% indicating that serious effort should be made to create and implement customer retention strategies, or strategies that will help Syphone acquire new customers. It seems beneficial to focus on new customer acquisition because customers don't bring much value to syphone in the long run.

**Question 3:**

**With a discount factor of 35%, reconsider Question 1. What changes do you notice, in both absolute and relative terms? In terms of customer value, what is the consequence of focusing on the short term? Also the question asks to take in consideration cost, and how it affects the CLV.**

In response to the rapidly evolving and highly competitive industry environment, Syphone's top management has chosen to replace the previous 10% discount factor with a more robust 35% discount factor. This strategic decision prompts us to revisit our initial CLV analysis, where we will analyze the impact of this change in both absolute and relative terms. Additionally, we will assess the ramifications of prioritizing short-term gains on customer value. This transition signifies a shift towards a more adaptive and risk-conscious financial approach.

*Figure 3: Customer Lifetime Value Analysis (35% discount rate).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer Segment** | **Customer lifetime value ($)** | **Gross Margin** | **Difference** | **% of gross margin** |
| **Large accounts** | $46,354.17 | $63,000.00 | -$16,645.83 | 73.58% |
| **Large accounts, rebate** | $38,333.33 | $36,000.00 | $2,333.33 | 106.48% |
| **Small accounts** | $6,535.46 | $10,800.00 | -$4,264.54 | 60.51% |
| **Small accounts, rebate** | $6,215.38 | $7,200.00 | -$984.62 | 86.32% |

The analysis revealed that most customer segments, except for Large Accounts with Rebates, have a lower Customer Lifetime Value (CLTV) than their gross margin, indicating potential long-term losses. The only segment with a positive CLTV was Large Accounts with Rebates, suggesting that this segment is profitable. To improve overall profitability, Syphone should prioritize customer acquisition over retention for most segments. Additionally, they should investigate factors like product quality, customer service, and market dynamics to understand why CLTV is low for most segments.

As seen in *Figure 4,* Analyzing the CLV of Syphone’s customer segments using a 35% discount rate we saw significantly lower cumulative discounted revenue across all segments compared to the 10% discount rate model, providing us a more conservative outlook for Syphone’s CLV. This increase in discount rate indicates that Syphone’s management may value future revenues less than revenues today. This sentiment is understandable when considering the highly competitive and volatile market that the firm operates in.

Additionally, the cell phone industry consumers demonstrate a greater degree of price sensitivity making it harder to maintain customer loyalty.

*Figure 4: Customer Lifetime Value Comparison (10% discount rate vs 35%).*

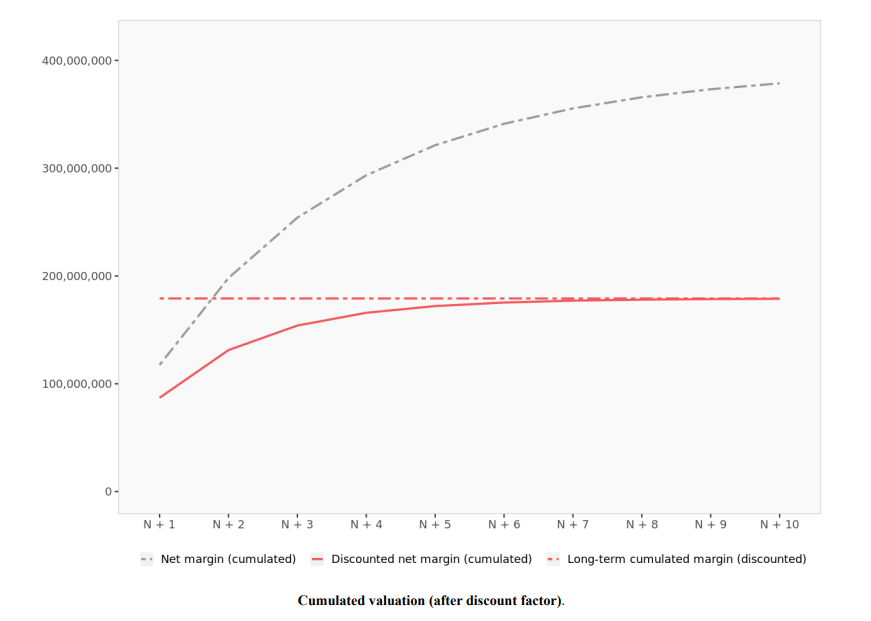
|  |  |  |  |
| --- | --- | --- | --- |
| **Customer Segment** | **Customer lifetime value ($) 10% discount** | **Customer lifetime value ($) 35% discount** | **Percent change** |
| **Large accounts** | $72,402.60 | $46,354.17 | -56% |
| **Large accounts, rebate** | $65,714.29 | $38,333.33 | -71% |
| **Small accounts** | $9,826.92 | $6,535.46 | -50% |
| **Small accounts, rebate** | $10,100.00 | $6,215.38 | -63% |

There are many additional factors that contribute to a firm's success in the long run including economic conditions, government regulations, and technological advancements. For example, the recent COVID-19 pandemic greatly impacted the economies of the entire world. This model does not take these large scale macroeconomics into account when predicting CLV. If another recession or pandemic were to hit, then current past customer behavior data would not be sufficient to determine if Syphone can count on its current customer base in those conditions. Also, Syphone is firm in an industry where technology is always changing and evolving. For example, Syphone could be using LTE or 4G technology which will soon be obsolete, so past customer behavior data is not enough to predict how Syphone customer behave in a market with future technological advancements and the corresponding service expectations. Given these factors the increase of the discount rate within our CLV analysis seems well founded.

We can be reasonably certain that customers will continue to churn overtime, eventually leaving the business with no long standing clients. The further into the future one attempts to predict, the more they need to account for this risk by applying discounts. The "infinity model" suggests that focusing on the short term appears to yield the highest revenue returns.

The line plot shown in *Figure 5* suggests that cumulative discounted revenue grows for a few years while after three years growth begins to slow substantially and plateau after five years. Assuming a 35% discount rate it makes little sense to try to maintain your customer for more than five years as the subsequent discounted reviews are much less substantial. Thus the analysis indicates that Syphone should focus on maintaining customers for at least three years and up to five years.

*Figure 5: Customer Lifetime Value (35% discount factor)*



Addressing concerns raised by SyPhone's Sales Manager, Nadia Morel, our analysis shifts focus to a comprehensive evaluation of factors beyond customer lifetime value (CLV) that significantly impact the company's profitability. Morel emphasizes the need to account for acquisition-related expenses, including pre-sales costs, and the fixed costs incurred once an account is secured. Our analysis agrees with Nadia Morel because our analysis only focuses on past behavior. However there are many factors that effect revenue, and a company's success. These considerations encompass sales representative efforts, advertising, trade shows, promotions, and various setup expenditures. Morel's suggestions entail a structured analysis of these cost elements, win rates, and fixed costs associated with customer acquisition, fostering a more holistic understanding of the financial dynamics at play within SyPhon. Also, changes in the environment such as technology changes, recession, regulation, and pandemics or natural disasters, should be considered when creating strategy. This analysis is good to get an idea of how your current customer base contributes,but this analysis does not cover a lot of factors that contribute to success.

**Question 4:**

**Build an Excel spreadsheet to estimate how much a prospective customer is worth, depending on whether that customer is offered a rebate. What do you learn from the updated spreadsheet? Explain the logic behind your findings and conclusions. On the basis of these results, what sales and marketing strategies would you recommend for SyPhone**

*Figure 6: Syphone’s Customer Acquisition and Onboarding Costs.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Customer Segment** | **Presale costs** | **win rates** | **Fixed costs (one time charge)** |
| **Large accounts** | $7,000.00 | 20% | $20,000.00 |
| **Large accounts, rebate** | $7,000.00 | 35% | $20,000.00 |
| **Small accounts** | $1,500.00 | 15% | $3,000.00 |
| **Small accounts, rebate** | $1,500.00 | 40% | $3,000.00 |

To further enhance our understanding of SyPhone's customer valuation strategy, we constructed a comprehensive spreadsheet cost model. This spreadsheet will enable us to estimate the prospective worth of a customer while considering acquisition costs. Our objective is to glean valuable insights from this updated spreadsheet, rooted in sound logic and robust findings. By analyzing the data, we aim to provide clear recommendations for sales and marketing strategies tailored to SyPhone's specific needs. Our approach will encompass 100 prospective customers in each of the four segments, accounting for pre-sale process management costs, customer acquisition rates, and fixed expenses tied to new customers. Additionally, we will integrate the previously calculated lifetime values, incorporating the 35% discount factor, to arrive at a precise estimate of a prospective customer's value.

*Figure 7: Syphone Cost Model by Customer Segment*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Customer Segment** | **Prospective customers** | **Win rate** | **Presale costs** | **Fixed costs** | **Total Costs** | **Customers Won** | **CLV (35% discount)** | **gain (loss)** | **Customer Value** |
| **Large Accounts** | **100** | **20%** | **$700,000** | **$400,000** | **$1,100,000** | **20** | **$927,083** | **-$172,917** | **-$1,729** |
| **Large Accounts, Rebate** | **100** | **35%** | **$700,000** | **$700,000** | **$1,400,000** | **35** | **$1,341,667** | **-$58,333** | **-$583** |
| **Small Accounts** | **100** | **15%** | **$150,000** | **$45,000** | **$195,000** | **15** | **$98,032** | **-$96,968** | **-$970** |
| **Small Accounts, Rebate** | **100** | **40%** | **$150,000** | **$120,000** | **$270,000** | **40** | **$248,615** | **-$21,385** | **-$214** |

Based on the spreadsheet model, shown in *Figure 7*, none of the current customer segments have positive customer value after taking into account the costs associated with winning those customers. With acquisition costs greater than the discounted cumulative revenues of the customer segments it is not financially sound to continue trying to onboard customers with the current costs in the long run.

Going forward Syphon should implement cost saving measures to lower acquisition costs, one area that Syphone should consider lowering is the fixed costs associated with large accounts. Currently Large Account fixed costs are over six times larger than the fixed costs associated with Small accounts. Lowering these fixed costs would help improve overall customer value of Large accounts. *Figure 8* shows the potential impact of decreasing fixed costs by 50%. Dropping these fixed costs by 50% would lead to an increase in customer value to 116% for Large Accounts and 600% for Large Accounts with rebates. This impact is quite significant, and is a potential change that Syphone could make to increase its long term viability.

*Figure 8: Proposed Decrease in Fixed Costs*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Current fixed costs ($20,000)** | **Reduced fixed costs ($10,000)** | **NET** |
|  | **Customer Value** | **Customer Value** | **Change** |
| **Large accounts** | **-$1,729** | **$271** | **116%** |
| **Large accounts, rebate** | **-$583** | **$2,917** | **600%** |

**Conclusions and Managerial Insights:**

There appears to be limited monetary value in Syphone's efforts to maintain long-term customer relationships. Additionally, as time progresses, the percentage of lost customers increases exponentially, posing a significant risk. Syphone can potentially increase its profits by capitalizing on the first three to five years of a customer's life span, where gross margin and income are higher and grow more rapidly before declining.

Additionally, based on our analysis rebates are successful in helping to acquire and retain customer accounts. We suggest Syphone to focus on using rebates as a tool to acquire more customers now and retain them for up to five years. To this aim, Syphone should consider expanding both the breadth and scope of their current rebate offerings. Offering tiered discounts could help in decreasing the already comparatively low levels of churn within their rebate customer segments. As well, Syphone should offer rebates to a greater number of customers, specifically in the small account segment, potentially eliminating the small accounts without rebates segment all together.

For Syphone to secure its long-term profitability in the competitive cell phone market, it needs to take a multifaceted approach. Firstly, they should cut costs by renegotiating contracts with suppliers and finding more efficient sales strategies, especially for larger accounts. Scaling up and optimizing resources can also help reduce per-customer acquisition costs. Secondly, investing in technology is key; they should upgrade their network infrastructure for better services, enhance user experience, and harness data analytics for insights into customer behavior. Strengthening cybersecurity to protect customer data is essential. Thirdly, diversifying their offerings and exploring partnerships can open up new revenue streams. Lastly, staying informed about industry trends and maintaining a customer-centric approach will be crucial for long-term success. Additionally, offering more rebates or bumping up existing ones could sweeten the deal for customers, which could lead to loyalty and even better long-term retention. Ultimately, for Syphone to remain successful they need to focus on remaining competitive in pricing, retaining customers within the sweet spot of three to five years, staying up to date on the most recent tech and focusing on the customer.