# CUSTOMER RELATIONSHIP MANAGEMENT (CRM) INDICATORS AS BUSINESS EVALUATION MEASUREMENTS

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***Introduction.*** If we ask 10 people what customer relationship management (CRM) is, we will get 10 different answers. Many consider it a program, a technical tool, for another large group CRM is a culture, for a 3rd group it is a strategy. Each business takes a unique approach to CRM implementation, adapting to its specifics, but there are a number of features that have general, cornerstone applications in business development. When implementing a CRM strategy, the company's attention is largely diverted from the product or service to identifying the customer and the latter's behavior, preferences, and tastes. Effective implementation requires that every department in the company operates within the same framework.

The main goal of the article is to study the CRM-related measurements and the most significant coefficients, indicators that are indicators of business development in the modern professional literature, to find out what components they contain, how they are related to each other and to the financial results of companies.

***Research methodology.*** To achieve the main goal of the work, the methods of theoretical research, comparative analysis, and combination were used. The method of theoretical analysis is widely used in the work to describe the main factors in the CRM literature. Studying the works of various theoreticians, an attempt was made to present their most important aspects, features, main purposes of application, their importance in assessing the status of business, and through combination method, possible combinations of their use in practice were presented. To study each of the coefficients presented in the work, it is very important to compare it with the rest. Each ratio has a special significance, but their joint application opens up a wide horizon for the company's management in making further strategic decisions. Through a comparative analysis, some existing international market data on some ratios and their trends, especially when describing customer loyalty, were presented.

***Literature review.*** The vast majority of the literature used in our research are foreign books and scientific articles, because there are almost no in-depth and comprehensive studies on CRM in the Armenian professional literature. In general, there is no clear and universally accepted definition of CRM in the literature. For many business people, CRM is an opportunity or a way to save the business, promising great efficiency.

The Sales Educators defines CRM as a process that describes customers, creates customer data, creates customer relationships, and shapes customer attitudes toward a company and its products or services [Richards, Jones, 2008, 121]. In another definition, CRM is a comprehensive strategy and process for attracting, retaining and collaborating with selected customers to achieve the best results for both the organization and the customer [Parvatiyar, Sheth, 2001, 5]. Generalizing these and many other definitions, we can say that CRM is the set of processes for attracting new customers, keeping them, activating passive ones, taking into account customer preferences and data, with appropriate software. Figure 1 shows the revenue dynamics of the CRM technology market and the forecast of these dynamics in the coming years. Steady income growth year over year across the world is evident.

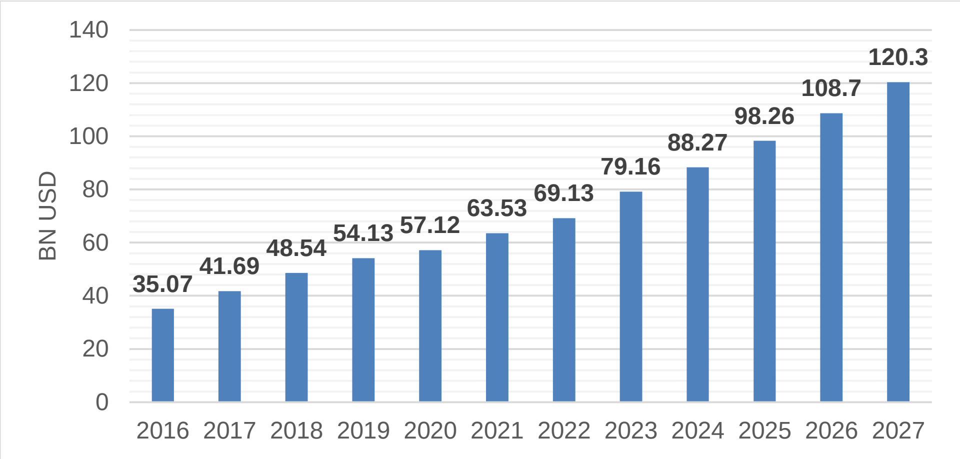


**Figure 1.** CRM technology market revenue dynamics 2016-2027[1]

In general, companies implement CRM tools and plan strategic steps to achieve several key results: higher sales rates, new customer acquisition, reactivation of lost customers, higher customer retention rates, flexible analytics, improved customer segmentation, formation of communication different channels, etc. All this cannot be achieved without observing, forecasting and calculating the relevant indicators, which are the basis for evaluating the effectiveness of the CRM strategy and the status of the business. When companies implement a CRM strategy, they should develop clear indicators and goals that they should strive to achieve in a certain period of time. a number of factors that are discussed in the research help here. When it comes to customer lifetime value (CLV), F. Battle and S. Maclan in their "Customer Relationship Management: concept and technology" point out that 1 in every 5 banks do not calculate the CLV ratio, which, combined with the incomplete study of other financial indicators, is the basis for the lack

[1] https://www.statista.com/outlook/tmo/software/enterprise-software/customer-relationship-management-software/worldwide#revenue

of cross-selling or ineffectiveness [Battle, Maclan, 2019, p. 36]. In the same work, much attention is paid to the initial stage of CRM implementation of every business, customer acquisition (acquisition), which, in itself, is the beginning of everything, without which it is not possible to do business. The authors point out that it is necessary to first have answers to the following questions in order to understand how or from where they are going to acquire new customers:

- Which target group of potential customers will be selected?
- How will the business communicate with the latter?
- What proposal will be presented to them?
- How can the customer be motivated to make a purchase? [Battle, et al., 2019, 68]

V. Kumar and N. Umashankar in their "Customer relationship management: Concepts, strategy and tools. " article point out that in the past the focus of the academic literature has been on metrics that only include customer’s financial operations, but it is clear that customer value is not limited to only transactions. It should also include the study of behavioral manifestations, which can be both positive and negative, and the latter can be influenced by a number of external, internal stimuli [Kumar, et al., 2014, 7]. Customer referral value is much more difficult to calculate than the CLV [Kumar, Reinartz, 2012, 346]. This indirect effect affects the company's financial results by saving costs on acquiring customers.

***Scientific novelty.*** Customer relationship management is one of the most important conditions for success in business today. Many companies organize many campaigns, programs to acquire and retain customers and their loyalty, but the evaluation of these results is often missed by companies. It is very important to evaluate the effecttiveness of all campaigns and know the value of each customer to the company and in generating profit. As a result of the lack of customer value assessment in many companies, many other problems arise in the directions of sales, reputation, competition, the restoration of which is much more expensive than the organization of initial actions.

***Analysis.*** A customer's decision to use a company's product or service usually directly depends on their previous relationship experience with that company; in case of a good result, the probability is high that the customer will return to that company, otherwise, the probability can be greatly reduced, which can be even more detrimental, because each lost customer can turn other customers away from the company as well. And naturally, when a customer's likelihood of using the company's services in the future changes, or the same customer shares his attitude with others, the company's financial results are directly affected, either in positive or negative trends. Many companies' financial statements lack an assessment of the customer's potential residual value. It should be understood that, regardless of its valuation, the impact of customer decisions over days, weeks or longer periods is seen in the company's financial data. For this reason, there are a number of indicators that allow companies to evaluate their relationship with customers in different aspects of CRM.

Many companies focus on identifying the customers who are most profitable. Each client bears "responsibility" for certain events that may affect the company's financial status; purchasing a product, paying for a service, transferring payment for a subscription package, rating a product or service online, posting a video, article or comment about the company on social media, recommending friends, and the list goes on and on. The so-called customer lifetime value (CLV) indicator helps companies in this. CLV is generally the present value of all future profits expected from a customer over the lifetime of the relationship with the company [Gupta, et al., 2006, 141]. The indicator has 2 important features. the calculation can be performed for each customer or a segment of customers, which allows to find real profitable customers and it includes the probability of customers preferring competitors. The formula for calculating CLV is [Gupta, et al., 2006, 141]:

$$CLV = \sum_{t=0}^{T} \frac{(p_t - c_t) r_t}{(1+d)^t} - AC$$

where $p_t$ is the amount of customer payments at time t,

$c_t$ is the cost of services directly provided to the customer at time t,

d is the discount rate,

$r_t$ is the customer's probability of repurchasing at time t,

AC is the cost of acquiring a customer (acquisition cost),

T is the future time period in which the CLV is calculated.

Among some authors, we can find a calculation formula where not only the cost of acquiring a customer, but also the further marketing costs are subtracted from the total [Kumar, et al., 2014, 144].

$$CLV = \sum_{t=1}^{T} \frac{(p_t - c_t) r_t}{(1+d)^t} - \sum_{t=1}^{T} M_t * \left(\frac{1}{(1+d)}\right)^t - AC$$

where M is the firm's marketing expenditure for a given customer.

If we try to analyze this formula and each of its variables, it can be said that regardless of the calculation method used, each company should have most or all of the following data:

- repeat customer purchases/quantity;
- history of transactions,
- product costs,
- service delivery costs,
- costs of marketing campaigns,

- possible indirect benefit from customers, such as referrals (suppose a celebrity likes a product and spreads information about it on social networks),
- customer feedback on future use of the company or competitors, etc.

The formation of customers' LV by companies can actually consist of several processes and components, the most important of which are shown separately in Figure 2.

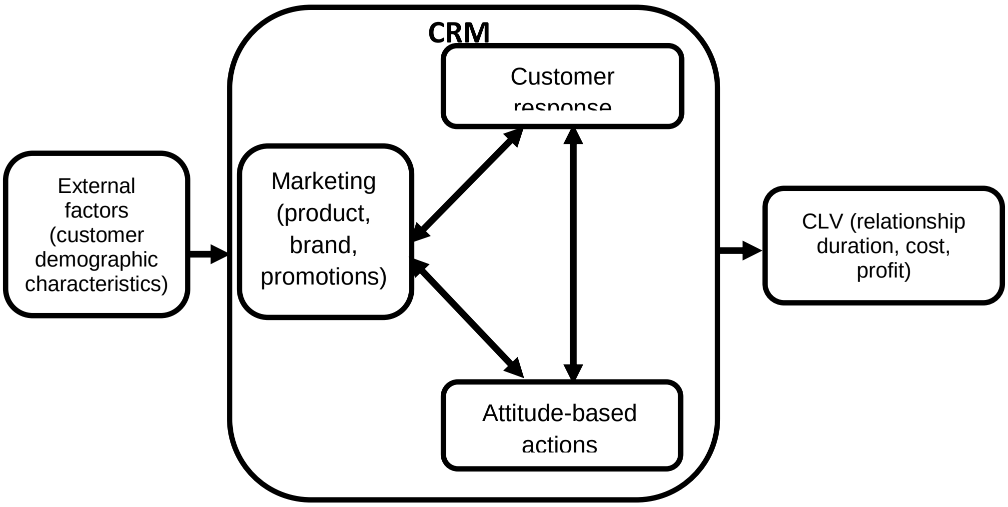


**Figure 2.** Interrelationship of processes and components preceding CLV

Figure 2 shows the series of general processes: in the case of technical capabilities available in the initial period, information can be obtained about external factors that are not controlled by the company, such as demographic characteristics. Then, based on the previously received information, companies offer certain products, services, organize marketing campaigns, create their brand, etc., which forms an attitude, positive or negative, among customers, which is the basis for certain actions on the part of the latter, such as are purchase, usage, complaints, etc. These actions have their influence on the future actions of the company, changes and improvements are made based on them. This process is constant and continuous. This, in itself, is a set of customer relationship management processes in organizations. All of these generate the movement of cash flows that form the customer's value. A factor directly related to CLV is customer equity (CE). This ratio shows the value of the company's relationship with customers and in itself is the sum of the previously discussed and presented LTV's [Peppers, et al., 2017, 391]:

$$CE^t = \sum_k CLV_k^{(t)}$$

where $CE^t$ is the customer equity at time t,

$CLV_k^{(t)}$ is the LV of the customer k at time t, There is also another way to calculate CE when using average CLV [Kumar, Shah, 2015, p. 33]:

$$CE_j = mean_j(CLV_{jk}) * POP$$

where $mean_j(CLV_{jk})$ is the average LV of customers of company j,

POP is the total number of customers.

It can be argued that CE is an indicator of customer loyalty, by which we get a real idea about that loyalty. In recent decades, companies, realizing that gaining customer loyalty is of great importance to their existence and prosperity, invest heavily in the latter. The nature of customer loyalty can be represented in a simple figure 3:

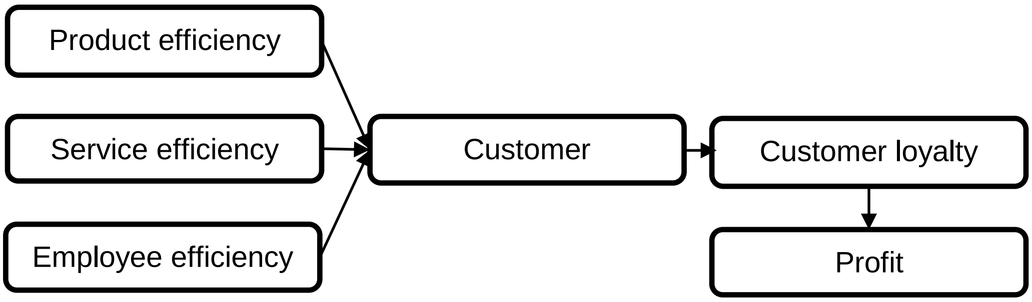


**Figure 3.** Interrelatedness of the components of customer loyalty [Kumar, et al., 2014]

It can be argued that the set of processes reflected in figure 3 is circular, as was observed in figure 2, because in the case of a decrease in profit, it is necessary to re-consider the efficiency of products, services, employees to attract customer satisfaction and loyalty. Here, the attachment of customer loyalty to CE is clearly noticeable, which is reflected in the company's recent financial results. Analysis conducted by Fortune Business Insights concludes that the customer loyalty management market worldwide will be around USD 24.44 billion by 2029 (see Figure 4). These metrics are also used to calculate another indicator that gives companies a lot of information about the effectiveness of CRM processes: we are talking about the "return on customer" (ROC) factor. The latter shows how effectively the company "uses" customers to generate value (profit). The coefficient is calculated by the following formula [Peppers, Rogers, 2017, 389-391]:

$$ROC = \frac{P^{(t)} + (CE^t - CE^{(t-1)})}{CE^{(t-1)}}$$

where $P^{(t)}$ is the firm's cash flow at time t,

$CE^t$ as introduced above, is the sum of customer CLV's at time t.

ROC is a very important factor for organizations to understand the effectiveness and significance of implemented processes on financial results. It contains customer acquisition, retention, growth data and shows the summary nature of the ratio. Knowing this ratio, companies can reshape their marketing strategy to balance short-term and long-term results as much as possible.

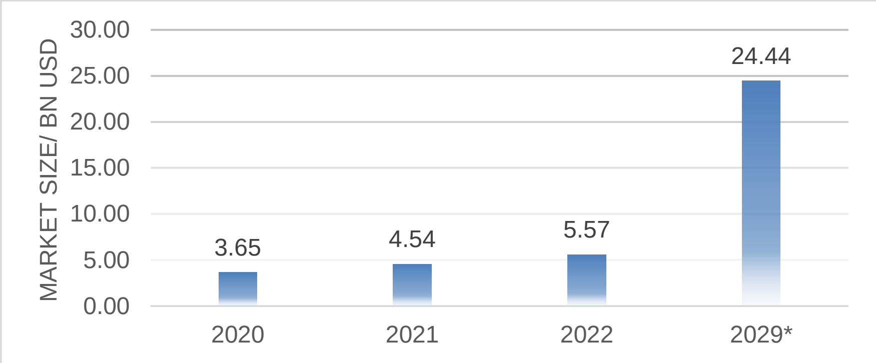


**Figure 4.** Customer Loyalty Management Market Size, 2020-2029[1]

As mentioned above, the benefits received from the customer can also be indirect: positive or negative comments on social networks, expressing opinions about the company among friends, etc. All this can provide a flow of new customers for the company without their efforts (acquisition), as well as cause the loss of customers. In practice, the referral option is used when customers, using and being satisfied with the products or services of a company, recommend them to their friends. This can be considered as part of the customer's LV, which can be of great benefit to the company. Realizing all this, organizations implement referral programs, encouraging existing customers to attract new customers by offering them a reward in exchange for indirect service. Within all of this, companies consider the value of customer referrals (Customer referral value - CRV). CRV is the customer's expected future referral value to the organization. Calculating this ratio is actually more complicated and unpredictable than CLV. It is calculated by the following formula [Kumar, Reinartz, 2012, p. 346-347]:

$$CRV_i = \sum_{t=1}^{T}\sum_{y=1}^{n1}\frac{(A_{ty} - a_{ty} - M_{ty} + ACQ1_{ty})}{(1+r)^t} + \sum_{t=1}^{T}\sum_{y=n1}^{n2}\frac{(ACQ2)_{ty}}{(1+r)^t}$$

where

T are the whole time slots where the coefficient will be calculated for the future,

i is the client index,

t is the time at which the NPV[2] is calculated,

$A_{ty}$ is the gross margin provided by customer y,

[1] https://www.statista.com/outlook/tmo/software/enterprise-software/customer-relationship-management-software/worldwide

[2] Net present value - Net worth, which shows how much the investment will be profitable in the future, calculated at the present value

$a_{ty}$ is the gross referral cost of customer y,

1 to n1 are customers who would not use the company without the referral program,

n2 to n1 are customers who would use the company regardless of the referral program,

$M_{ty}$ is the marketing costs needed to retain new customers,

$ACQ1_{ty}$ is the savings in acquisition costs for customers who would not have used the company without the referral program,

$ACQ2_{ty}$ is the acquisition cost savings for customers who would have used the company regardless of the referral program,

r is the discount rate.

Companies can use the CRV ratio very closely and compare it to the CLV. As a result, it becomes clear which customers are most valuable to the company and which can be a source of new customers. Experience and studies have shown that customers who have a high CLV ratio have a low CRV ratio and vice versa. If companies focus only on CLV and focus on valuable and profitable customers, they will lose the opportunity to acquire new customers without much cost, and otherwise, they will acquire new customers without creating value and profit.

***Conclusion.*** Metrics and ratios related to customer relationship management can provide invaluable insight into the value of a company's customer base, potential profitability, and the viability of a new customer acquisition strategy. Depending on the performance of the customer or customer groups, individual treatment can open up new horizons for companies in terms of financial, new markets, and acquisition of new customers. However, customer behavior can often be unclear and inaccessible for companies to study, so a number of modern CRM systems come to the rescue, which collect information without human intervention. The goal of a successful company is to maximize CRM results, in the implementation of which a number of interconnected processes of customer acquisition, retention, and recovery strategies should be implemented.

Summarizing the study of indicators presented in the work, we can distinguish that each of them is calculated for the purpose of forming another indicator, and each subsequent one provides more summary information about the value of the customer or the effectiveness of the strategy adopted by the company. Of particular importance are CLV and CRV, which, if correctly distributed and calculated, can be used to segment the customer base for effective targeting. Each customer can score high on one of these two factors for the most part and this forms the basis for their grouping. Based on their separation, the nature of campaigns is determined. if companies want to promote their products or services to a specific group or to enter new markets, campaigns for customers with high LV are applicable, and if the main goal is to attract new customers through existing customers, CRV campaigns are applicable because they are already mostly used are among the company's existing products.

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**Customer relationship management (CRM) Indicators as business evaluation measurements**

*Key words: customer relationship management, customer lifetime value, customer referral value, customer loyalty, customer equity*

The competitive markets and volatile economies that shape the modern world warn that it is essential for businesses to study customers, their behavior, and their opinions when developing both short-term and long-term strategies. It is a more pressing issue than ever. New modern trends, such as social platforms, present companies with new customer relationship management (CRM) challenges, the neglect of which can have irreversible consequences for future operations. Fortunately, data is now available to everyone and everywhere, so much so that companies are even overwhelmed with it, and all this enables companies to evaluate the effectiveness of their CRM strategy at every step and the impact on financial indicators through a variety of technologies. Depending on the area of business activity, there may be many indicators and ratios that are specific to only that type of activity, but there are a few that are applicable to almost all areas and are very important to keep in mind. Without taking into account the progress of the latter, it is pointless to plan further processes in the direction of CRM.