**Article RFM Migration Analysis**

1. In the article RFM Migration (<http://www.dbmarketing.com/articles/Art123.htm>), RFM scores of the customers are represented in different periods. How often should we recalculating the RFM scores of customers? Are there any general assumptions about duration of customer behaviour change?
2. (<http://www.dbmarketing.com/articles/Art123.htm>) In the article, it is stated that the RFM score is taken as the multiplication of the individual scores: recency, frequency and monetary. What other calculation could we use? What does it depend on? How do we pick the best calculation?
3. (<http://www.dbmarketing.com/articles/Art123.htm>) In the article, seven clusters formed. How can we determine the optimal number of clusters? Is there any metric like accuracy score to compare the performance of the clustering for RFM analysis?
4. <http://www.dbmarketing.com/articles/Art123.htm>. (RFM migration analysis) Here, as a result of periodic examination of the data, it is seen that a migration operation has been carried out. Is it possible to have a constantly updated or online version of it?
5. In the article(http://www.dbmarketing.com/articles/Art123.htm) Author said that “The Growing, High Value cluster increased their monetary value by 1,500% over the two year period. Although this cluster was only one third as valuable as the Stable, Top 10% cluster, their migration pattern shows that they are clearly worth serious marketing attention. Few clusters could promise as good a return on marketing investment.” So Wouldn’t it be best to invest marketing campaign on Growing customers as much as stable(can be called loyal customers) customers? That’s because They would in return would be converted to stable customers which than yield more profit.
6. In the material on the link (<http://www.dbmarketing.com/articles/Art123.htm>), standardization and normalization process were not applied on the dataset. When we work on RFM analysis, do we pass these processes? In the material, it is mentioned that FedEx was primarily interested in the monetary value rather than the recency of purchase. Therefore, can we say that the normalization process or coefficients of these three factors are based on the values of the given company?

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1. (<http://www.dbmarketing.com/articles/Art123.htm>): In RFM Migration Analysis article about the Federal Express case), it argues that the RFM score was determined by multiplying each of the scores (R,F,M) for each individual customer. However, in other documents we are been presented that we would not multiply the scores, but to concatenate them to get a three-digit number as a the RFM score. Why have the researches used multiplication for this case? Shouldn’t they apply any kind of normalization before multiplying in order not to let the calculation be biased towards monetary value?
2. Actually, this question is somewhat related to my first question. Don’t the weights of these three measures differ from one to another type of business? For example, if you’re selling automobiles, the frequency metric would not be significant, and if you’re selling a commodity the monetary value will be explained more or less only by the frequency. Looking from this perspective, shouldn’t the researches of the FedEx RFM Migration Analysis (again in dbmarketing article) drop the recency measure when calculating RFM score, since they already took in accounts which are in the researched periods?
3. RFM Migration Analysis A New Approach to a Proven Technique by Jim Sellers and Arthur Middleton Hughes. Within the scope of RFM analysis and Migration analysis, the coefficients of RFM values can vary. While Recency is one of the most important factors in RFM analysis, Moneraty can be more important in migration analysis. According to the analysis to be made, what is the decision to determine the importance coefficients of the RFM factors?
4. http://www.dbmarketing.com/articles/Art123.htm.In the graffic it is told that Customers were then categorized into deciles based on their RFM score in the 4 Periods, what I could not understand here is that why there are 4 blocks in each period ? Are these divided up to their total values -high/medium/Low and top 10 and why ? How can we determine this number?

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1. <http://www.dbmarketing.com/articles/Art123.htm>. How are the seven clusters identified in the third step? Should we use machine learning methods for this?
2. <http://www.dbmarketing.com/articles/Art123.htm>. In the example given in the article calculating the RFM score up to periods is a bit confusing. How do we exactly calculate R, F, M values seperately? I understand that the recency calcualted as the time until the end date of the period. Frequency is the count of transactions in last three months’ transactions until the end date of the period. Why do we look periods seperately? Why don’t we check it for last 6 months, last 12 months , last 18 months ?
3. In our web source which given below, There is an initial study which aims to identify activity time frame of customers in last two year period. According to result of the preliminary analysis some products with relatively lower both year usage ratio are not evaluated rest of the study(Product C,D). What is the reason behind this decision? Is it not possible that the customers who prefer these products from other products in the last year caused this increase? <http://www.dbmarketing.com/articles/Art123.htm>
4. (<http://www.dbmarketing.com/articles/Art123.htm>) 2nd paragragh of Objective part, article said “ Marketing dollars are thus not wasted on lower value customers who are less likely to migrate up.” , Of course, we should spend the assets on high-value customers. What can be done to increase the value of our low value customers?
5. In activity frame % Accounts are classified as one year / both years. Does it make difference the which year is the one year attribute? First year, Second year, Both years classification gives us more information, am i right? (Reference: http://www.dbmarketing.com/articles/Art123.htm / Activity timeframe)

**Optimove/RFM Segmentation**

1. (<https://www.optimove.com/resources/learning-center/rfm-segmentation>) In article last paragraph of Step 2, It is stated that we can use K-Means for clustering. Can we cluster our customer based on whole data or we should do cluster separately recency, frequency and monetary?
2. (<https://www.optimove.com/resources/learning-center/rfm-segmentation>) In article at Step 3, High-spending New Customers R-Tier-1 - F-Tier-4 and M-Tier-1 are identified. Should we choose R-Tier-1 - F-Tier-4 and M-Tier-2 for more accurate analysis? Because if cannot applied good outlier analysis 1-4-1 can mislead us.
3. (<https://www.optimove.com/resources/learning-center/rfm-segmentation>) At the Step 2 of “Performing RFM Segmentation and RFM Analysis” in the Optimove Article, it is recommended not to divide the customers into more than four tiers for each dimension. As many sources indicate that the RFM is based on the Pareto Principe (also mentioned in the PDF document: “Customer Analytics with R”), wouldn’t it be best if we divide them into five tiers?
4. In the material on the link (<https://www.optimove.com/resources/learning-center/rfm-segmentation>), it is explained the steps of the RFM analysis. How should we define the metrics of the given period in recency and frequency? Should be they the same or different?

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1. In RFM analysis browsing history can be used although there is no transaction at all. Are "Frequent browsers but less frequent buyers" define a segment? Can they be encouraged by sending coupons? (<https://www.optimove.com/resources/learning-center/rfm-segmentation>)
2. (<https://www.optimove.com/resources/learning-center/rfm-segmentation>) In the article, it is stated that after dividing the customer list into tiered groups, some clustering analysis is done. Is it done with respect to only recency, frequency and monetary individually? How do we set up the equation?
3. <https://www.optimove.com/resources/learning-center/rfm-segmentation>. Step 2: “*Three tiers can also be used (resulting in 27 segments); using more than four, however, is not recommended (because the difficulty in use outweighs the small benefit gain from the extra granularity).*” Why using three tiers (or 27 segments) is more compelling than four tiers?
4. In the content RFM Segmentation (https://www.optimove.com/resources/learning-center/rfm-segmentation), Step 3 section, it is mentioned that customer segments can be named based on their RFM groups. Are there any cluster names which widely used in RFM analysis?
5. Also, in the same paper, Caveats of RFM Segmentation and RFM Model section, it is mentioned that RFM model looks historical data, so it may not accurately predict future behaviours of customers. How we can predict the customers future behaviours and use this prediction into RFM models?
6. On RFM Segmentation Article a [simulator](https://segmentor.optimove.com/?pk_vid=446d98b615e1da361588087102430367#/) with a sample data is provided. While # of outliers is around 300 out of 10K, we observe only 1 unit drop in customer number?

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1. On RFM Segmentation Article a [simulator](https://segmentor.optimove.com/?pk_vid=446d98b615e1da361588087102430367#/) with a sample data is provided. When we exclude outliers we observe a significant drop in Monetary lifetime. Can you please elaborate on that? What is the linkage between outliers and Monetary?

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**Medium/Customer Segmentation**

1. <https://medium.com/@triimamwicaksono_47213/customer-segmentation-and-strategy-using-rfm-analysis-in-rstudio-be79118c8235> (RFM score part)

When the RFM score is calculating, why r score multiply with 100 and f score multiply with 10?

**Customer Analytics with R**

1. In “Customer Analytics with R” in “Benefits” section,“*Can be extended with location dimension*” What does score location mean? According to what is it done?
2. Let us assume we have a customer which is not frequently buying and also the last visit was a long time ago. But when he/she buys, the amount of purchase is too high. But if we focus on his/her general characteristics of purchases his/her general frequency/recency attributes supports that situation. So the monetary value is too much but recency and frequency values are correspondingly low. Should we make an exception for her/him? Our company may be a furntiure company and our customer may purchase once for a year and in a huge amounts. (Reference: customer-analytics-with-r / RFM Analysis)
3. In RFM analysis can synthetic varibles be used such as monetary \* frequency or recency (in days since last transaction) / frequency (times between per transaction)? (<https://www.dropbox.com/s/5u2vrkztbvqgkoh/customer-analytics-with-r.pdf>)
4. (customer-analytics-with-r.pdf page= 24) In article, its mention about the recency, frequency and monetary concepts, can this data be collected from shopping cards for example Money Card? If possible, the shopping card can sometimes be used by others, for example close friends. In this case, would it be right to use the data, should we ignore this case ?

**Visualizing RFM Segmentation**

1. <http://ai.stanford.edu/people/ronnyk.link/RFMSDM2004.pdf> (page:5)

Here, criteria range between 111(best) and 555(the worst) so, How can we decide the criteria range in this problem?

**Others**

1. What do we need the RF, FM and RM models?
2. Let us assume we design a marketing strategy mainly aims to increase total monetary value of the customers. This can be a quick-win strategy. By finalizing the RFM score, can we increase the coefficient of the monetary rank? Do this direct approach result with a unexpected implementation problems? (Reference: Google search :) )
3. Is RFM analysis is a cyclic methodology? In marketing decisions is it recommended to test the strategy with a small bunch of customers then apply the whole segment?
4. Do yo think segmenting customer just for three characteristics (Recency,Frequency,Monetary)? Wouldn’t it could be a misleading? That’s because there are variables that could effect the analysis ?
5. From the resources You’ve given and throughout google research I’ve only seen one specific Customer Type Clusters (Champ,Loyal Customers,Can’t lose Them) Could It be a good idea to change or differ it with respect to sectors?
6. I want to ask a question about the idea of the RFM analysis. Many companies want to penetrate their customers to minimize risk, especially financial institutions. So, the Pareto principle does generally not fit their goals. How can RFM analysis helps these companies to segment their customers by penetrating?
7. On article “RFM Migration Analysis A New Approach to a Proven Technique by Jim Sellers and Arthur Middleton Hughes” we are told that we need to make sure that the RFM score is precise enough to identify fine changes in behavior. I understand the precision level to ensure make it actionable but also avoid making it too generic. However, I did not understand how to make it happen with R? what is the 125-cell approach? How can I apply this to my methodology? How can I utilize Migration Analysis to obtain a good strategy?
8. A general question based on all weekly materials. We analyze customers by looking at their past behaviors. At such an unusual time as we are now, there can be many factors that can determine and change customer behavior. Can the RFM method be preferred at such times? Even if it was, would this method give us a healthy result?
9. A general question based on all weekly materials. Values such as monetary and recency belonging to customers during Christmas, discounts and special occasions (such as Valentine's Day) can create a skewed data. Is there a specific application in RFM analysis for such periods, or are such periods excluded from the analysis?
10. All the elements that include the RFM score calculation (Recency,Frequency,Monetary) are related to what a company expects from the customer. Isn't there a variable in the RFM score assessment representing which products or services the customer prefers in order to define a customer more specifically?
11. As mentioned in our previous lessons, there are statistical methods for determining the number of clusters to reduce the difference in a segment which allocated with clustering algorithm (Elbow method etc.). As I understand, In RFM studies, there is a grouping within the framework of marketing activities (Best Customers, High-spending New Customers,Lowest-Spending Active Loyal Customers) rather than the statistical approach.Is this approach sufficient to create segments that truly differ the customers correctly?
12. Would you prefer RFM or K-means for customer segmentation?
13. How should we determine how many segments we will create as a result of RFM?
14. Should RFM be applied only to customers? Does it make sense to perform RFM analysis for products or services?
15. If you were in place of federal express, which different sets would you look at based on your experiences? Is there a case they haven't seen? Would you also decide to stable top 10% or more? Why?
16. (FedEx) The article says that marketing analysts and marketers should work closely together during the migration analysis. There should also be salespeople and employees who charged for advertising in that area, right? After what phases should they start working together? Where exactly should the data analyst be?
17. One of the facts that I encountered in companies where I worked as a consultant was to realize more complex structures by duplicating the data that is not at hand. What feature engineering can we do using the available data from a company with little data for RFM? (available data name surname, shopping category, spending amount and time)