



The Government of the Russian Federation

**The Federal State Autonomous Institution of Higher Education
"National Research University - Higher School of Economics"**

Faculty of Business and Management
Department of Strategic Marketing

Managing the Customer Equity

Master Education 38.04.02 "Management", Master program in "Marketing"

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Approved by the meeting of the Department «__»_____ 2015

Head of the Department _____

Recommended by the section of Academic Council «__»_____ 2015

Chairman _____

Approved by the Academic Council of the Faculty «__»_____ 2015

Academic Secretary _____

Moscow, 2015.

1 Course Summary

This course emphasizes an importance of a customer equity management for corporations and gives a particular emphasis to a usage of the customer lifetime value concept. It aims to teach main principles involved in measuring and managing the customer value, and demonstrate the scope of its application. Students will learn how to use the CLV concept for measuring the efficiency of marketing actions, evaluation the long-run profitability of different customer groups, market segmentation and an allocation of marketing resources for customer acquisition and retention.

Among main questions covered in the course there are the following: Customer Equity and Firm Valuation, Individual Customer Lifetime; Customer Loyalty; Customer Acquisition and Retention; Customer Acquisition - Customer Retention Optimization.

2 Area of Application and Regulatory References

This Course Program establishes minimum requirements for skills and knowledge of the student and determines the content and the forms of educational activities and reporting.

Course Goals

Course Goals are as follows:

- Offer students a deep insight into new emerging concept of Customer Equity and Customer Lifetime Value
- Master in modern marketing tools and technologies
- Obtain practical skills to develop and apply marketing strategies based on a customer evaluation approach.

Students' competencies to be developed by the course are as follows.

The student is supposed to:

- Know the concept of customer equity; understand advantages and limitations of different customer profitability metrics.
- Be able to analyze customer equity, perform customer lifetime value assessment.
- Gain skills (experience) of usage of CLV-based strategies development and implementation.

The Course develops the following competencies:

Competencies	PC-Code	Descriptors - the learning outcomes (the indicators of achievement)	Teaching forms and methods of that contribute to the development of a competence
Academic activity	PC-1	Ability to identify and formulate relevant issues, summarize and critically evaluate results of research on a chosen topic	Lectures and seminars, case analysis

Competencies	PC-Code	Descriptors - the learning outcomes (the indicators of achievement)	Teaching forms and methods of that contribute to the development of a competence
	PC-5	Ability to present results of study in a report and presentation	Students' presentations
Consulting activity	PC-17	Ability to identify the data needed to make decision, collect and process the data	Lectures and seminars, case analysis
	PC-19	Knowledge of the quantitative and qualitative methods for analyzing and modeling, theoretical and experimental research	Lectures and seminars

- according to NC/NRU-HSE classification

Competencies	NC/NRU-HSE Code	Descriptors - the learning outcomes (the indicators of achievement)	Teaching forms and methods of that contribute to the development of a competence
Organize research activity for business strategy development and customer base analysis	IC-M1.2 (M)	Possess methodology, methods and tools of Customer Equity management, CLV-models	Lectures and seminars, case analysis
Organize consulting activity for business strategy development	IC-M1.2 (M)	Able to develop and implement strategies for business development with marketing tools	Lectures and seminars, case analysis

3 How the Course Fits in with the Curriculum

The Course Program has been developed in accordance with Education Program 38.04.02 Management, Master program in Marketing.

Prerequisites: As course designed to be taught in MALOLEGO framework, there are no special prerequisites. However, basic knowledge in Marketing, Economics and Mathematics/Statistics is required.

4 Course Schedule

№	Topic	Total amount of hours	Classroom Activities			Self-Study
			Lectures	Seminars	Workshops	



1	Introduction: customer equity approach	3	1	-	-	2
2	Maximizing profitability: value of loyalty programs	3	1	-	-	2
3	Customer selection metrics and customer lifetime value models	18	4	2	-	12
	Midterm exam	10	-	-	2	8
	Midterm exam correction	3	-	-	1	2
4	Customer lifetime value drivers	3	1	-	-	2
5	Managing loyalty and profitability simultaneously	3	1	-	-	2
6	Customer attrition and Customer acquisition	16	2	2	-	12
7	Optimal allocation of resources across marketing and communication strategies	18	4	2	-	12
8	Selected applications: pitching the right product to the right customer at the right time, managing multi-channel shoppers, linking investments in branding to customer profitability.	8	2	-	-	6
	Students' Presentations	16	-	-	4	12
	Final exam	12	-	-	2	10
	Final exam correction	1	-	-	1	
	TOTAL	118	16	6	10	84

4.1 Grading Criteria

Forms and Types of Testing

Type of testing	Form of testing	Parameters
Intermediate exam	Quiz	Written assignment, 2 hrs.
Student presentations	Oral presentation and written summary of a selected paper	Oral presentation and written assignment, 4 hrs.
Final exam	Quiz	Written exam, 2 hrs.

Intermediate exam– 33%; Students Presentations – 33%; Final Exam – 34%. Current testing grading has 10 ranks.

5 The Course Content

The main textbooks are:

Kumar, V., 2008, *Managing Customers for Profit: Strategies to Increase Profits and Build Loyalty*, Pearson Education (US). [Kumar, 2008]

Blattberg, Robert C., Kim, Byung-Do, Neslin, Scott A., *Analyzing and Managing Customers Series: International Series in Quantitative Marketing*, Vol. 18, 2008, XXIV, 872 p.

In the following table papers marked with the star (*) are obligatory for reading prior classES.

Date: Time: Auditorium: Lections: 1 hrs Self-study: 2 hrs	<p>Topic 1. Introduction: customer equity approach</p> <p>Key points:</p> <ul style="list-style-type: none"> - Course overview. - Introduction in Customer Lifetime Value. - Aligning Customer Management Strategies with the CLV Metric. <p>Reading:</p> <ol style="list-style-type: none"> 1. Kumar, 2008, Ch.1. 2. B. O'Reilly, "The Mechanic Who Fixed Continental," <i>Fortune</i>, April 23, 1999: 176–186. 3. Rangan V. Kasturi and Marie Bell, "Dell-New Horizons," <i>Harvard Business Review Case Study 9-502-022</i>, October 10, 2002. 4. Paul W. Farris, Neil T. Bendle, Philip E. Pfeifer, and David J. Reibstein. <i>Marketing Metrics: 50+ Metrics Every Executive Should Master</i> (Prentice Hall, 2006).
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Date: Time: Auditorium: Lections: 1 hrs Self-study: 2 hrs	<p>Topic 2. Maximizing Profitability: Value of Loyalty Programs.</p> <p>Key points:</p> <ul style="list-style-type: none"> # Loyalty Programs. # How Do Loyal Customers Really Perform? # Are Loyal Customers Profitable? # Where May Firms Go Wrong? # The Problem with Measuring Loyalty. # When to Stop Investing in a Customer. <p>Reading:</p> <ol style="list-style-type: none"> 1. Kumar, 2008, Ch.2. 2. F. F. Reichheld and W. E. Sasser Jr., "Zero Defections: quality comes to services," <i>Harvard Business Review</i>, 68(5) 1990: 105–11. (*) 3. W. W. Reinartz and V. Kumar, "The Mismanagement of Customer Loyalty," <i>Harvard Business Review</i> 80(7) 2002: 86. (*) 4. J. Passingham, "Grocery Retailing and the Loyalty Card," <i>Journal of the Market Research Society</i> 40(1) 1998: 55–67. 5. W. Reinartz and V. Kumar, "On the Profitability of Long Life-
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	time Customers: An Empirical Investigation and Implications for Marketing,” Journal of Marketing. Vol. 64(4) 2000: 17–35.
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<p>Date: Time: Auditorium: Lections: 4 hrs Seminars: 2 hrs Self-study: 12 hrs</p>	<p>Topic 3. Customer Selection Metrics. Customer Lifetime Value Models.</p> <p>Key points:</p> <ul style="list-style-type: none"> # Traditional Metrics. # The Need for a Forward-Looking Metric. # Introducing Customer Lifetime Value (CLV). # Advanced Model for Measuring CLV. <p>Reading:</p> <ol style="list-style-type: none"> 1. Kumar, 2008, Ch.3. 2. V. Kumar, G. Ramani, and T. Bohling, “Customer Lifetime Value Approaches and Best Practices Applications,” Journal of Interactive Marketing 18(3) 2004: 60–72. 3. P. D. Berger and N. I. Nasr, “Customer Lifetime Value: Marketing Models and Applications,” Journal of Interactive Marketing 12 1998: 17–30. 4. David A. Schweidel, Peter S. Fader, and Eric T. Bradlow, “Understanding Service Retention Within and Across Cohorts Using Limited Information,” Journal of Marketing, Volume (70) 2007. 5. S. Gupta and D. R. Lehmann, “Customer as Assets,” Journal of Interactive Marketing 17(1) 2003: 9–24. 6. W. J. Reinartz and V. Kumar, “The Impact of Customer Relationship Characteristics on Profitable Lifetime Duration,” Journal of Marketing 67(1) 2003: 77–99. 7. R. T. Rust, K. N. Lemon, and V. A. Zeithaml, “Return on Marketing: Using Customer Equity to Focus Marketing Strategy,” Journal of Marketing 68 2003: 109–127. 8. R. Venkatesan and V. Kumar, “A Customer Lifetime Value Framework for Customer Selections and Resource Allocation Strategy,” Journal of Marketing 68(4) 2004: 106–125.
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<p>Date: Time: Auditorium: Lections: 1 hrs Self-study: 2 hrs</p>	<p>Topic 4. Customer lifetime value drivers .</p> <p>Key points:</p> <ul style="list-style-type: none"> # What drives CLV. # A Specific B2B Case Study. # A B2C Case Study in the Retailing Industry. <p>Reading:</p> <ol style="list-style-type: none"> 1. Kumar, 2008, Ch.4.
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	<p>2. W. Reinartz and V. Kumar, "The Impact of Customer Relationship Characteristics on Profitable Lifetime Duration," <i>Journal of Marketing</i> 67(1) 2003: 77–99.</p> <p>3. V. Kumar, D. Shah, and R. Venkatesan, "Managing retailer profitability—one customer at a time!" <i>Journal of Retailing</i> 82(4) 2006: 277–294.</p>
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<p>Date: Time: Auditorium: Lectures: 1 hrs Self-study: 2 hrs</p>	<p>Topic 5. Managing Loyalty and Profitability Simultaneously.</p> <p>Key points:</p> <ul style="list-style-type: none"># Behavioral and Attitudinal Loyalty# Customer Segmentation# A Framework for Building and Sustaining Loyalty# Cultivating Attitudinal Loyalty# Linking Loyalty to Profitability# Operationalizing the Framework# Evolution of Loyalty Programs <p>Reading:</p> <ol style="list-style-type: none">1. Kumar, 2008, Ch.6.2. S. Shoemaker and R. Lewis, "Customer Loyalty: The Future of Hospitality Marketing," <i>Hospitality Management</i> 18 1999: 349.3. F. F. Reichheld, "The One Number You Need to Grow," <i>Harvard Business Review</i> 81(12) 2003: 46–54. (*)4. V. Kumar and Denish Shah, "Building and Sustaining Profitable Customer Loyalty for the 21st Century," <i>Journal of Retailing</i> 80(4) 2004: 317–330.5. W. J. Reinartz and V. Kumar, "The Mismanagement of Customer Loyalty," <i>Harvard Business Review</i> 80(7) 2002: 86. (*)
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<p>Date: Time: Auditorium: Lectures: 2 hrs Seminars: 2 hrs Self-study: 12 hrs</p>	<p>Topic 6. Customer attrition and Customer acquisition</p> <p>Key points:</p> <ul style="list-style-type: none"># Impact of Attrition.# Preventing Attrition of Customers.# Case Study: Telecommunication Industry.# Acquiring Profitable Customers.# Pitfalls to Balancing Acquisition and Retention Spending.# Profit Maximizing Strategies.# Maximum Profit, Acquisition Likelihood and Retention Duration. <p>Reading:</p> <ol style="list-style-type: none">1. Kumar, 2008, Ch.9,12.
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	<ol style="list-style-type: none">2. Robert C. Blattberg and John Deighton, "Manage Marketing by the Customer Equity Test," Harvard Business Review 74(4) 1996: 136–144. (*)3. V. Kumar, R. Venkatesan, and W. J. Reinartz (2006), "Knowing What to Sell, When, and to Whom," Harvard Business Review, March 2006: 131–137. (*)4. J. Thomas, W. Reinartz, and V. Kumar, "Getting the Most out of All Your Customers," Harvard Business Review (July-August) 2004: 116-123. (*)
Date: Time: Auditorium: Lectons: 4 hrs Seminars: 2 hrs Self-study: 12 hrs	<p>Topic 7. Optimal Allocation of Resources across Marketing and Communication Strategies.</p> <p>Key points:</p> <ul style="list-style-type: none"># Channels Type and Frequency of Communication.# Resource-Allocation Strategy and CLV Maximization.#Optimal Resource Allocation: A Case Study. <p>Reading:</p> <ol style="list-style-type: none">1. Kumar, 2008, Ch.7.2. J. Thomas, W. Reinartz, and V. Kumar, "Getting the Most out of All Your Customers," Harvard Business Review (July-August) 2004: 116-123. (*)3. Susan Fournier, Susan Dobscha, and David Glen Mick (1997), "Preventing the Premature Death of Relationship Marketing," Harvard Business Review 75 (Jan-Feb): 2–8. (*)4. Jakki Mohr and John R. Nevin, "Communication Strategies in Marketing Channels: A Theoretical Perspective," Journal of Marketing 54 (October) 2001: 36–51.5. Rajdeep Grewal, James M. Corner, and Raj Mehta, "An Investigation into the Antecedents of Organizational Participation in Business-to-Business Electronic Markets," Journal of Marketing 65 (July) 2001: 17–34.6. R. Venkatesan and V. Kumar, "A Customer Lifetime Value Framework for Customer Selections and Resource Allocation Strategy," Journal of Marketing 68(4) 2004: 106–125.

Date: Time: Auditorium: Lectons: 2 hrs Self-study: 6 hrs	<p>Topic 8. Pitching the Right Product to the Right Customer at the Right Time.</p> <p>Key points:</p> <ul style="list-style-type: none"># What Companies Have Been Doing The Question of "What Next?"# An Integrated Approach to Predicting Customer Behavior.# Increasing the Cross-Sell Ratio: Path to Profitability.
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Reading:

1. Kumar, 2008, Ch.8.
2. A. Knott, A. Hayes, and S. A. Neslin, "Next-Product-to-Buy Models for Cross-Selling Applications," *Journal of Interactive Marketing* 16(3) 2002: 59–75.
3. S. Li, B. Sun, and R. T. Wilcox, "Cross-Selling Sequentially Ordered Products: An Application to Consumer Banking Services," *Journal of Marketing Research* 42 2005: 233–239.
4. V. Kumar, R. Venkatesan, and W. J. Reinartz (2006), "Knowing What to Sell, When, and to Whom," *Harvard Business Review*, March 2006: 131–137. (*)

Managing Multichannel Shoppers.

Key points:

- # Who Are Multichannel Shoppers?
- # Are Multichannel Shoppers More Profitable?
- # Determining the Next Channel a Customer Adopts.

Reading:

1. Kumar, 2008, Ch.10.
2. V. Kumar and Rajkumar Venkatesan, "Who Are Multichannel Shoppers and How Do They Perform?: Correlates of Multichannel Shopping Behavior," *Journal of Interactive Marketing* 19(2) 2005: 44–62.

Linking Investments in Branding to Customer Profitability.

Key points:

- # Aggregate vs. Individual Brand Value.
- # Framework for Linking CLV and Brand Value.
- # How to Link IBV to CLV.

Reading:

1. Kumar, 2008, Ch.11.
2. David Dunne, "Branding the Experience," *Marketing* 38 2004: 11.
3. V. Kumar, M. Luo, and V. R. Rao, "Linking an Individual's Brand Value to the CLV: An Integrated Framework," Working Paper, University of Connecticut.

6 Educational Technologies

Present course includes lectures, projects, group work, presentations, case studies, paper analysis and discussion.

7 Methods and Materials for Current Testing and Attestation

8.1. Examples of Final exam “Managing the customer equity”.

Exercise 1. Consider the following hypothetical customer base structure in contractual setting. Number of active customers each year by year-of-acquisition cohort is given in the following table:

	Year 2001	Year 2002	Year 2003	Year 2004
	10000	5600	3220	1904
		12000	6720	3864
			15000	8400
				10000
Total number of customers	10000	17600	24940	24168

In bold the numbers of customers acquired in the corresponding years. Assume that

- Each contract is annual, starting on January 1 and expiring at 11:59pm on December 31.
 - An average net cash flow of \$100/year.
 - A 10% discount rate.
- 1) Calculate the annual retention rates by cohort and by whole customer base.

Suppose the customer base consists of the identical customers, i.e. all customers have the same retention rate.

- 2) How could you explain the changes in the average retention rates over time?
- 3) What is the expected residual value of the customer base at December 31, 2004?

Suppose now, that each cohort consist of two groups of customers with different retention rate: 30% of customers with the retention rate 70% and 70% of customers with the retention rate 50%.

- 4) Is this assumption consistent with the data in the table?
- 5) How could you explain the changes in the average per cohort and per customer base retention rates over time?
- 6) What is the expected residual value of the customer base at December 31, 2004?

Exercise 2. Consider the case of a marketing manager faced with the choice between two alternative advertising campaigns (A and B). With Campaign A, the company can attract “good” customers with a probability of 25% and “bad” ones with a probability of 75%. A good client will generate a net profit of \$1,300 in Period 1, whereas a bad one is assumed to result in a net loss of —\$500 in the same period. For both types of clients, this net contribution can either improve (with probability 10%) or deteriorate (with probability 90%) by 20% in Period 2. With Campaign B, only one type of customer – one that generates a constant net profit of \$50 in Periods 1 and 2 - can be acquired. For both campaigns, the average cost of recruiting the customer and setting up a new account is assumed to be \$A, where A is the positive number. Suppose that a discount rate is 15% and an average lifetime of two periods.

- 1) Calculate the CLV of a newly acquired customer for Campaign A and for Campaign B.
- 2) Which campaign, if any, will be chosen by the marketing manager?

Suppose that the marketing manager after the end of Period 1 has the option to behave asymmetrically in Period 2: In the case of a good customer, the client relationship will continue, and in the case of a bad one, it will be abandoned. Assume that the marketing manager decides to terminate the client relationship with a bad customer at the end of Period 1 and that this abandonment does not cause additional cost.

- 3) How does the lifetime value of a bad customer change in this case?
- 4) What is the value of the abandonment option?
- 5) Which campaign, if any, will be chosen by the marketing manager in such the case?

8.2. Examples of Midterm exams

Midterm exam 2013.

Exercise 1 (The Simplest CLV Model). Suppose the firm receives \$ M in net cash flow each period when the customer is retained (\$ M is the revenue minus costs minus any retention marketing spending). The customer is retained with probability (or rate) “ r ” each period. The per-period discount rate is “ d ”. The customer is “lost for good” the first time she is not retained.

Suppose that at the moment “ t ” the firm spent an amount \$ A to acquire the customer, and the customer makes his first purchase at the moment $t=1$. Suppose $M=100$, $d=0.2$, $r=0.8$.

- a) Calculate CLV for the customer, assuming his lifetime horizon is 4 periods.
- b) Calculate CLV for the customer assuming an infinite lifetime horizon.

How would your answers change if we assume that the first customer’s purchase is made at the moment $t=0$?

Exercise 2 (Budget distribution 1). Suppose the formula for CLV (including acquisition and retention spending) is determined to be $CLV= 25 + 50 A - 2 A^2 +15 R - 0.3 R^2$, where A is the acquisition spending and R is the retention spending of the firm.

- 1) What are optimal values of A and R if there are no restrictions on marketing budget?
- 2) Suppose the maximum marketing budget is limited by \$ B . That is $A + R \leq B$. What is the optimal budget distribution for values $B = \{1, 30, 100\}$?

Exercise 3 (Budget distribution 2). The firm trades the product in two different regions, and has equal number of customers in each region. If firm applies the same marketing strategy (the same acquisition and retention spending per client) in each region, then the customer’s CLV is determined to be

$$CLV= 25 + 50 A - 2 A^2 +15 R - 0.3 R^2,$$

where A is the acquisition spending and R is the retention spending per customer. Suppose, the firm knows that customers differs across regions but not within region. In particular, CLV of each client in the first region is given by

$$CLV_1= 15 + 55 A_1 - 3 A_1^2 +25 R_1 - 0.2 R_1^2.$$

- 1) Derive the formula of CLV of each client in the second region.
- 2) Suppose the marketing budget is \$30 per customer. Suppose also the firm chooses the acquisition and retention spending for each region separately. What are optimal values of retention and acquisition spending in each region (i.e. what are R_1 , R_2 , A_1 , A_2 maximizing the firm’s total profit)?

- 3) Suppose there are no restrictions on the marketing budget. Suppose the firm still chooses the acquisition and retention spending for each group separately. What are optimal values of retention and acquisition spending in each region in this case?
- 4) Compare your answers with the corresponding answer in the exercise 2.

Exercise 3 (Budget distribution 3). Suppose that

- 1) spending \$A for given acquisition, the firm may attract the customer with probability

$$a(A) = \begin{cases} \frac{\sqrt{A}}{10}, & \text{if } A < 100 \\ 1, & \text{if } A \geq 100 \end{cases},$$

and

- 2) to support the retention rate r firm must make spending R :

$$R = \begin{cases} 50r^2, & r < 0.8 \\ \infty, & r > 0.8 \end{cases}$$

CLV of a potential customer is given by $CLV = a(A) \frac{m}{1+d-r} - A - R(r)$, where $d = 0.1$ is the discount rate, and $m=50$ is the contribution margin.

- 1) Suppose the level of retention spending is fixed. Calculate the optimal level of A for different level of R : $R = 1/2$, $R = 1$, $R = 2$.
- 2) Suppose the level of acquisition spending is fixed. Calculate the optimal level of R . for different level of A : $A = 1$, $A = 7$, $A = 10$.
- 3) Calculate optimal values of A and R , if the firm chooses both values simultaneously.

Midterm exam 2014.

Q1. Consider a case of two customers (similar to one that we had in Lecture 3). Behavior data for customers over a period of five months (Jan-May) is given in tables below.

Table 1. Dollar Amount Spent by Each Customer (i.e. firm's revenue)

Cust.	Jan	Feb	March	April	May
1	200	50	80	150	200
2	350	200	0	100	50

Table 2. Purchase frequency of Customers

Cust.	Jan	Feb	March	April	May
1	3	1	2	0	1
2	2	1	0	1	2

Suppose the firm uses the following system of weights to calculate RFM value for customers:

Recency =	10 points if purchased within the last 1 month
	5 points if purchased 2 months ago
	3 points if purchased 3
	2 points if purchased 4 or more months ago
Relative weight	40%
Frequency =	3 points for each purchase within the last 6 months
Relative weight	30%
Monetary Value =	10% of \$ volume of Purchase within the last 6 months
Relative weight	30%

- 1) Calculate the RFM value for each customer.
- 2) What is economic/marketing sense of the values of RFM? Do absolute values provide any valuable information? Gives you arguments.
- 3) Suppose the firm's markup (or contribution margin) is 30% of revenue. Calculate PCV for each customer using data in Table 1 and assuming that the discount rate is 15% per annum (1.25% per month).

Q2. 1) Firms use PCV and RFM to evaluate the profitability of customers. To calculate PCV, firms typically use contribution margin, i.e. the profit generated by each customer. However, for calculation of RFM, firms often use revenues obtained from customers, instead of profits.

Suppose that a firm starts to use contribution margins instead of revenues to calculate RFM *keeping the system of weights the same*. Can it change the ranking of customers? Gives your arguments.

2) Do you agree with the following statement: it does not matter if firm uses contribution margins instead of revenues to calculate RFM, because it is always possible *to change* the system of weights such that the ranking of customers will remain the same? Choose *the most correct answers*:

- a) The statement is correct
- b) The statement is incorrect
- c) The statement is correct only if the share of contribution margin in revenue is the same across all products and over all periods
- d) The statement is correct only under special assumptions on marketing cost and the share of gross contribution in revenue.

Provide your arguments.

Solve only one of the following exercises.

Q3. Consider the data in Table 1. Let's assume that the retention rate for each customer is 0.7, a firm expects that the contribution margin in next periods will be equal to average gross contribution

over previous periods, per-period discount rate is 0.2, the share of contribution margin in the revenue is 30%.

1. Calculate CLV for the customer, assuming his lifetime horizon is 4 periods.
2. Calculate CLV for the customer assuming an infinite lifetime horizon.

Provide numbers here and additional calculations at separate page.

Q4. Suppose the formula for CLV (including acquisition and retention spending) is determined to be $CLV = 40 + 50A - 2A^2 + 15R - 4R^2$, where A is the acquisition spending and R is the retention spending of the firm.

1. What are optimal values of A and R if there are no restrictions on marketing budget?
2. Suppose the maximum marketing budget is limited by \$ B . That is $A + R \leq B$. What is the optimal budget distribution for values $B = \{10, 30\}$? Provide numbers here and additional calculations at separate page.

8 Grading Procedures

The final grade consists of three parts. The first one is for intermediate quiz, which may include theoretical questions and exercises. The resulting score (10-point scale) is calculated prior to final testing – $O_{intermediate}$.

The second part is for a presentation and a written summary of a selected paper. The resulting score (10-point scale) is calculated prior to or final testing – $O_{presentation}$.

Finally, the third part of the final grade is for the final exam, which includes theoretical questions and exercises. The resulting score (10-point scale), O_{exam} .

The resulting score is exposed by the following formula:

$$O_{final} = 0,33 \cdot O_{intermediate} + 0,33 \cdot O_{presentation} + 0,34 O_{exam}.$$

9 Teaching Methods and Information Provision

9.1 Core Textbook

Blattberg, Robert C., Kim, Byung-Do, Neslin, Scott A., Analyzing and Managing Customers Series: International Series in Quantitative Marketing, Vol. 18, 2008, XXIV, 872 p.

Kumar, V., 2008, Managing Customers for Profit: Strategies to Increase Profits and Build Loyalty, Pearson Education (US).

9.2 Required Reading

F. F. Reichheld and W. E. Sasser Jr., “Zero Defections: quality comes to services,” Harvard Business Review, 68(5) 1990: 105–11.

W. W. Reinartz and V. Kumar, “The Mismanagement of Customer Loyalty,” Harvard Business Review 80(7) 2002: 86.

F. F. Reichheld and W. E. Sasser Jr., “Zero Defections: quality comes to services,” Harvard Business Review, 68(5) 1990: 105–11.

V. Kumar, G. Ramani, and T. Bohling, “Customer Lifetime Value Approaches and Best Practices Applications,” Journal of Interactive Marketing 18(3) 2004: 60–72.



W. W. Reinartz and V. Kumar, "The Mismanagement of Customer Loyalty," *Harvard Business Review* 80(7) 2002: 86.

Robert C. Blattberg and John Deighton, "Manage Marketing by the Customer Equity Test," *Harvard Business Review* 74(4) 1996: 136–144.

Susan Fournier, Susan Dobscha, and David Glen Mick (1997), "Preventing the Premature Death of Relationship Marketing," *Harvard Business Review* 75 (Jan-Feb): 2–8.

V. Kumar, R. Venkatesan, and W. J. Reinartz (2006), "Knowing What to Sell, When, and to Whom," *Harvard Business Review*, March 2006: 131–137.

W. J. Reinartz and V. Kumar, "The Mismanagement of Customer Loyalty," *Harvard Business Review* 80(7) 2002: 86.

9.3 Supplementary Reading

R. T. Rust, K. N. Lemon, and V. A. Zeithaml, "Driving Customer Equity. How Customer Lifetime Value Is Reshaping Corporate Strategy," Free Press, June 2000

A. Knott, A. Hayes, and S. A. Neslin, "Next-Product-to-Buy Models for Cross-Selling Applications," *Journal of Interactive Marketing* 16(3) 2002: 59–75.

B. O'Reilly, "The Mechanic Who Fixed Continental," *Fortune*, April 23, 1999: 176–186.

David A. Schweidel, Peter S. Fader, and Eric T. Bradlow, "Understanding Service Retention Within and Across Cohorts Using Limited Information," *Journal of Marketing*, Volume (70) 2007.

David Dunne, "Branding the Experience," *Marketing* 38 2004: 11.

F. F. Reichheld, "The One Number You Need to Grow," *Harvard Business Review* 81(12) 2003: 46–54.

J. Passingham, "Grocery Retailing and the Loyalty Card," *Journal of the Market Research Society* 40(1) 1998: 55–67.

J. Thomas, W. Reinartz, and V. Kumar, "Getting the Most out of All Your Customers," *Harvard Business Review* (July-August) 2004: 116-123. (*)

Jakki Mohr and John R. Nevin, "Communication Strategies in Marketing Channels: A Theoretical Perspective," *Journal of Marketing* 54 (October) 2001: 36–51.

Paul W. Farris, Neil T. Bendle, Philip E. Pfeifer, and David J. Reibstein. *Marketing Metrics: 50+ Metrics Every Executive Should Master* (Prentice Hall, 2006).

P. D. Berger and N. I. Nasr, "Customer Lifetime Value: Marketing Models and Applications," *Journal of Interactive Marketing* 12 1998: 17–30.

R. T. Rust, K. N. Lemon, and V. A. Zeithaml, "Return on Marketing: Using Customer Equity to Focus Marketing Strategy," *Journal of Marketing* 68 2003: 109–127.

R. Venkatesan and V. Kumar, "A Customer Lifetime Value Framework for Customer Selections and Resource Allocation Strategy," *Journal of Marketing* 68(4) 2004: 106–125.

Rajdeep Grewal, James M. Corner, and Raj Mehta, "An Investigation into the Antecedents of Organizational Participation in Business-to-Business Electronic Markets," *Journal of Marketing* 65 (July) 2001: 17–34.

Rangan V. Kasturi and Marie Bell, "Dell-New Horizons," *Harvard Business Review Case Study* 9-502-022, October 10, 2002.

S. Gupta and D. R. Lehmann, "Customer as Assets," *Journal of Interactive Marketing* 17(1) 2003: 9–24.



S. Li, B. Sun, and R. T. Wilcox, "Cross-Selling Sequentially Ordered Products: An Application to Consumer Banking Services," *Journal of Marketing Research* 42 2005: 233–239.

S. Shoemaker and R. Lewis, "Customer Loyalty: The Future of Hospitality Marketing," *Hospitality Management* 18 1999: 349.

V. Kumar and Denish Shah, "Building and Sustaining Profitable Customer Loyalty for the 21st Century," *Journal of Retailing* 80(4) 2004: 317–330.

V. Kumar, G. Ramani, and T. Bohling, "Customer Lifetime Value Approaches and Best Practices Applications," *Journal of Interactive Marketing* 18(3) 2004: 60–72.

V. Kumar and Rajkumar Venkatesan, "Who Are Multichannel Shoppers and How Do They Perform?: Correlates of Multichannel Shopping Behavior," *Journal of Interactive Marketing* 19(2) 2005: 44–62.

V. Kumar, D. Shah, and R. Venkatesan, "Managing retailer profitability—one customer at a time!" *Journal of Retailing* 82(4) 2006: 277–294.

V. Kumar, M. Luo, and V. R. Rao, "Linking an Individual's Brand Value to the CLV: An Integrated Framework," Working Paper, University of Connecticut

W. J. Reinartz and V. Kumar, "The Impact of Customer Relationship Characteristics on Profitable Lifetime Duration," *Journal of Marketing* 67(1) 2003: 77–99.

W. Reinartz and V. Kumar, "On the Profitability of Long Lifetime Customers: An Empirical Investigation and Implications for Marketing," *Journal of Marketing*. Vol. 64(4) 2000: 17–35.

9.4 Directories, dictionaries, encyclopedias

All obligatory readings are available at the HSE Library, through HSE On-Line Resources or from the teacher. For external access additional registration may be required.

9.5 Software

No special software is required.

9.6 Distance Learning

Not applicable.

10 Technical Provision

Present course is conducted with the use of following equipment: laptop and projector for lectures and group project presentations.

11 Academic Integrity

14.1 Each student in this course is expected to abide by the Higher School of Economics' Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work. For this course, collaboration is allowed in the following instances: *group discussion in class*.

14.2 You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e-mail, an e-mail attachment file, a diskette, or a hard copy. Should copying occur,



both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action.

14.3 During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

12 Accommodations for Students with Disabilities

The Higher School of Economics is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design, and diversity. I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.