

## **OPERATIONAL FINANCIAL SOLUTIONS ON PRODUCT ASSORTMENT OF DISTRIBUTION COMPANY**

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### *Abstract*

*In the course of the evolution of financial management objectives, the organizations have undergone significant changes over the past decades, both from the establishment of financial control, the establishment of operational and organizational control, operational improvement (business process reorganization), to the formation of a new model for increasing efficiency.*

*Operational financial decisions taken by the distribution company are aimed at solving tasks such as: assessing and maximizing the value of business, reorganizing the company and ensuring long-term financial planning, working capital and cash flow management, and providing timely information on decision-making for diagnosing and identifying financial improvement of the company.*

*This work considers the development and implementation of the entire complex of operational financial solutions in the management of the product range of the organization.*

*The paper analyses the types of financial solutions and market strategies illustrated by an example of product assortment management at a distributor company using modern methods of market positions diagnosing and financial instruments.*

*The studied approaches in the pricing and product range management of the company in question are considered taking into account the sales volume and the final margin profit based on the "Marcon" matrix, which allows to assess the success / failure of individual products and adjust the assortment policy. The main stages of the matrix construction are considered in the paper: the creation of a database, the definition of binary codes characterizing the economic result, the construction of the "Marcon" matrix for the analysis of homogeneous groups of goods, the determination of the position of goods in homogeneous groups, the analysis of the position of assortment positions, and the decision-making based on the analysis.*

*The analysis carried out by the financial service of the company is the source of basic information for the sales department, whose management takes fully weighted decisions regarding the marketing support of the goods.*

*The analysis of Delta's product range illustrates graphically the effectiveness of the presented approach in making decisions on managing working capital and cash flows of the company, which at the present stage is a key factor in the company's competitiveness on the market.*

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***Keywords:** financial management, financial solutions, distribution, product assortment, price formation, Marcon matrix, marginal profit*

### **1. Introduction**

In a market economy, the state is not responsible for business performance of economic entities. In this regard, one of the most important tasks of businesses is to ensure effective financial management. This requirement is put forward as the most important for companies applying for authorization as an official importer and distributor. The recipient of such rights from brands well-known in the global market must ensure professional application of a wide range of financial instruments for successful promotion of the proposed product range.

## 2. Degree of investigation of the problem at present, aim of research

The company Delta, considered by us, is a distributor of a number of well-known brands represented on the territory of the Republic of Moldova. The company considers its financial activities proceeding from the logic of developing financial management objectives, including the establishment of control over commodity and financial flows (including the establishment of operational and organizational control), the formation of a new holistic approach to improving the effectiveness of financial activities aimed at sustainable behavioral changes of Delta.

The purpose of research is to conduct an analysis of the company's policy in the field of pricing and product range management using the Marcon matrix as a toolkit and to develop some recommendations for improving the efficiency of operational financial decisions on the product range of the Delta distribution company.

## 3. Methods and materials applied. Results obtained and discussions

**Strategic:** how to evaluate and maximize the value of a business by means of financial and non-financial solutions; how to create a tree of goals and reorganize a company; how to ensure long-term financial planning and growth. Financial management of an organization provides a forecast when adopting one or another strategy/tactics to solve strategic issues. Methods for strategic analysis of the company's development are known marketing techniques: SGM (sustainable growth matrix), FSM (financial strategies matrix), and DuPont model [2].

**Operational solutions:** for floating capital and cash flow management; income and expenses management; ensuring liquidity and solvency.

Methodical techniques for operational analysis of the company include: Marcon matrix, ABC matrix, BCG matrix [1].

**Financial solutions:** solutions involving search of financial resources at acceptable cost; solutions for optimization of capital structure; for capitalization and dividend policy.

**Investment solutions:** involving decisions on capital investments and selection of perspective types of assets; portfolio (projects) management; management of project and financial risk.

**Analytical solutions:** how to support the decision-making process with adequate information; how to carry out diagnosis and identify ways of financial recovery. An analytical approach helps to identify problems associated with the profitability (efficiency) of the capital used, as well as an indicator of the business monetary return.

Based on the types of financial solutions described above and applied by businesses, we would like to focus on operational solutions and illustrate their effectiveness by example of Marcon matrix application for analysis of the product assortment of Delta company. Since 2007, Delta company (The Republic of Moldova) is the exclusive importer and distributor of cosmetics of global brands. Initially, the product portfolio included: decorative cosmetics, mass market cosmetics, middle market cosmetics and cosmetics for beauty salons.

The status of general distributor and official importer does not guarantee competitive advantages for the company, because most of the consumer market regards price as a motive for buying rather than quality and authenticity of the products. As a result, most of the budget for the promotion of goods "goes" to the regions and the release price from the importer's warehouse is formed within the cost of production. Using a competitive price formation strategy, the company retains its positions throughout the territory of Moldova. When making decisions on pricing and product promotion, the company takes into account the terms of contracts with supermarkets, in accordance with which the level of trade margin remains unchanged, regardless of the market's sensitivity to the price. Thus, all costs for product promotion and pricing are borne by the distributor; the decrease in the release price from the warehouse by the distributor does not ensure a reduction in the final price for products, because, in accordance with the concluded contracts, the intermediary shop retains its retail margin regardless of the situation on the market. Such a "winning" position of supermarkets is possible due to the oversaturation of the market with competitive goods. Another factor that significantly influences the choice of strategy of price formation is the supplier's binding of the purchase price to the exchange rate, which is quite unstable in the Republic of Moldova, which also predetermines the need for variation and adaptation of prices to the market of Moldova.

In order to make key decisions in the sphere of price formation and management of the product assortment of Delta company, taking into account the volume of sales and the final marginal profit, the authors resorted to the use of Marcon matrix, which helps to assess the success / failure of individual products and adjust the assortment policy.

After decomposition of the assortment according to the matrix, the goods are named: white giants; red giants; white dwarfs; blue dwarfs; satellites; black holes.

Three parameters are used to construct the Marcon matrix [3]:

1. Total gross margin, marginal revenue or marginal profit (MCA):

$$\mathbf{MCA = PxQ - CxQ (1);}$$

where:

P – unit price;

C – average variable costs per unit price;

Q – number of units sold.

2. Gross margin per commodity unit (MCU):

$$\mathbf{MCU = MCA / Q (2).}$$

3. Gross margin percentage (MCI):

$$\mathbf{MCI = MCA / (PxQ) (3).}$$

To build a matrix, one needs to go through several stages:

1. Compilation of database.
2. Definition of binary codes characterizing the economic result.
3. Construction of Marcon matrix for analysis of homogeneous groups.
4. Determination of products positions in homogeneous groups.
5. Analysis of positions of assortment items.
6. Decision-making.

The first stage: compiling a database for the reporting period (2016) (Table 1).

Table 1. Basic data on commodity groups of Delta company for the year 2016

	Item	Q – number of units (pcs) sold	P – unit price (€)	C – average variable costs per unit (€)	MCA – marginal profit (€)	MCU – marginal profit per unit price	MCI – share of marginal profit in the price
1	Deodorants	76 052	1.65	1.23	31 732	0.42	25.31%
2	Decorative cosmetics 1	13 374	8.22	6.60	21 585	1.61	19.64%
3	Decorative cosmetics 2	29 938	4.10	3.16	28 051	0.94	22.85%
4	Hair dye 1	166 499	1.64	1.32	53 384	0.32	19.60%
5	Hair dye 2	66 327	1.98	1.60	25 179	0.38	19.21%
6	Hair dye 3	9 136	3.32	2.65	6 085	0.67	20.08%
7	Hair dye 4	13 586	4.79	3.99	10 884	0.80	16.71%
8	Hair dye 5	11 279	4.46	3.10	15 343	1.36	30.50%
9	Hair dye 6	3 798	6.13	4.97	4 389	1.16	18.85%
10	Men's series	1 757	4.40	3.47	1 628	0.93	21.05%
11	Solar series	9 682	6.11	4.80	12 695	1.31	21.46%
12	Hair stylers	4 424	2.26	1.86	1 798	0.41	17.95%
13	Hair care products 1	80 691	2.57	2.07	40 147	0.50	19.40%
14	Hair care products 2	42 757	2.04	1.64	17 214	0.40	19.73%
15	Hair care products 3	53 531	1.54	1.27	14 534	0.27	17.66%
16	Face care products 1	18 600	5.52	4.43	20 305	1.09	19.79%
17	Face care products 2	48 678	2.82	2.23	28 603	0.59	20.84%
18	Body care products	1 971	2.41	1.97	849	0.43	17.90%

In addition to the data presented, the information is also estimated regarding the shares of sales (in sales and profit) of the above mentioned product groups (Figures 1, 2).

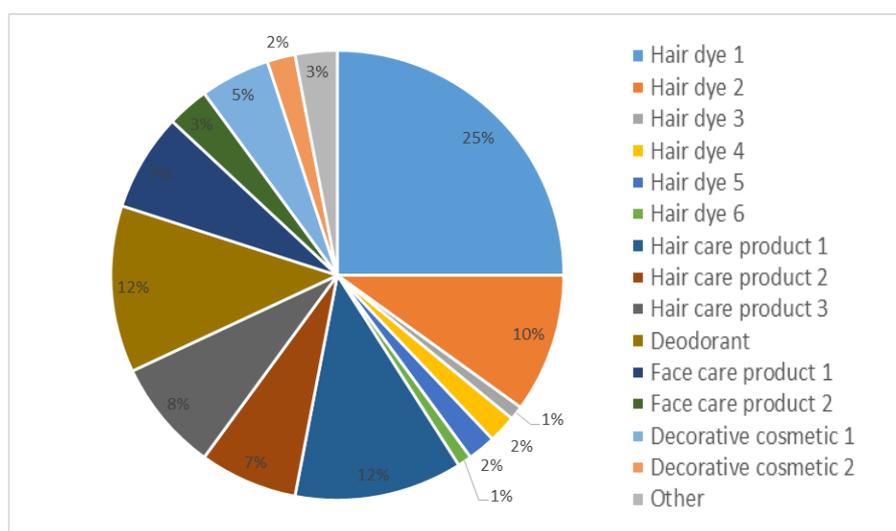


Figure 1. Sales structure of Delta company in 2016 (units)

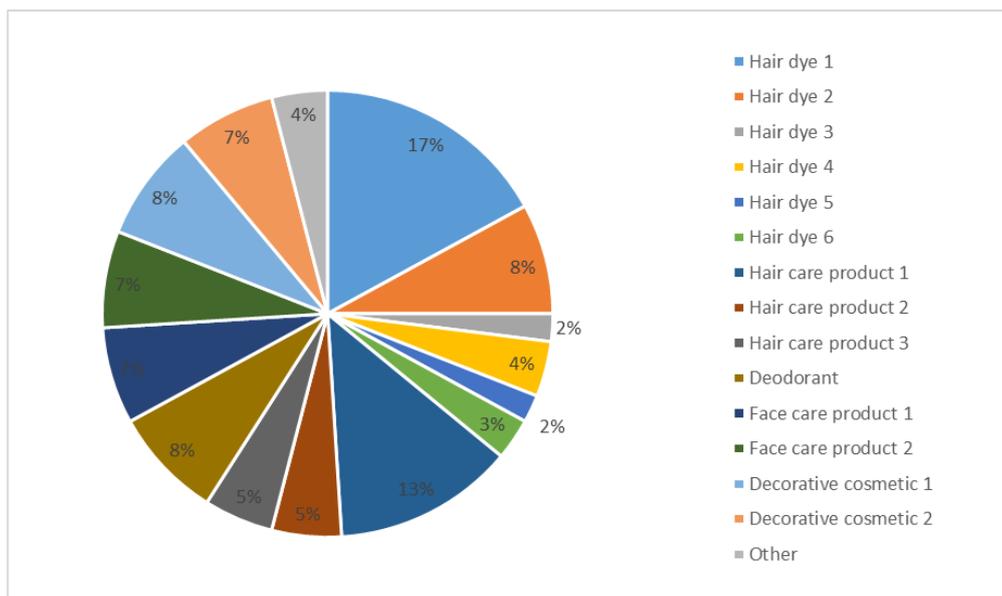


Figure 2. Sales structure of Delta company in 2016 (euro)

At the second stage of the matrix construction, binary codes are assigned ("1" or "0") to products relative to the weighted average for all groups, where "1" means "profit" and "0" means "loss". The "0" code is assigned if the value for a product shown in Figure 1 is less than the average value for the entire assortment, otherwise code "1" is assigned. This condition must be applied to all values, this can be illustrated by an example of "Hair dye 1" item (Table 2):

Table 2. Table with assigned binary codes to commodity groups of Delta company

Item	MCA	MCU	MCI	Q	P	C	AUI	QPC
Hair dye 1	1	0	0	1	0	1	100	101

The third stage: constructing matrix for analysis of homogeneous groups. Here the obtained values shall be inserted from Table 2 into the Marcon's grid (Figure 3). The obtained data are fit into the matrix (Figure 4).

**White giants:** - face care products 2 – profit share 8.55%, margin 20.84%.

Products with stable / growing demand bringing the main profits to the company thanks to high sales and high gross margin. These products are self-repaying, which profit is used to develop sales of other products, as well as to support those that lag behind.

**Red giants:** hair care products 1 – profit share 12.01%, margin 19.40%; deodorants – profit share 9.49%, margin 25.31%; hair dye 1 – profit share 15.96%, margin 19.60%; hair dye 2 – profit share 7.53%, margin 19.21%.

These products are also characterized by great "energy" although relatively less than that of "white giants". They bring a large share of profits. However, these products are not at the stage of growth, but at the stage of maturity. These products are self-repaying. If a company does not monitor the cost and does not expand the purchased assortment of a "red giant", than it can turn into a "black hole" over time.



The fourth stage: determination of products' positions in homogeneous groups.

**Blue dwarfs:** decorative cosmetics 2 – profit share 8.39%, margin 22.85%; face care products 1 – profit share 6.07%, margin 19.79%; decorative cosmetics 1 – profit share 6.45%, margin 19.64%.

Products characterized by significant profitability, but with low sales. This is the sale of upscale goods with high quality (high prices and variable costs, but low demand).

**White dwarfs:** hair dye 5 – profit share 4.59%, margin 30.50%; solar series – profit share 3.80%, margin 21.46%; man's series – profit share 0.49%, margin 21.05%; hair dye 3 – profit share 1.82%, margin 20.08%; hair dye 6 – profit share 1.31%, margin 18.85%; hair dye 4 – profit share 3.25%, margin 16.71%.

Products have a certain margin of profitability, but still or no longer bring significant revenue. Decrease in profitability leads to the "white dwarf" conversion into "satellite", while in case of errors in assessing the product's potential and in the absence of cost control it turns into "black hole". With more successful development, depending on the type, "white dwarf" can become a "red giant" or a "blue dwarf".

**Satellites:** hair stylers – profit share 0.54%, margin 17.95%; body care products – profit share 0.25%, margin 17.90%.

Products do not bring high profits because they are not bought in large volumes. Often these products are "unpromising" in terms of profit, but necessary for the company for some other reasons (prestige, advertising, traditions, social significance).

**Black holes:** hair care products 2 – profit share 5.15%, margin 19.73%; hair care products 3 – profit share 4.35%, margin 17.66%.

This is a product that absorbs a large amount of resources, but does not bring returns in the form of gross margin. Such products must either be abandoned, or, if they still have sales potential, their profitability must be increased to convert them into supernovae "hot stars".

The fifth stage: analysis of the position of assortment items according to the above characteristics. The author conducted an analysis of the product groups, taking into account the extent to which the sales of the product group should grow so that the marginal profit would not decrease, if the price is lowered by n%.

This can be illustrated by an example of "Hair dye 1" item (Table 3).

Table 3. Analysis by product group "Hair dye 1"

	Item	Q	MCA	MCU	MCI
1	Hair dye 1	166 499(un)	53 384(€)	0.32	19.60%

Lowering the price by 5% gives the margin (MCI) 14.60%; hence, the profit per unit (MCU) will fall to 0.23 euros. In order to maintain marginal profit (MCA) for the group, it is necessary to increase sales in units by 41.1%.

#### 4. The recommendations for product assortment

Such an analysis carried out by the company's financial service is the basic information for the sales department, which management makes detailed balanced decision regarding the marketing support of products (decision on assortment, price, promotion and distribution). Based on the analysis performed, the following approaches are recommended for the product assortment management (Table 4).

Table 4. Recommendations for product assortment management in Delta company

	Item	Recommendations and Comments
1	2	3
1	Face care products 2	<b>White giants.</b> The supplier lowered prices for some products, and raised prices for others; the company did not change prices. Average margin has not changed. Recommendation – adjust prices in accordance with <b>competitors' prices.</b>
2	Hair care products 1	<b>Red giant.</b> Recommendation – <b>do not change</b> prices to avoid drop of sales and marginal profit.
3	Deodorants	<b>Red giant.</b> The supplier lowered prices for some products, but the company did not. Recommendation – possibly <b>lower</b> prices by 2%, if sales can be increased by 15%, if growth is not possible – prices shall not be changed! Perform promotional activities using marketing budget to increase sales.
4	Hair dye 1	<b>Red giant.</b> Recommendation – <b>do not change</b> prices to avoid drop of sales and marginal profit.
5	Hair dye 2	<b>Red giant.</b> Very near to a "black hole". Recommendation – raise the price by 3-5%. A drop in sales (in pcs) by 15% is allowed at 3% rise, by 20% at 5% rise.
6	Decorative cosmetics 2	<b>Blue dwarf.</b> Recommendation – <b>do not change</b> prices; rising of prices will lead to sales drop, while lowering prices will mean the need to increase sales by at least 20%.
7	Face care products 1	<b>Blue dwarf.</b> Recommendation – since the product is in VIP zone, adjust prices in accordance with competitors' prices.
8	Decorative cosmetics 1	<b>Blue dwarf.</b> Recommendation – since the product is in VIP zone, adjust prices in accordance with competitors' prices.
9	Hair dye 5	<b>White dwarf.</b> Recommendation – <b>do not change</b> prices; <b>lowering</b> prices by 5% will mean the need to increase sales by at least 27% to reach the profit of 2016.
10	Solar series	<b>White dwarf.</b> Sales increased significantly (seasonal product). Recommendation – <b>do not change</b> prices, rising prices will mean drop in sales, while price lowering by at least 2% will necessitate increase in sales by at least 15%.
11	Men's series	<b>White dwarf.</b> After price increase, sales fell sharply. Recommendation – <b>lower</b> prices by 3%, sales shall be increased by at least 15%, if growth is not achieved – <b>withdraw</b> from assortment of products.

1	2	3
12	<b>Hair dye 3</b>	<b>White dwarf.</b> After price increase, sales fell slightly. Recommendation – <b>do not change</b> prices. Increase sales.
13	<b>Hair dye 6</b>	<b>White dwarf.</b> After price increase, sales fell. Recommendation – <b>do not change</b> prices. Increase sales.
14	<b>Hair dye 4</b>	<b>White dwarf.</b> Prices were not raised. Sales dropped. Recommendation – <b>rise</b> prices by 5% => convert to VIP. A drop in sales (in pcs) by 15% is allowed.
15	<b>Hair stylers</b>	<b>Satellite.</b> After price increase, sales fell slightly. Recommendation – <b>rise</b> prices by 5%. In case of sharp drop in sales <b>withdraw from assortment of products.</b> A drop in sales (in pcs) by 15% is allowed.
16	<b>Body care products</b>	<b>Satellite.</b> After price increase, sales fell sharply. Recommendation – <b>lower</b> prices by 3%, sales shall be increased by at least 15%, if growth is not achieved – <b>withdraw</b> from assortment of products
17	<b>Hair care products 2</b>	<b>Black hole.</b> Sales are high, but the profit per pcs is low. Recommendation – <b>rise</b> prices by 5% to get out of "black hole". A drop in sales (in pcs) is allowed by 20%.
18	<b>Hair care products 3</b>	<b>Black hole.</b> Sales are high and did not fall. But profit per product unit is low, since high sales are achieved by means of stimulation of customers, average discount is 4.5%. Recommendation – <b>rise</b> prices by 5%, or provide discounts through promotions covered by marketing budget to get out of "black hole". A drop in sales (in pcs) by 20% is allowed.

## 5. Conclusions

Thus, the following decisions are advisable based on the above recommendations: maintaining the established price level; product offers shall be accompanied by active advertising and promotion (if price lowering is recommended), namely:

- prices for products which fell into the "white dwarfs" category shall be changed according to recommendations, except for products for which price lowering is possible;
- concerning products that fell into the "black hole" category it was decided to negotiate with the supplier about additional discount or about additional support of advertising actions;
- concerning "satellite" products the decision was made to withdraw them from the assortment.

Analysis of Delta company's product assortment clearly illustrates the effectiveness of presented approach in making decisions on the management of floating capital and cash flows that is a key factor in the company's competitiveness in the market nowadays.

## REFERENCES

1. BAGIEV, G. L., TARASEVICH, V. M., ANN, Kh. Marketing: Textbook for high schools. 3-rd edition. / Editor: G.L. Bagiev. – Saint-Petersburg: Piter Publishing, 2007. 736 p. ISBN 978-5-469-00482-0, 5-469-00482-1
2. LAMBIN, J.-J. Menedzhment, orientirovannyi na rynek [Market-Driven Management]. Translated from English under editorship of V.B. Kolchanov. Saint Petersburg: Piter, 2007. ISBN 5-272-00136-2
3. NEZNAKHINA, E. L., LYAKHOVA, P. O. The method of „Marcon” as optimization tool range. 15.02.13. ISSN 2414-5122
4. Financial and marketing reports of Delta company for the year 2016. Internal reporting of the firm (Sales reports for 2016 in units and in cash).

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### Rezumat

Pe parcursul evoluției obiectivelor managementului financiar, organizațiile au suferit schimbări semnificative în ultimele decenii, atât de la stabilirea controlului financiar, stabilirea controlului operațional și organizațional, îmbunătățirea operațională (reorganizarea proceselor de afaceri), până la formarea unui nou model de creștere a eficienței.

Deciziile financiare operaționale, luate de compania de distribuție, vizează rezolvarea unor sarcini precum: evaluarea și maximizarea valorii afacerii, reorganizarea companiei și asigurarea planificării financiare pe termen lung, gestionarea capitalului circulant și a fluxului de numerar, precum și furnizarea oportună de informații pentru luarea deciziilor privind diagnosticarea și identificarea căilor îmbunătățirii situației financiare a companiei.

Lucrarea în cauză are ca scop abordarea creării și implementării tuturor deciziilor financiare operaționale necesare gestionării sortimentului de mărfuri în cadrul organizației.

În articol sunt analizate tipurile soluțiilor financiare și strategiilor de piață utilizate, având ca exemplu gestionarea unui sortiment de mărfuri al unei companii de distribuție cu utilizarea metodelor moderne de diagnosticare a pozițiilor de piață și a instrumentelor financiare.

Sunt analizate abordările în domeniul stabilirii prețurilor și gestionării sortimentului de mărfuri, având în vedere volumul de vânzări și profitul marginal total bazat pe matricea „Marcon”, care permite a evalua succesul / non-succesul mărfurilor concrete și de a ajusta politica de sortiment. În lucrare sunt analizate principalele etape de construcție a matricei: formarea unei baze de date, identificarea codurilor binare ce caracterizează rezultatul economic, construirea matricei „Marcon” pentru analiza grupurilor omogene de mărfuri, determinarea poziției mărfurilor în grupurile omogene, analiza situației pozițiilor sortimentale, luarea deciziei în baza analizei efectuate.

Efectuarea unei astfel de analize de către serviciul financiar al companiei este sursa informațiilor de bază pentru departamentul de vânzări, conducerea căreia ia decizii pe deplin ponderate cu privire la suportul de marketing al mărfurilor.

Analiza sortimentului marfar al companiei "Delita" ne prezintă eficacitatea abordării prezentate în luarea deciziilor privind gestionarea capitalului circulant și a fluxurilor de trezorerie ale companiei, care în prezent este un factor cheie al competitivității firmei pe piață.

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**Cuvinte-cheie:** management financiar, soluții financiare, distribuție, sortiment de marfă, formarea prețului, matrice „Marcon”, profit marginal

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### Аннотация

В процессе эволюции целей управления финансами организации за последние десятилетия претерпели существенные изменения, от установления финансового контроля, установления операционного и организационного контроля, операционного совершенствования (реорганизация бизнес-процессов) до формирования новой модели увеличения эффективности.

Операционные финансовые решения, принимаемые дистрибьюторской компанией, направлены на решение таких задач как: оценка и максимизация стоимости бизнеса, реорганизация компании и обеспечение долгосрочного финансового планирования, управление оборотным капиталом и денежными потоками, а также обеспечение своевременной информацией принятие решений по проведению диагностики и выявлению путей финансового оздоровления компании.

Данная работа рассматривает разработку и внедрение всего комплекса операционных финансовых решений при управлении товарным ассортиментом организации.

В статье рассматриваются виды финансовых решений и применяемых рыночных стратегий на примере управления товарным ассортиментом дистрибьюторской компании с использованием современных методов диагностики рыночных позиций и финансового инструментария.

*Проанализированы подходы в сфере ценообразования и управления товарным ассортиментом рассматриваемой фирмы с учетом объема продаж и итоговой маржинальной прибыли на основе матрицы «Маркон», которая позволяет оценить успешность/неуспешность отдельно взятых товаров и скорректировать ассортиментную политику. В работе рассмотрены основные этапы построения матрицы: формирование базы данных, определение двоичных кодов, характеризующих экономический результат, построение матрицы «Маркон» для анализа однородных групп товаров, определение положения товара в однородных группах, анализ положения ассортиментных позиций, принятие решений на основе проведенного анализа.*

*Проведение подобного анализа финансовой службой компании является источником базовой информации для отдела продаж, руководство которого принимает всесторонне взвешенные решения относительно маркетингового сопровождения товара.*

*Проведенный анализ товарного ассортимента компании «Дельта» наглядно иллюстрирует эффективность представленного подхода в принятии решений по управлению оборотным капиталом и денежными потоками компании, что на современном этапе выступает ключевым фактором конкурентоспособности фирмы на рынке.*

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**Ключевые слова:** финансовое управление, финансовые решения, дистрибуция, товарный ассортимент, ценообразование, матрица «Маркон», маржинальная прибыль

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