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*Optimization of the finished products distribution system of an organization using 3PL-providers*

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Master's dissertation  
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## SUMMARY

Master's dissertation: 70 pages, 7 figures, 40 tables, 32 sources, 8 annexes

### THIRD PARTY LOGISTICS, 3PL PROVIDER, DISTRIBUTION SYSTEM, TRANSPORTATION, STORAGE

The object of the research of the master's dissertation is the use of 3PL-providers for optimization of finished products distribution system of organizations of the Republic of Belarus.

The subject of the research is 3PL-providers.

The goal of this research is to identify ways to optimize the finished products distribution system of organizations through the use of the services of 3PL-providers.

In the course of work the following research was conducted: various approaches of domestic and foreign authors to the essence of the notion "third party logistics" were analyzed, the status of the third-party logistics market in the Republic of Belarus was investigated, the costs of maintaining organization's own distribution system were calculated, as well as the costs for distribution after using the services of a 3PL-operator based on the example of the domestic organization, recommendations to improve the staffing and software provision, as well as to improve business processes after implementing the services of a 3PL-operator were formulated.

Scientific novelty items (relevance) of the received results are the development of a method to improve the finished products distribution system through the use of the services of 3PL-providers, staffing and software equipment, business processes of an organization.

The area of possible practical application: the results can be adopted for use in LLC "Lubava-LIS" or in other organizations of different ownership forms, as well as in the educational process in the study of logistics.

Calculations and analytical materials shown in the graduate work objectively reflect the state of the object of study, principles and concepts borrowed from theoretical and methodological literature and other sources are accompanied by references to their authors.

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## INTRODUCTION

With the adoption of the Programme for the development of logistic system and transit potential, logistics infrastructure is being actively developed in the Republic of Belarus. However, the measures described in the program are primarily aimed at attracting transit flows and insufficient attention is paid to the development of domestic flows. In this connection, the relevant direction of the research is to optimize the distribution of the finished products of domestic manufacturers involving the use of 3PL-providers.

The object of the research of the master's thesis is the use of 3PL-providers for optimization of finished products distribution system of organizations of the Republic of Belarus.

The subject of the research is 3PL-providers.

The goal of this research is to identify ways to optimize the finished products distribution system of organizations through the use of the services of 3PL-providers.

To achieve this goal, the following tasks were solved:

- identifying an economic essence of the notion “third party logistics”;
- analyzing the performance of 3PL-providers in the Republic of Belarus and the countries of the European Union;
- researching the business process “Distribution” based on the data from a Belarusian organization;
- studying the distribution system of the organization and identifying gaps;
- developing recommendations on improving the finished products distribution system using 3PL-providers.

During the writing of the work scientific articles of domestic and foreign authors, documentation of the studied organization as well as the remote access resources of were used.

In the first chapter of the work an economic essence of the notion “third party logistics” was analyzed, a comparative analysis of the performance of 3PL-providers of the Republic of Belarus and countries of the European Union was made, and annotated review of the legislative framework for regulating logistics outsourcing was compiled.

In the second chapter a situational analysis of LLC “Lubava-LIS” was conducted, including SWOT -and SNW -analysis, analysis of financial and economic activities of the organization, the distribution system analysis with the identification of material, financial and information flows within the organization; the organizational structure and staffing, information and documentation, hardware and software provision was examined, as well as business processes of the distribution system of “Lubava-LIS”.

In the third chapter the analysis of the costs of maintaining organization's own distribution system was made, as well as the costs for distribution after using the services of a 3PL-operator. Recommendations on staffing and the introduction of modern specialized software were also made. After identifying sources of

funding for the development and implementation of the proposed activities, the mechanism of introduction of proposed activities to the organization was developed, as well as the ways of handling the risks, the uncertainties and the security of implementation of the proposed activities to LLC “Lubava-LIS”.

During the writing of this thesis general philosophical dialectic method was used, as well as the following particular scientific methods: economic and statistical, dynamical and comparative methods, SWOT- and SNW-analysis, the method of ABC- and XYZ-analysis.

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# CHAPTER 1

## THEORETICAL ASPECTS OF THIRD-PARTY LOGISTICS

### 1.1 The economic essence of the notion “third party logistics”

By far one of the most promising areas of improving competitiveness and reducing costs is to transfer the main logistics functions for outsourcing. However, the problem of transferring these functions to a third party are not enough explored. Currently there is no single approach to the definition of third party logistics (or 3PL, TPL), and there is a need for analysis of the literature in this area.

Table 1.1 lists different definitions of third party logistics developed by domestic and foreign researchers.

Table 1.1. – Views of scholars on the essence of the notion “third party logistics”

Source	Definition
1	2
Bask A.H.	TPL as relationships between interfaces in the supply chains and third-party logistics providers, where logistics services are offered, from basic to customized ones, in a shorter or longer-term relationship, with the aim of effectiveness and efficiency. TPL is a set of three dyadic relationships linking seller, buyer and logistics service provider in a supply chain [1, p. 474].
Bashirzade R.R., Pakhomova A.V.	3PL technology means the provision of logistics services from delivery and address storage to orders management and tracking goods movement [2, p. 41].
Berglund M., van Laarhoven P., Sharman G., Wandel S.	Third-party logistics are activities carried out by a logistics service provider on behalf of a shipper and consisting of at least management and execution of transportation and warehousing [3, p. 59].
Botnaryuk M.V.	3PL is an outsourcing company that “sells” integrated delivery services on the principle from door to door (i.e. door-to-door), while providing all the required activities [4, p. 54].
Dovnar V.I.	3PL (Third Party Logistics) - the company provides a full range of services on transportation, storage and handling of goods, customs clearance, and has its own resources for this (transport, storage facilities, staff of customs brokers etc.) [5, p. 110].
Coyle J.J., Bardi E.J., Langley C.J.	TPL involves an external organization that performs all or part of a company’s logistics functions [6].
Lankova Yu.V.	The term “third party logistics (3PL)” is used to denote the concept of purchasing logistics services [7, p. 176].
Levin S.B.	3PL is defined as a company that provides multiple transportation services for clients [8, p. 60].
Lieb R.C.	TPL involves the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process [9, p. 29].
Matyunkova N. N.	“Third Party Logistics” – a contract logistics or the transfer of the main logistics functions to a third-party outsourcing company [10, s. 48].



The end of table 1.1.

1	2
Murphy P.R., Poist, R.F.	TPL involves a relationship between a shipper and third party, which, compared with basic services, has more customized offerings, encompasses a broader number of service functions and is characterized by a longer term, more mutually beneficial relationship [11, p. 26].
Morozova A.K., Ribak S.P.	3PL provider is to provide logistics services or a complex of services (from delivery and address storage to orders management and tracking goods movement [12, p. 65].
Pilyaeva V.K., Poznyak O.V.	The term 3PL is used to indicate the modern concept of purchasing logistics services - when the client is offered complex services [13, p. 4].
Savina E. P.	Third Party Logistics (3PL) diverges from simple transportation of goods, including in the list of rendered services warehousing, handling, using subcontractors, as well as additional services with a high added value [14, p. 246].
Shpak A.V.	Third-level logistics (3PL) is an activity that is performed by an external company on behalf of the shipper and which consists in the provision of logistics services and the management of a complex of several logistics services [15, p. 47].
Wikipedia	Third Party Logistics (3PL) is to provide logistics services or a complex of services – from delivery and address storage to orders management and tracking goods movement [16].
Grand Logistic	3PL means the provision of logistics services from delivery and address storage to orders management and tracking goods movement [17].
SAP-South, Llc	Third Party Logistics (3PL) – logistics for third parties (logistics outsourcing), implying the transfer of a part or all of the functions in the field of logistics services that goes beyond simple transportation, to a third party logistics services provider, or 3PL-operator [18].
RBK – market surveys	3PL, or third-party logistics, refers to the concept of purchasing logistics services [19].
Logistim – a portal about logistics, logistics on the Internet and new technologies	3PL logistics is a complete outsourcing of all logistics processes (shipping, warehouse, equipment, accounting and control) [20].
PL Engineering	3PL (Third Party Logistic) – logistics services provision beyond simple transportation of goods [21].

Note – own elaboration based on studied literature

As can be seen from table 1.1, 21 definition of third-party logistics (3PL or TPL), developed by domestic and foreign authors, as well as various organizations and online resources, has been revealed. In order to analyze the presented definitions table 1.2 was developed.

Table 1.2. – An economic notion of third party logistics

Source	Third party logistics is				
	the concept of transferring logistics functions for outsourcing	providing complex logistic services	operations performed by a logistics services provider	the relationships between the shipper and the third party logistics providers	organizations that perform logistics functions
1	2	3	4	5	6
Bask A.H. [1, p. 474]				+	
Bashirzade R.R., Pakhomova A.V. [2, p. 41]		+			
Berglund M., van Laarhoven P., Sharman G., Wandel S. [3, p. 59]			+		
Botnaryuk M.V. [4, p. 54]					+
Dovnar V.I. [5, p. 110]					+
Coyle J.J., Bardi E.J., Langley C.J. [6]					+
Lankova U.V. [7, p. 176]	+				
Levin S.B. [8, p. 60]					+
Lieb R.C. [9, p. 29]	+				
Matyunkova N.N. [10, p. 48]	+				
Murphy P.R., Poist, R.F. [11, p. 26]				+	
Morozova A.K., Ribak S.P. [12, p. 65].		+			
Pilyaeva V.K., Poznyak O.V. [13, p. 4]	+				
Savina E.P. [14, p. 246]			+		
Shpak A.V. [15, c. 47]		+			
Wikipedia [16]		+			
Grand Logistic [17]		+			
SAP-South, Llc [18]	+				
RBK – market surveys [19]	+				
Logistim – a portal about logistics, logistics on the Internet and new technologies [20]	+				
PL Engineering [21]		+			
Total, %	33.3	28.6	9.5	9.5	19.1

Note – own elaboration based on the studied literature

Thus, there are five main approaches to the definition of the notion “third party logistics”. The term “third party logistics” can mean:

1. The concept of transferring logistics functions to outsourcing. This is the most common way to identify third-party logistics, followed by 33.3 % of all analyzed sources. In this case, many writers equate the concepts of “outsourcing” and “third party logistics”.

2. The process of providing complex logistic services. This definition is adhered to by 28.6 % of the analyzed sources.

3. The combination of various logistics operations. The list of operations usually includes transportation, storage, handling, as well as additional value-added services. This definition is adhered to by 9.5 % of the analyzed sources.

4. The relationships between shipper and third party logistics providers. This definition is also adhered to by 9.5 % of the analyzed sources.

5. Organizations that perform logistics functions. This definition is adhered to by 19.1 % of the analyzed sources. When using this meaning it is usual to add the word “provider” or “operator” after “3PL” (i.e. 3PL-provider, 3PL-operator).

## 1.2 Analysis of the performance of 3PL providers in the Republic of Belarus and the countries of the European Union

The use of 3PL providers’ services is one of the most effective ways to reduce logistics costs. In the Republic of Belarus, 3PL providers have emerged relatively recently, however, in the countries of the European Union third party logistics is actively used and developed. Therefore, there is a need to analyze the performance of 3PL providers in the Republic of Belarus compared to the countries of the European Union.

One of the methods to evaluate the quality of logistics is the logistics performance index (LPI) calculated by the World Bank [22]. Table 1.3 presents the results of calculation of the LPI for the Republic of Belarus and the countries of the European Union.

Table 1.3. – LPI of the Republic of Belarus and the countries of the European Union

Country	LPI rank	LPI score						
		Total	On customs	On infrastructure	On international shipments	On logistics quality and competence	On tracking and tracing	On timeliness
1	2	3	4	5	6	7	8	9
Germany	1	4.23	4.12	4.44	3.86	4.28	4.27	4.45
Luxembourg	2	4.22	3.90	4.24	4.24	4.01	4.12	4.80
Sweden	3	4.20	3.92	4.27	4.00	4.25	4.38	4.45
Netherlands	4	4.19	4.12	4.29	3.94	4.22	4.17	4.41
Belgium	6	4.11	3.83	4.05	4.05	4.07	4.22	4.43
Austria	7	4.10	3.79	4.08	3.85	4.18	4.36	4.37
United Kingdom	8	4.07	3.98	4.21	3.77	4.05	4.13	4.33
Finland	15	3.92	4.01	4.01	3.51	3.88	4.04	4.14
France	16	3.90	3.71	4.01	3.64	3.82	4.02	4.25
Denmark	17	3.82	3.82	3.75	3.66	4.01	3.74	3.92
Ireland	18	3.79	3.47	3.77	3.83	3.79	3.98	3.94
Italy	21	3.76	3.45	3.79	3.65	3.77	3.86	4.03
Spain	23	3.73	3.48	3.72	3.63	3.73	3.82	4.00

Czech Republic	26	3.67	3.58	3.36	3.65	3.65	3.84	3.94
Lithuania	29	3.63	3.42	3.57	3.49	3.49	3.68	4.14
Hungary	31	3.43	3.02	3.48	3.44	3.35	3.40	3.88
Poland	33	3.43	3.27	3.17	3.44	3.39	3.46	3.80

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The end of table 1.3.

1	2	3	4	5	6	7	8	9
Portugal	36	3.41	3.37	3.09	3.24	3.15	3.65	3.95
Estonia	38	3.36	3.41	3.18	3.07	3.18	3.25	4.08
Slovakia	41	3.34	3.28	3.24	3.41	3.12	3.12	3.81
Latvia	43	3.33	3.11	3.24	3.28	3.29	3.42	3.62
Greece	47	3.24	2.85	3.32	2.97	2.91	3.59	3.85
Slovenia	50	3.18	2.88	3.19	3.10	3.20	3.27	3.41
Croatia	51	3.16	3.07	2.99	3.12	3.21	3.16	3.39
Malta	56	3.07	2.78	2.94	3.09	2.85	3.12	3.61
Cyprus	59	3.00	3.11	3.00	2.80	2.72	2.54	3.79
Romania	60	2.99	3.00	2.88	3.06	2.82	2.95	3.22
Bulgaria	72	2.81	2.40	2.35	2.93	3.06	2.72	3.31
Belarus	120	2.40	2.06	2.10	2.62	2.32	2.16	3.04

Note: – source [22, p. 38-40]

Thus, the Republic of Belarus is 120th out of 160 places in the LPI ranking. A considerable gap between Belarus and its closest neighbors is noticeable, especially in the field of customs services, logistics infrastructure and tracking the passage of goods. However, rather high levels of timeliness of provided logistic services were identified, with the Republic of Belarus approaching some of the countries of the European Union. In spite of this, Belarus has significantly lagged behind the other analyzed countries.

It should be noted that the logistics performance index for the Republic of Belarus has dropped significantly compared to 2014 when Belarus ranked 99, although there was an improvement on index “international shipments”.

Table 1.4 presents the levels of logistics costs in the Republic of Belarus and some of the countries of the European Union.

Table 1.4. – The levels of logistics costs in the Republic of Belarus and some of the countries of the European Union

Country	GDP, billion dollars	The proportion of logistics cost in GDP, %	Logistics costs, billions dollars
France	2423.0	9.5	229.9
Germany	3371.0	8.8	297.1
Italy	1819.0	9.7	176.5
Netherlands	750.8	8.3	62.6
Spain	1221.0	9.7	118.2
United Kingdom	2865.0	8.8	251.1
Belarus	48.13	5.5	2.7

Note – own elaboration based on [23] and [24]

As shown in table 1.4, Belarus is characterized by a relatively small proportion of logistics cost in total GDP compared to other European Union countries, which is around 5.5 %. The proportion of logistics costs in GDP in analyzed European Union countries did not fall below 8.3 percent.

Most organizations in Belarus are 2PL, only 0.5 % are 3PL providers. 4PL services market does not exist. The share of outsourcing in Belarus is relatively small too – no more than 2% [25, p. 520].

Table 1.5 presents data on transport-expeditionary services rendered in the Republic of Belarus based on the information on 55 organizations of the country.

Table 1.5. – Services provided by freight forwarding organizations of the Republic of Belarus

Organization	Services											
	Transportation					Customs clearance	Warehousing services	Insurance	Development of schemes of transportation	Implementation of loading/unloading services	Information services	
	By road	Railway transportation	Marine transportation	Air transportation	Intermodal transportation							
1	2	3	4	5	6	7	8	9	10	11	12	
Avtovneshtans UE	+					+						
Avtopromsnabspedishn JV	+				+	+						
Avtoinvest LTD	+					+	+	+				
Adlergrupp LTD	+		+		+	+	+	+	+	+	+	
ADM Logistic PCUE	+											
Alevtrans J LTD	+				+	+	+	+	+	+	+	
ANNEBERG transport A/S												
AsstrA	+	+	+	+	+	+	+	+	+	+	+	+
Belagroeksport PCUE	+				+	+	+	+	+	+		
BELINTERTRANS Lietuva	+	+	+		+	+	+			+	+	
State Enterprise «BTLC»	+	+	+		+	+						
BelmagistralAvtotrans	+				+	+	+	+				
Belinterlogistic FLTD	+	+	+	+	+	+	+	+	+			
Bellogateks LTD	+	+	+	+	+	+	+	+				
Belarusian Transport Company CJSC		+										
Beleks-logistic CAR	+					+		+	+			
Beltechnoservice TUE	+					+			+			
Belekstestrans FLTD		+										
belvneshtans JLTD	+	+				+	+					
Export Bureau LTD	+	+	+	+								
Vitana UPCUE	+											
Вера-транс LTD	+											
Vitrans LTD	+		+	+	+	+	+	+		+	+	

The end of table 1.5.

1	2	3	4	5	6	7	8	9	10	11	12
Gradalogistic FPCUE		+	+			+		+	+	+	+
Grintour LTD					+	+		+			
EMTrans LTD	+					+	+	+			
Imekstrade FUE		+							+		+
«Karat-expedition» PCUE	+	+	+		+	+		+			
Krafttrans LTD	+	+	+	+	+	+		+	+	+	
KTL LTD	+					+	+	+			+
Litrailas FE		+	+								
Lars Krougius											+
Landtransexpedition LTD	+	+	+	+	+						
Megasila CPUE	+										
M&M Militzer&Munh JLTD	+			+	+	+				+	+
UE «Minsk Branch of the Belarusian Railways»		+				+	+			+	
Majot Cargo Service BEL LTD	+	+	+	+	+	+	+	+		+	
Our Cause LTD	+					+	+	+			+
Nortrop FE Our Cause	+	+	+	+	+	+					
Orion-Bel LTD	+	+	+			+	+	+	+	+	+
Prosper LTD	+	+	+		+	+	+	+	+	+	
Puls LTD	+	+				+	+			+	
Ralados UE	+	+	+	+	+	+	+	+	+	+	+
Ratipa LTD	+				+	+					
Russurvey JLTD									+		+
Sana Implex Brest JE LTD	+	+				+					
CD Factoral Logistic JCJSC	+	+	+	+	+	+	+	+		+	+
Service M Logistik PCUE	+	+	+		+	+		+			
Spedimec SRL	+		+			+	+			+	
Transkomlogistik LTD	+					+		+		+	
T.E.L.S.-BY FE	+	+	+	+	+	+		+			
Firm Evax LTD	+										
Forward TLTD	+					+					
DB Shenker FLTD	+	+	+	+	+	+	+	+	+	+	+
Expressfreight LTD	+	+	+	+	+	+	+	+	+	+	+
Total, %	32. 6	20.3	17. 4	10.9	18.8	74.5	43.6	49.1	29.1	36.4	30.9

Note – own elaboration based on [25]

Table 1.6 provides information on the types of services rendered by logistics intermediaries in the Republic of Belarus and in the world.



Table 1.6. – Logistics services provided by logistics intermediaries

Types of services	Use of the logistics services, %	
	in Belarus	in the world
Customs brokerage	74.5	53
Warehousing	43.6	67
Supply chain consultancy services provided by 3PLs	30.9	15
Product labeling, packaging, assembly, kitting	36.4	30
Transportation management and planning	29.1	25
Reverse logistics	-	36
Information technology (IT) services	-	14
Fleet management	-	13
4PL services	-	11
Sustainability/green supply chain-related services	-	3

Note – own elaboration based on [25, p. 519] and [26, p. 14]

The most common service provided by transportation and logistics organizations in Belarus, is customs brokerage (74.5 % of the analyzed organizations provide these services). This figure is significantly higher than the world average (53 %). The percentage of organizations providing information and consulting services (30.9 %), cargo labeling, packaging, assembly and kitting (36.4 %), transportation and cargo placement planning (29.1%) also exceeds world averages. However, there are no logistics intermediaries in Belarus providing services in the field of reverse logistics, information technology, fleet management, 4PL and sustainability.

Thus, the Republic of Belarus is 120th out of 160 places in the LPI ranking. There is a noticeable gap between Belarus and its closest neighbors in the field of customs services, logistics infrastructure and tracking the passage of goods, although Belarus is characterized by relatively high levels of timeliness of provided logistic services. The Republic of Belarus is also characterized by a relatively small proportion of logistics cost in total GDP compared to other European Union countries, which is around 5.5 %. The percentage of organizations in Belarus providing customs, information and consulting services, cargo labeling, packaging, assembly and kitting, transportation and cargo placement planning exceeds world averages. Despite this, there are no logistics intermediaries in Belarus providing services in the field of reverse logistics, information technology, fleet management, 4PL and sustainability.

### 1.3. The current status of the third party logistics market in the Republic of Belarus

A list of the logistic centers of the Republic of Belarus, hosted on the website of the Ministry of transport and communications, is presented in the appendix A, table A.1, and the layout of logistic centers of the Republic of Belarus, compiled by the



Association of international forwarders and logistics (BAME) is presented in the figure A.1.

In accordance with the Programme for the development of logistic system of the Republic of Belarus for the period of up to 2015, 20 logistics centers were built in the country during Programme period, with another 9 planned for construction for the year 2021. Most logistics centers are constructed or planned for construction in Minsk and Brest regions.

Implementation of the Programme made it possible to intensify the development of third party logistics in the Republic of Belarus and to encourage the expansion of warehouse and transport infrastructure.

Table 1.7 provides data on the volume of services provided by organizations engaged in logistics and transport-expeditionary activities.

Table 1.7. – The volume of services rendered by organizations engaged in logistics and transport-expeditionary activities, thous. BYN

	2013	2014	2015
The volume of logistic services, including those provided:	109 710	151 700	156 890
in transport-logistics centers	67 000	56 520	113 590
in wholesale logistics centers, trade logistics centers	22 300	22 080	18 350
other logistics centers	0	0	760
logistics operators working in leased structural elements of a logistics center	4 520	14 980	15 780
logistics operators working in warehouses and (or) other sites, with the exception of the structural elements of a logistics center	15 890	58 130	8 410
The volume of logistic services for handling transit cargo on the territory of the Republic of Belarus	4 100	17 490	46 600
The volume of freight forwarding services, including by the modes of transport:	1 572 620	1 650 590	2 099 390
road	638 910	691 100	1 015 400
inland waterway, marine	70 890	75 730	91 600
railway	847 320	858 410	956 940
air	15 500	25 350	35 450

Note – own elaboration based on [26]

Thus, with the increase of the number of logistics centers the number of their logistics services rendered is also growing. During the period from 2013 to 2015 the number of logistics services rendered rose by 47 180 thous. BYN, or 43 %. The greatest growth was in transport-logistics centers, which had an increase of 46590 thous. BYN, or 69.5 %.

However, as shown in paragraph 1.2, the Republic of Belarus still has fairly low utilization rates of logistics outsourcing in comparison with neighboring countries. This is due to the following reasons:

- most organizations declared as logistics operators provide only warehousing services;

- the lack of complexity in service fees: many logistics operators bill every action with cargo, thereby significantly complicating the process of determining the cost of services and increasing the final cost;
- higher price compared to logistic operators in Poland and Lithuania, which is especially important for enterprises that sell goods abroad;
- lack of warehousing space in the regions of the country;
- major Belarusian enterprises already have their own warehouses;
- skepticism of the heads of domestic enterprises with respect to the possibility of reducing costs through the use of the services of logistic operators.

However, despite these problems, the transition to logistics outsourcing would allow organizations to significantly increase the quality level of logistics services and reduce the cost of certain business processes. In this regard, it is necessary to consider the specific company with analysis of the efficiency of business processes in-house and using the services of a 3PL-provider.

#### 1.4 An annotated review of the legislative framework for regulating logistics outsourcing

Logistics activities of intermediaries in the Republic of Belarus is governed by the following legal acts:

- Law of the Republic of Belarus of June 13, 2006 No. 124-Z “On transportation and forwarding activities”.

Defines the legal and organizational framework for the implementation of the transportation and forwarding activities in the Republic of Belarus in order to create the conditions to ensure the needs of the economy and population in transport and forwarding services.

- Law of the Republic of Belarus of May 5, 1998 No. 140-Z “On fundamentals of transport activity”.

Defines legal, economic and organizational foundations of transport activity and its implementation principles, establishes the basic rights, duties and responsibilities of the actors of the transport activities irrespective of their organizational-legal forms and forms of ownership, contributes to the development of market relations in the sphere of transport activity, creates conditions for the integration of the Republic of Belarus transport subjects in the international market of transport work and services.

- Law of the Republic of Belarus of January 6, 1999 No. 237-Z “On railway transport”.

Defines legal, economic and organizational foundations of railway transport operations of the Republic of Belarus, regulates its relationship with the republican bodies of state administration, local executive and administrative bodies, users of works and services of rail transport and other transport modes

- The air code of the Republic of Belarus of May 16, 2006 No. 117-Z.

Establishes the legal and organizational bases for use of the airspace of the Republic of Belarus and the implementation of activities in the field of aviation in order to meet the needs of citizens and the economy, defense and security of the state [39].

- Decree of the President of the Republic of Belarus from March 27, 2008 No. 178 “On the order of conduct and control of foreign trade operations”.

Defines legal, economic and organizational bases for carrying out and monitoring foreign trade operations, establishes the basic rights, duties and responsibilities of the subjects of foreign trade operations

- The Republican programme for the development of logistics and transit capacity for years 2016-2020.

The goal of this Programme is to improve the conditions of logistics activities, to increase the effectiveness of the usage of the infrastructure necessary for the provision of logistics services, and the transit potential of the Republic of Belarus. The Programme describes the current status of the logistic system of the Republic of Belarus, lists the main risks of implementing the Programme and measures to minimize them, the main sources of funding, as well as the methodology to assess the effectiveness of the implementation of the Programme.

- STB 2046-2010 Transport-logistic center. Requirements for technical equipment and transport-expeditionary services.

Standard applies to transport-logistics centers under construction, as well as on existing freight terminals, based on which the transport-logistics centers are created. The standard establishes requirements for technical equipment for transport-logistics centers; requirements for the provision of freight forwarding services; the grading order of transport-logistics centers. Standard requirements are aimed at raising the level of technical equipment of transport-logistics centers, the efficiency of their functioning and the quality of transport and logistics services in the Republic of Belarus.

- STB 2047-2010 Logistic operations. Terms and definitions.

The standard establishes the terms and definitions of basic concepts in the field of logistics activities. The standard does not apply to the logistics activities carried out to ensure the defense capability, law, order and emergency response, as well as by citizens for personal needs with the use of funds belonging to them on the right of private property.

- STB 2133-2010 Classification of warehousing infrastructure.

The standard establishes basic requirements for classification of warehousing infrastructure of transport-logistics centers of the Republic of Belarus. Requirements are aimed to improve the technical level of the warehousing infrastructure of transport-logistics centers. Standard applies to objects of warehousing infrastructure under construction, as well as existing objects, based on which the transport-logistics centers are created. The standard is intended for use by organizations owning objects of warehousing infrastructure and conducting or intending to conduct their activities on modernizing or constructing transport-logistics centers, to assess their market value when entering into contracts for the sale of warehouse real estate, as well as for the organization of accounting, assessment of the level of development and planning activities to modernize the warehouse infrastructure, to determine the need to construct new facilities of warehousing infrastructure of transport-logistics centers.

- STB 2306-2013 Logistics services. General requirements and certification procedure.

Standard applies to logistics services provided by logistics operators, logistics centers, transport, freight forwarding and trade organizations in the area of procurement, transport, customs, warehousing, production, sales and information logistics through the introduction of logistics business principles. The standard establishes the types of logistics services, categories of logistic services executors, general requirements applicable to the executors of logistic services, and the procedure for carrying out the work on their certification in the National system for conformity attestation of the Republic of Belarus. The standard applies to conformity assessment entities involved in certification of logistic services.

- STB 2345-2013 Logistic activities. Requirements for the professional competence of the executors of logistics services and certification procedure.

The standard establishes requirements for the knowledge, skills and abilities of the staff of the operational, higher and strategic levels, and certification procedure.

### Conclusions on the first chapter

Thus, there are five main approaches to the definition of the notion “third party logistics”. The term “third party logistics” can mean:

1. The concept of transferring logistics functions to outsourcing.
2. The process of providing complex logistic services.
3. The combination of various logistics operations.
4. The relationships between shipper and third party logistics providers.
5. Organizations that perform logistics functions.

One of the methods to evaluate the quality of logistics is the logistics performance index (LPI) calculated by the World Bank. The Republic of Belarus is 120th out of 160 places in the LPI ranking. A considerable gap between Belarus and its closest neighbors is noticeable, especially in the field of customs services, logistics infrastructure and tracking the passage of goods. However, rather high levels of timeliness of provided logistic services were identified, with the Republic of Belarus approaching some of the countries of the European Union. Belarus is characterized by a relatively small proportion of logistics cost in total GDP compared to other European Union countries, which is around 5.5 %. The percentage of organizations providing customs brokerage, information and consulting services, cargo labeling, packaging, assembly and kitting, transportation and cargo placement planning exceeds world averages. However, there are no logistics intermediaries in Belarus providing services in the field of reverse logistics, information technology, fleet management, 4PL and sustainability.

In accordance with the Programme for the development of logistic system of the Republic of Belarus for the period of up to 2015, 20 logistics centers were built in the country during Programme period, with another 9 planned for construction for the year 2021. Most logistics centers are constructed or planned for construction in Minsk and Brest regions. Implementation of the Programme made it possible to intensify the development of third party logistics in the Republic of Belarus and to encourage the expansion of warehouse and transport infrastructure.

However, the Republic of Belarus still has fairly low utilization rates of logistics outsourcing in comparison with neighboring countries. This is due to the following reasons:

- most organizations declared as logistics operators provide only warehousing services;
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- higher price compared to logistic operators in Poland and Lithuania, which is especially important for enterprises that sell goods abroad;
- lack of warehousing space in the regions of the country;
- major Belarusian enterprises already have their own warehouses;
- skepticism of the heads of domestic enterprises with respect to the possibility of reducing costs through the use of the services of logistic operators.

Logistics activities of intermediaries in the Republic of Belarus is governed by the following legal acts: Law of the Republic of Belarus of June 13, 2006 No. 124-Z “On transportation and forwarding activities”, Law of the Republic of Belarus of May 5, 1998 No. 140-Z “On fundamentals of transport activity”, Law of the Republic of Belarus of January 6, 1999 No. 237-Z “On railway transport”, The air code of the Republic of Belarus of May 16, 2006 No. 117-Z, Decree of the President of the Republic of Belarus from March 27, 2008 No. 178 “On the order of conduct and control of foreign trade operations”, The Republican Programme for the development of logistics and transit capacity for years 2016-2020, STB 2046-2010 Transport-logistic center. Requirements for technical equipment and transport-expeditionary services, STB 2047-2010 Logistic operations. Terms and definitions, STB 2133-2010 Classification of warehousing infrastructure, STB 2306-2013 Logistics services. General requirements and certification procedure, STB 2345-2013 Logistic activities. Requirements for the professional competence of the executors of logistics services and certification procedure.



## CHAPTER 2

### THE ANALYSIS OF THE EFFICIENCY OF BUSINESS PROCESSES OF THE FOCUS ORGANIZATION

#### 2.1 General information on organization

Limited Liability Company “Lubava-LIS” was selected as the focus organization for the study of the efficiency of the use of logistic operators.

LLC “Lubava-LIS” is one of the leaders of the Belarusian market of knitwear.

Management policy of the company: “the best must be available to the Belarusian customer”. The initial choice for the LLC “Lubava-LIS” to enter the Belarusian market was shops, not bazaar trade.

The organization uses high-quality cutting, sewing, embroidery, push-button machines and polish knitted fabric. Accessories, decorative elements for the LLC “Lubava-LIS” are also bought from leading European manufacturers.

In the production of clothing 100% cotton and cotton with lycra, viscose and polyester fabrics are used.

Cloths are manufactured according to the latest technologies, such as dual painting canvases, making patterns not to lose brightness after washings, and polyester manufactured by such technologies is breathable and does not electrify.

LLC “Lubava-LIS” has eight shopping facilities located in different cities of the Republic of Belarus: two in Novopolotsk, two in Polotsk, one in Vitebsk, three in Minsk and one in Gomel, and has its own warehouse in Polotsk.

The head office is located in Polotsk.

In addition to the production of clothing, LLC “Lubava-LIS” provides a number of additional services [27]:

- laser cutting of fabric. One of the most common types of laser cutting. With the help of laser equipment fabric can be cut with patterns of any complexity. Laser equipment is capable of cutting fabric both synthetic and natural, without leaving any traces of laser cutting, just as after cutting with scissors or a knife. Any fabric can be turned into a lace or napkins using the patterns of the customer.

- embroidery service. LLC “Lubava-LIS” is engaged in professional embroidery. Organization develops computer programs to work on high-tech sewing equipment with which embroidery logos to uniforms, chevrons, and multicolor patterns of any cut are made. The organization provides services on manufacturing machine embroidery, which includes:

- multi-color embroidery;
- embroidery with sequins (from 3 mm to 7 mm);
- embroidery with cord;
- embroidery with ribbon;
- embroidery of appliques.

Embroidery is done on embroidery machines from Japanese firm “Tajima”. The sewing factories, studios and advertising agencies are among the customers of LLC “Lubava-LIS”.

- sublimation. Sublimation printing is printing, in which paint, tentatively applied on paper or film, goes on a specially prepared surface of a product. Coloring particles can penetrate deep into the structure of the material, therefore the image is very high quality, resembling a photo with smooth semitones. Main feature when working with textile is that the fabric should not be less than 50 % synthetic. A disadvantage of the technology is that there is no ink to print on dark fabrics. Only white and light colored fabrics with a sufficiently large number of synthetic fibers can be used.

- serigraphy (silkscreen screen printing). Serigraphy is a print method based on the bursting of paint through the stencil. During separations, the original image is decomposed into its component colors, each of which has its own stencil produced. Serigraphy is applied when printing on t-shirts, bags, uniforms, tablecloths.

- production of thermo-application made of rhinestones. LLC “Lubava-LIS” uses thermo-applications, on one of the planes of which a layer of special melting glue is applied. Organization uses an automatic method of applying rhinestones with special equipment that puts pictures made of rhinestones by specified program. Later a picture is attached to the surface of the product with the help of thermopress.

- manufacturing souvenirs. LLC “Lubava-LIS” produces various kinds of promotional products to create a positive image of the company, as well as for conducting advertising campaigns and participating in conferences – souvenir pouches, fabric bags, backpacks of any size and shape, scarves, pillows and other textile products with the logo or any image on request of the customer. The customer can provide ready-made layout or designers of LLC “Lubava-LIS” can help to make the layout, put customer’s logo and design.

## 2.2 The situation analysis of LLC “Lubava-LIS”

The objective of the situational analysis of LLC “Lubava-LIS” is the definition of the situation facing the organization, i.e. identification of internal and external factors influencing its activity, as well as the competitive advantage and some other specific characteristics of its activities.

The main directions of the situational analysis of LLC “Lubava-LIS” are:

- SWOT analysis;
- competition analysis.

To conduct the SWOT-analysis, the strengths, weaknesses, opportunities and threats must be identified for the organization.

Strengths and weaknesses of the organization are presented in table 2.1.

Table 2.1. - Strengths and weaknesses of LLC “Lubava-LIS”

Strengths (S)	Weaknesses (W)
1	2
1. Extensive experience in the market of sewing services	1. Insufficient attention to advertising policy
2. A high level of product quality	2. Low level of information support of decision-making
3. Competitive price	3. A narrow range of provided services

The end of table 2.1.

1	2
4. Extensive customer base	4. A drop in demand for products and services
5. Close relations with partners	

Note – own elaboration based on the researched documentation of the organization

Table 2.2 presents opportunities and threats for LLC “Lubava-LIS”.

Table 2.2. – Opportunities and threats to LLC “Lubava-LIS”

Opportunities (O)	Threats (T)
1	2
1. An emergence of new customers	1. Jumps of the courses of currencies
2. The development of information technology	2. The growing dependence on partners
3. An emergence of new partners	4. Changes in the levels of prices for products
4. The improvement of management of the organization	5. The growth of taxes on tailoring services
	6. Increased competition

Note – own elaboration based on the researched documentation of the organization

Based on identified opportunities and threats, strengths and weaknesses of the LLC “Lubava-LIS” SWOT analysis has been conducted, the results of which are presented in table 2.3



Table 2.3. – SWOT analysis of LLC “Lubava-LIS”

	<p>Opportunities (O)</p> <ul style="list-style-type: none"> <li>- an emergence of new customers;</li> <li>- the development of information technologies;</li> <li>-an emergence of new partners;</li> <li>- the improvement of management of the organization.</li> </ul>	<p>Threat (T)</p> <ul style="list-style-type: none"> <li>- jumps of the courses of currencies;</li> <li>- the growing dependence on partners;</li> <li>- changes in the levels of prices for products;</li> <li>-the growth of taxes on tailoring services;</li> <li>- increased competition.</li> </ul>
<p>Strengths (S)</p> <ul style="list-style-type: none"> <li>- extensive experience in the market of sewing services;</li> <li>- high level of product quality;</li> <li>- competitive price;</li> <li>- extensive customer base;</li> <li>- close relations with partners.</li> </ul>	<p>Field SxO – strength and opportunities – key factors for future success</p> <p>Extensive experience in the market of sewing services, competitive price and high quality of manufactured products would enable the organization to attract more new partners and customers, and maintaining close relations with them will lay the foundation for future cooperation.</p>	<p>Field TxS – strength and threats – neutralization of threats and support of strengths</p> <p>Maintaining close relationships with customers and partners, as well as providing quality services at competitive prices contributes to the preservation of organization's place in the market even in the face of increasing competition and instability of the economic situation in the country.</p>
<p>Weaknesses (W)</p> <ul style="list-style-type: none"> <li>- insufficient attention to the advertising policy of the organization;</li> <li>- low level of information support of decision-making;</li> <li>- the drop in demand for products and services;</li> <li>- a narrow range of provided services.</li> </ul>	<p>Field OxW – weaknesses and opportunities – neutralization of weaknesses and the use of opportunities</p> <p>The development of information technology makes it possible to identify and address deficiencies in the system of information support of decision-making, as well as to pay more attention to the advertising policies of the organization (use of its own website, advertising in social networks and dedicated websites). In addition, the emergence of new clients will help to cope with the falling demand for products and services.</p>	<p>Field WxT – weakness and threats – future crises</p> <p>Insufficient attention to the advertising policy of the organization, a narrow range of provided services and a drop in demand for them can lead to a loss of customers due to the increased competition, and shortcomings in the system of information support of decision-making may affect the speed of decision-making in crisis situations.</p>

Note – own elaboration based on the researched documentation of the organization

Table 2.4 presents the strategic management zones of LLC “Lubava-LIS”.

Table 2.4. – Strategic management zones (SMZ) of LLC “Lubava-LIS”

The type of strategic management zone (SMZ)	Name of the services
SMZ <sub>1</sub> - sewing services and selling of clothing	<ul style="list-style-type: none"> <li>- production and sale of clothes for children, adolescents, women, men;</li> <li>- production and sale of knitted garments for children, adolescents, women, men;</li> <li>- production and sale of textile clothing for children, adolescents, women, men;</li> <li>- manufacturing of custom-made clothing.</li> </ul>
SMZ <sub>2</sub> - embroidery services, production of appliqué and images on fabric	<ul style="list-style-type: none"> <li>- multi-color embroidery;</li> <li>- embroidery with sequins (from 3 mm to 7 mm);</li> <li>- embroidery with cord;</li> <li>- embroidery with ribbon;</li> <li>- embroidery of appliques;</li> <li>- sublimation printing;</li> <li>- screen printing;</li> <li>- manufacturing thermo-application made of rhinestones.</li> </ul>
SMZ <sub>3</sub> - production of souvenirs	<ul style="list-style-type: none"> <li>- manufacturing textile souvenirs (gift pouhes, fabric bags, backpacks, scarves, cushions, etc.) with customer logo.</li> </ul>

Note – own elaboration based on the researched documentation of the organization

LLC “Lubava-LIS” has a lot of competitors on the market of sewing services, some of which are such well-known Belarusian organizations as JSC “Kupalinka”, JSC “Svitanak”, JSC “Polesie”, CJSC “Milavitsa”.

Table 2.5 presents the main areas of activity of LLC “Lubava-LIS” and its nearest competitors.

Table 2.5. – Areas of activity of LLC “Lubava-LIS” and its nearest competitors

Organization	Area of activity
1	2
LLC “Lubava-LIS”	<ul style="list-style-type: none"> <li>- production and sale of linen, knitted and textile clothing for children, adolescents, women, men;</li> <li>- manufacturing of custom-made clothing;</li> <li>- application of embroidery, appliques and images on fabric;</li> <li>- manufacturing souvenir textile products.</li> </ul>
JSC “Kupalinka”	<ul style="list-style-type: none"> <li>- production and sale of lingerie and knitwear for children, adolescents, women, men;</li> <li>- cutting and sewing of knitted fabrics;</li> <li>- realization of knitted trimmings;</li> <li>- piece printing and embroidery.</li> </ul>
JSC “Svitanak”	<ul style="list-style-type: none"> <li>- production and sale of underwear and knitwear for children, adolescents, women, men;</li> <li>- cutting and sewing of knitted fabrics;</li> <li>- manufacturing fabrics of different types of weaves;</li> <li>- application of embroidery, appliqué and images on fabric;</li> <li>- installation of buttons, duplication of parts of a cut</li> </ul>

The end of table 2.5.

1	2
JSC “Polesie”	- production of yarn; - production and sale of knitwear for children, adolescents, women, men; - manufacturing fabrics of different types of weaves; - cutting and sewing of knitted fabrics;
CJSC “Milavitsa”	- production and sale of corselets for women; - production and sale of underwear for men and women.

Note – own elaboration based on the researched documentation of the organization

As shown in tables 2.4 and 2.5, LLC “Lubava-LIS” mainly provides services on manufacturing linen, knitted and textile clothing for all ages, as well as embroidery services, production of appliques and patterns on fabrics and manufacturing souvenir products. For a more detailed study of the key positions of LLC “Lubava-LIS” and its competitors an SNW-analysis was made, which is presented in table 2.6.

Table 2.6. – SNW-analysis of strategic positions of LLC “Lubava-LIS” and its closest competitors

Organization	The name of the strategic position	Qualitative assessment of positions		
		S - strong	(N) - neutral	W - weak
1	2	3	4	5
LLC “Lubava-LIS”	Price	x		
	Quality		x	
	The assortment of goods	x		
	Market coverage			x
	Additional services			x
JSC “Kupalinka”	Price		x	
	Quality		x	
	The assortment of goods		x	
	Market coverage	x		
	Additional services		x	
JSC “Svitanak”	Price			x
	Quality		x	
	The assortment of goods		x	
	Market coverage		x	
	Additional services	x		
JSC “Polesie”	Price	x		
	Quality		x	
	The assortment of goods			x
	Market coverage	x		
	Additional services			x
CJSC “Milavitsa”	Price			x
	Quality	x		
	The assortment of goods		x	
	Market coverage	x		
	Additional services			x

Note – own elaboration

According to SNW-analysis, LLC “Lubava-LIS” has quite high assortment of goods and a relatively low price but is inferior to competitors in terms of the reach to the market and the number of additional services.

### 2.3 The analysis of financial-economic activity of LLC “Lubava-LIS”

The financial status of the organization is a system of indicators, describing:

- the financial solvency of the organization;
- the financial independence of the organization on the basis of the sources of funds;
- security of organization with its own circulating assets;
- business activity of the organization.

#### 2.3.1 The calculation of solvency ratios of LLC “Lubava-LIS”

For the assessment of the solvency of the business entities, the following indicators are used:

- current liquidity coefficient (K1);
- coefficient of security of circulating assets (K2);
- coefficient of security of financial obligations with assets (K3).

Current liquidity coefficient is defined as the ratio of the value of short-term assets to short-term liabilities of the entity.

Current liquidity coefficient (K1) is calculated as the ratio of the total of the section II of the balance sheet to the total of the section V of the balance sheet according to formula

$$\text{---}, \quad (2.1)$$

wherein STA - short-term assets (line 290 of the balance sheet);

STL - short-term liabilities (line 690 of the balance sheet).

Coefficient of security of circulating assets is defined as the ratio of the sum of shareholders equity and long-term liabilities after deducting the cost of long-term assets to the cost of short-term assets.

Coefficient of security of circulating assets (K2) is calculated as the ratio of the sum of the total of the section III of the balance sheet and the total of the section IV of the balance sheet, minus the total of the section I of the balance sheet divided by the total of the section II of the balance sheet according to the following formula

$$\text{---}, \quad (2.2)$$

wherein EC - equity capital (line 490 of the balance sheet);

LTL - long-term liabilities (line 590 of the balance sheet);

LTA - long term assets (line 190 of the balance sheet).

Coefficient of security of financial obligations with assets is defined as the ratio of long-term and short-term obligations of the entity to the total value of the assets.

Coefficient of security of financial obligations with assets (K3) is calculated as the ratio of the sum of the totals of sections IV and V of the balance sheet divided by the total of the balance sheet according to the following formula

$$\frac{\text{---}}{\text{---}}, \quad (2.3)$$

wherein TBS - the total of the balance sheet (line 300 of the balance sheet).

The balance sheet of LLC “Lubava-LIS” for year 2015 is presented in the annex B, and for year 2016 – in the annex C.

The results of calculation of solvency and liquidity ratios of LLC “Lubava-LIS” are summarised in table 2.7.

Table 2.7. – Analysis of solvency of LLC “Lubava-LIS” for the 2014-2016 timeframe

Name of indicator	By 01.01. 2015	By 01.01. 2016	By 01.01. 2017	Normative	Change, +/-				
					For the period		compared with the normative value		
					2015	2016	by 01.01. 2015	by 01.01. 2016	by 01.01. 2017
Current liquidity ratio (K1)	2.07	2.87	3.22	K1 = > 1.15	0.79	0.35	0.92	1.72	2.07
Coefficient of security of circulating assets (K2)	0.52	0.65	0.69	K2 > = 0.2	0.13	0.04	0.32	0.45	0.49
Coefficient of security of financial obligations with assets (K3)	0.39	0.31	0.29	K3 < = 0.85	-0.08	-0.02	-0.46	-0.54	-0.56

Note – own elaboration based on the study of the balance sheet of LLC “Lubava-LIS” for the 2014-2016 timeframe

Based on the results of the analysis of solvency of LLC “Lubava-LIS” it was concluded that by the beginning of 2017 the organization has greatly improved its ability to meet short-term obligations (compared to year 2015 the current liquidity ratio has risen by 1.15 BYN/BYN, compared to year 2016 – by 0.35 BYN/BYN). The increase of organization’s own current assets can also be traced (an increase in the coefficient of security of circulating assets by 0.17 BYN/BYN compared to year 2015, by 0.04 BYN/BYN. compared to year 2016). However, there has been a reduction of assets needed to cover the long-term financial liabilities (drop in the coefficient of security of financial obligations with assets by BYN/BYN compared to year 2015, by 0.02 BYN/BYN compared to year 2016).

After the analysis of indicators of liquidity, there is no reason to recognize the organization as insolvent. Due to the fact that the level of the indicators of the LLC “Lubava-LIS” meets standards and ensures its solvency, there is no need to calculate additional liquidity indicators in the context of the past four quarters.

### 2.3.2. The analysis of the dynamics and structure of balance sheet assets and liabilities

The sustainability of the financial situation of the organization depends largely on the feasibility and correctness of financial investments of resources in assets. The study of the structure of liabilities of balance allows to understand one of the possible reasons for the financial fragility of the organization, which could lead to its insolvency. To this end, analysis of the presence, composition, structure and dynamics of the sources of the organization and of their formation should be made.

The estimation of dynamics and structure of assets and liabilities of LLC “Lubava-LIS” was carried out with the help of analytical table 2.8.

Table 2.8. – Analysis of the dynamics and structure of the assets (liabilities) of LLC “Lubava-LIS” for the year 2016

Sections and articles of the assets (liabilities) of the balance	At the beginning of the period		At the end of the period			Changes during the reporting period	
	absolute value, mln	specific gravity, %	absolute value, mln	specific gravity, %	absolute value (col. 4 - col. 2), mln	increase (col. 6 / col. 2 * 100), %	according to the specific weight (col. 5 - col. 3), %
1	2	3	4	5	6	7	8
1. Non-current assets							
Fixed assets	1 656	95.89	829	57.73	-827	-49.94	-38.16
Intangible assets	0	0.00	3	0.21	3	100	0.21
Profitable investments in tangible assets	0	0.00	604	42.06	604	100	42.06
including: other profitable investments in tangible assets	0	0.00	604	100	604	100	42.06
Investments in non-current assets	71	4.11	0	0.00	-71	-100	-4.11
Subtotal of section 1	1 727	32.24	1 436	26.36	-291	-16.85	-5.88
2. Current assets							
Stocks	1607	44.27	1041	25.95	-566	-35.22	-18.32
including: materials	606	37.71	577	55.43	-29	-4.79	17.72
work-in-progress	6	0.37	0	0.00	-6	-100.00	-0.37
finished products and goods	995	61.92	464	44.57	-531	-53.37	-17.34

The continuation of table 2.8.

1	2	3	4	5	6	7	8
Expenses of future periods	4	0.11	4	0.10	0	0.00	-0.01
Value-added tax on purchased goods, works, services	0	0.00	4	0.10	4	100	0.10
Short-term receivables	2007	55.29	2940	73.30	933	46.49	18.01
Cash and cash equivalents	12	0.33	22	0.55	10	83.33	0.22
Subtotal of section 2	3630	67.76	4011	73.64	381	10.50	5.88
Balance	5357	100	5447	100	90	1.68	0.00
3. Capital and reserves							
Authorized capital	5	0.14	5	0.13	0	0.00	-0.01
Capital surplus	762	20.63	762	19.64	0	0.00	-0.99
Retained earnings (uncovered loss)	2 926	79.23	3 112	80.23	186	6.36	1.00
Subtotal of section 3	3 693	68.94	3 879	71.21	186	5.04	2.28
4. Long-term liabilities							
Long-term loans and borrowings	398	100	322	100	-76	-19.10	0.00
Subtotal of section 4	398	7.43	322	5.91	-76	-19.10	-1.52
5. Short-term obligations							
Short-term loans	36	2.84	597	47.91	561	1558.33	45.07
Short-term portion of long-term liabilities	153	12.09	76	6.10	-77	-50.33	-5.99
Accounts payable	1 077	85.07	573	45.99	-504	-46.80	-39.08
including: to buyers and customers	695	64.53	389	67.89	-306	-44.03	3.36
on advances received	11	1.02	2	0.35	-9	-81.82	-0.67
on taxes and duties	168	15.60	48	8.38	-120	-71.43	-7.22
on social security and welfare	27	2.51	17	2.97	-10	-37.04	0.46
on wages	78	7.24	37	6.46	-41	-52.56	-0.79
to the owner of the property (the founders, participants)	79	7.34	68	11.87	-11	-13.92	4.53
to other creditors	19	1.76	12	2.09	-7	-36.84	0.33
Subtotal of section 5	1 266	23.63	1 246	22.87	-20	-1.58	-0.76



The end of table 2.8.

1	2	3	4	5	6	7	8
Balance	5 357	100.00	5 447	100.00	90	1.68	0.00

Note – own elaboration based on the study of the balance sheet of LLC “Lubava-LIS” for the 2014-2016 timeframe

During the analysis of the dynamics and structure of assets of LLC “Lubava-LIS” for year 2016, it was revealed that most of them are current assets, in particular, short-term receivables. At the end of the period, an increase of short-term receivables (933 thous. BYN) and cash (10 thous. BYN) took place, the proportion of short-term assets in the assets of the organization has also increased (by 10.50 %) due to the growth of short-term receivables and a decrease in fixed assets. At the end of year 2016 there had been a significant reduction of stocks of finished products (531thous. BYN), as well as fixed assets (827 thous. BYN).

Most of liabilities of LLC “Lubava-LIS” are the capital and reserves of the organization, in particular, retained earnings, the amount of which at the end of the period increased by 186 thous. BYN. Long-term liabilities of the organization are represented by long-term loans, which were reduced by 76 thous. BYN by the end of the period. Short-term liabilities of the organization are presented mostly by short-term loans and payables, most part of which is owed to suppliers and contractors, as well as to the owner of the property. At the end of year 2016 payables have decreased by almost 2 times, or 504 thous. BYN, but the amount of short-term loans has significantly increased – by 16.6 times, or 561 thous. BYN.

### 2.3.3 Analysis of the liquidity of assets

Analysis of the liquidity is used to compare the balance of funds on assets, grouped according to their degree of liquidity and arranged in descending order of liquidity, with obligations on liability, grouped by their maturity dates in ascending order.

Grouping of assets depending on the degree of liquidity, as well as the values of these groups for LLC “Lubava-LIS” is presented in table 2.9.

Table 2.9. – Grouping of assets of LLC “Lubava-LIS” for the 2014-2016, mln BYN

Group of assets	The composition of the group	The value of the asset group		
		by 01.01.2015	by 01.01.2016	by 01.01.2017
1	2	3	4	5
A-1 The most liquid assets	all articles of funds of the organization and financial investments	44	12	22



The end of table 2.9.

1	2	3	4	5
A-2 Quickly realizable assets	accounts receivable, payments on which are expected within 12 months after the reporting date, shipped goods, performed works, rendered services	1044	2007	2940
A-3 Slowly sold assets	stock and costs, taxes on acquired values, finished products and goods, other current assets	1851	1607	1045
A-4 Assets sold with difficulty	articles of section I of the balance "Long-term assets"	1689	1727	1436

Note – own elaboration based on the study of the balance sheet of LLC "Lubava-LIS" for the 2014-2016 timeframe

Grouping of liabilities of the balance according to the degree of urgency of the payment for LLC "Lubava-LIS" are presented in the form of table 2.10.

Table 2.10. – Grouping of liabilities of LLC "Lubava-LIS" for the 2014-2016, mln BYN

Group assets	The composition of the Group	The value of the asset group		
		by 01.01.2015	by 01.01.2016	by 01.01.2017
1	2	3	4	5
P-1 The most urgent obligations	accounts payable and bank loans that were not repaid in time	1141	1077	573
P-2 Short-term liabilities	short-term loans	100	36	597
P-3 Long-term liabilities	long-term loans and borrowings	368	398	322
P-4 Permanent liabilities	section III of the balance "Capital and reserves"	2844	3693	3879

Note – own elaboration based on the study of the balance sheet of LLC "Lubava-LIS" for the 2014-2016 timeframe

To determine the liquidity of the balance the results of the listed groups on assets and liabilities should be compared. The balance is considered absolutely liquid if the following conditions are met:

$$A-1 > P-1;$$

$$A-3 > P-3;$$

$$A-2 > P-2;$$

$$A-4 < P-4.$$

The results of the analysis are presented in the table 2.11.

Table 2.11. – The ratio of groups of assets and liabilities of LLC “Lubava-LIS” for the 2014-2016, mln BYN

By 01.01.2015	By 01.01.2016	By 01.01.2017
1	2	3
44 < 1141	12 < 1077	22 < 573
1044 > 100	2007 > 36	2940 > 597
1851 > 368	1607 > 398	1045 > 322
1689 < 2844	1727 < 3693	1436 < 3879

Note – own elaboration based on the study of the balance sheet of LLC “Lubava-LIS” for the 2014-2016 timeframe

LLC “Lubava-LIS” is not in a position to pay its most urgent obligations in cash or financial investments, as evidenced by the ratio of assets and liabilities in the first group, namely: throughout the period the value of the most liquid assets is a lot less than of the most urgent obligations (by 1097 thous. BYN in 2014, 1065 thous. BYN in 2015 and 551 thous. BYN in 2016), i.e. the balance of the studied organizations is not absolutely is not absolutely liquid. However, the organization has no short-term loans, allowing it to use its quickly realizable assets. There is a stable trend for the remaining groups of assets and liabilities, indicating the ability of LLC “Lubava-LIS” to meet its obligations with available assets.

Further liquidity ratios were calculated. The results of the analysis are presented in the form of table 2.12.

Table 2.12. – Analysis of liquidity of LLC “Lubava-LIS” for the 2014-2016

Name of indicator	By 01.01.2015	By 01.01.2016	By 01.01.2017	Normative	Change, +/-				
					for the period		compared to the normative value		
					2015	2016	by 01.01.2015	by 01.01.2016	by 01.01.2017
1	2	3	4	5	6	7	8	9	10
Cash, mln	44	12	22	-	-32	10	-	-	-
Financial investments, mln	0	0	0	-	0	0	-	-	-
Short-term accounts receivable, mln	1044	2007	2940	-	963	933	-	-	-
Short-term assets, mln	2942	3630	4011	-	688	381	-	-	-
Short-term liabilities, mln	1418	1266	1246	-	-152	-20	-	-	-

The end of table 2.12.

1	2	3	4	5	6	7	8	9	10
Current liquidity ratio	2.07	2.87	3.22	1.4	0.79	0.35	0.67	1.47	1.82
The intermediate liquidity ratio	0.77	1.59	2.38	1.15	0.83	0.78	-0.38	0.44	1.23
Absolute liquidity ratio	0.74	1.59	2.36	-	0.85	0.77	-	-	-

Note – own elaboration based on the study of the balance sheet of LLC “Lubava-LIS” for the 2014-2016 timeframe

Current liquidity ratio shows what part of ongoing obligations on loans and accounts can be redeemed by mobilizing all current assets. Intermediate liquidity ratio shows the portion of short-term debt the organization can pay off in the shortest possible time at the expense of cash and receivables. These coefficients for the LLC “Lubava-LIS” have fairly high values that are exceeding standards (1.82 and 1.23 BYN/ BYN. respectively in the 2016), despite the mismatch of the value of the intermediate liquidity ratio to the normative in year 2014. Throughout the period under review, there has been an increase in liquidity ratios, mainly due to the growth of the amount of short-term receivables and short-term assets. This means that the organization is increasing its ability to repay current liabilities on loans and calculations and short-term debt. Absolute liquidity ratio shows the portion of short-term obligations the organization can pay off in the near future at the expense of cash and short-term valuable papers. The value of this coefficient is also high enough (2.36 BYN/ BYN in the 2016) to enable the LLC “Lubava-LIS” to repay its short-term obligations.

#### 2.3.4 An analysis of the financial results of the activities, structure and use of profits

When receiving profits an analysis of the formation, distribution and use of profit as well as analysis of the profitability of the activity should be made.

Analysis of the formation, distribution and use of profits is presented in the annex D in table D.1 (up to year 2015) and table D.2 (starting with year 2015).

Thus, net profit of LLC “Lubava-LIS” increased by 79 thous. BYN in 2015. The major part of profit is profit from current activities, while investment and financial activities in year 2015 brought significant loss – 408 thous. BYN, rising by 7 times compared to year 2014.

In 2016 all articles on profit decreased, while the amount of income tax has increased. However, at the same time, losses from investing and financing activities have also decreased – by 407 thous. BYN, or 99.5 %.

To assess the financial performance of LLC “Lubava-LIS” indicators of profitability are calculated.

The results of the analysis are presented in the form of table 2.13.

Table 2.13. – Analysis of profitability of LLC “Lubava-LIS” for the 2014-2016

Name of indicator	By 01.01.2014	By 01.01.2015	By 01.01.2016	Change for the period, +/-	
				2015	2016
1	2	3	4	5	6
Revenue from realization of products (goods, works, services), mln	5188	6707	5295	1519	-1412
Production and marketing costs of sold products, mln	4478	5484	4641	1006	-843
Profit from realization of products (goods, works, services), mln	710	1223	654	513	-569
Net income, mln	523	601	199	78	-402
The value of the assets, mln	4631	5357	5447	726	90
Long-term assets, mln	1689	1727	1436	38	-291
Profitability, BYN/ BYN	0.16	0.22	0.14	0.06	-0.08
Return on sales, BYN/ BYN	0.14	0.18	0.12	0.05	-0.06
Return on equity, BYN/ BYN	0.11	0.11	0.04	0.00	-0.08
Profitability of long-term assets, BYN/ BYN	0.31	0.35	0.14	0.04	-0.21

Note – own elaboration based on the study of the balance sheet of LLC “Lubava-LIS” for the 2014-2016 timeframe

Values of indicators of profitability of LLC “Lubava-LIS” increased considerably in 2015, however, by 2016 these indicators have undergone a sharp decline with the significant decrease of the profits from realization of products (goods, works, services) and net profit. In 2016 one BYN of costs of goods and services accounted for 0.14 BYN of profits, one BYN of sold goods and services – for 0.12 BYN of profits. One unit value of the assets of LLC “Lubava-LIS” accounted for 0.04 BYN of net income. Decrease of this indicator in 2016 shows a fall in demand for the services of the organization and an overaccumulation of assets. One BYN of long-term assets of LLC “Lubava-LIS” accounted for 0.14 BYN of net income. The value of this indicator has also significantly decreased, which is associated with the accumulation of long-term assets of the organization.

### 2.3.5 The analysis of business activity

Business activity in the financial aspect is evident in the funds turnover rate. The analysis of business activity is the research of the dynamics of the turnover ratios.

Total capital turnover ratio is calculated as the ratio of revenues from the sale of products, goods, works and services (line 010 of the profit and loss statement) to the average value of the assets of the business entity (line 300 of the balance sheet, the sum of graphs 3 and 4 divided by 2).

Turnover ratio of current capital (short-term assets) is calculated as the ratio of revenues from the sales of products, goods, works and services (line 010 of the profit

and loss statement) to the price of short-term assets of a business entity (line 290 of the balance sheet, sum of graphs 3 and 4 divided by 2).

The results of the analysis are presented in the form of table 2.14.

Table 2.14. – The analysis of business activity of LLC “Lubava-LIS” for the 2015-2016

Name of indicator	2015	2016	Change over the year, +/-
1	2	3	4
Revenue from sales of products, goods, works and services, mln BYN	6707	5295	-1412
The average value of short-term assets, mln BYN	3286	3820.5	534.5
The average value of assets, mln BYN	4994	5402	408
Total capital turnover ratio	1.34	0.98	-0.36
Turnover ratio of current assets	2.04	1.39	-0.66

Note – own elaboration based on the study of the balance sheet of LLC “Lubava-LIS” for the 2014-2016 timeframe

Thus, the values of the turnover ratios noticeably decreased in 2016 (total capital turnover ratio by 0.36 BYN/BYN, turnover ratio of current assets – by 0.66 BYN/BYN). This is due to the significant growth of the assets of LLC “Lubava-LIS”, including current assets, amid the declining amounts of revenue of the organization.

### 2.3.6 Assessment of the structure of sources of financing on the basis of the calculation of financial sustainability

Financial sustainability is the ability of the entity to operate and grow, while maintaining the balance of its assets and liabilities in the changing internal and external environment, guaranteeing its continued solvency and investment attractiveness within the boundaries of the acceptable level of risk. Financial sustainability indicators organizations characterize the structure of the capital used by the entity from a position of financial stability of development.

According to the “Instructions on the procedure for the calculation of solvency ratios and analysis of financial condition and solvency of business entities”, in order to assess the structure of the sources of financing capitalization ratio and coefficient of financial independence (autonomy) are calculated.

Capitalization ratio is defined as the ratio of liabilities to equity of a business entity. It's calculated as the ratio of the sum of the totals of sections IV and V of the balance sheet to the total of the section III of the balance sheet. The value of the capitalization ratio should be no more than 1.0.

Coefficient of financial independence (autonomy) is defined as the ratio of equity to the total balance sheet. It's calculated as the ratio of the total of the section III of the balance sheet to the total of the balance sheet. The value of the coefficient of financial independence should not be less than 0.4-0.6.

The results of the analysis of indicators of financial stability are presented in the annex E.

Thus, the values of the indicators of financial sustainability over the entire period of research correspond to the regulatory values.

Autonomy ratio reflects the degree of independence of the organization from borrowed funds. The higher the value of this coefficient, the more financially stable and independent from external creditors is the organization. LLC “Lubava-LIS” in general has a fairly high level of autonomy ratio (for the entire period of research it increased by 0.1 BYN/BYN), indicating the financial independence of the organization, the reduced risk of financial difficulties in future periods, raising the guarantee of repayment of its obligations. The value of the capitalization rate of LLC “Lubava-LIS” is also consistent with the normative value and amounted to 0.6 BYN/BYN in 2016.

#### 2.4 Overview of the distribution system of LLC “Lubava-LIS”

The business process, which will be transferred to outsourcing, is business process “distribution”. To analyze the effectiveness of the transfer of the distribution system to outsourcing it is necessary to conduct a review of the existing distribution system.

In the process of conducting a review objects of the distribution system of an organization are identified.

The following objects of the distribution system of the organization must be analyzed:

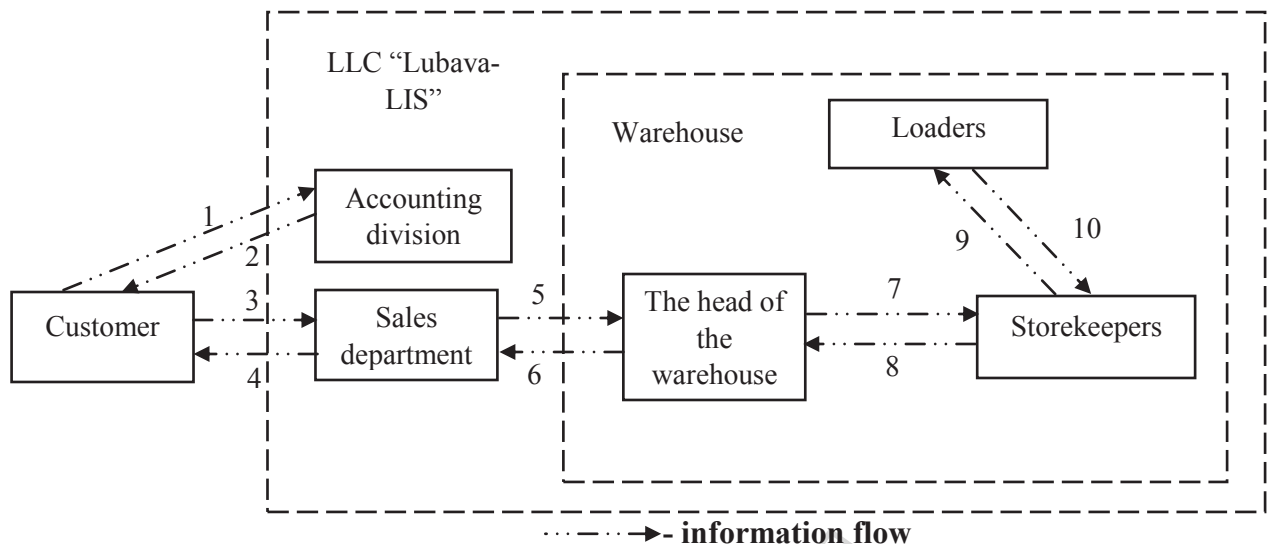
- types of flows with their specification by the functional areas of the logistics (material, financial, information, service, etc.), and their composition;
- channels of the distribution system of the organization (from supplier to end-user);
- interaction of the divisions of the logistics system of the organization for all types of flows;
- the specific divisions of the distribution system of the organization and their characteristics.

The following objects of an organization’s distribution system are analysed:

- types of flows broken down by functional areas of logistics organization (material, financial, information, service, etc.), and specific to their composition;
- distribution channels of the organization: interaction scheme between organization-manufacturer, consumers, brokers, carriers, insurers and others involved in goods circulation, on the different types of flows (material and related).

The information flow scheme of LLC “Lubava-LIS” is presented in figure 2.1.



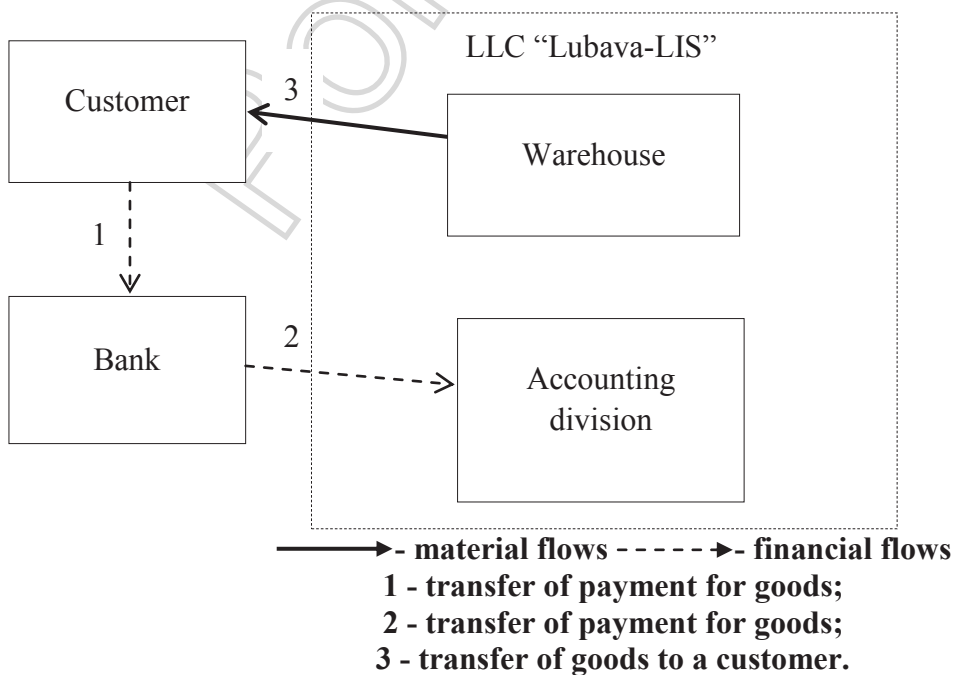


- 1 - supplying information on the payment;
- 2 - information on receiving the payment;
- 3 - applying for the purchase of products;
- 4 - signing the contract on a product purchase, information about the execution of order;
- 5 - information on orders;
- 6 - information on the results of the execution of orders;
- 7 - information on orders;
- 8 - information about the results of execution of orders;
- 9 - transfer of the order for execution;
- 10 - information on the results of the execution of order.

**Figure 2.1. – The information flow scheme of LLC “Lubava-LIS”**

Note – own elaboration based on the studied documentation of the organization

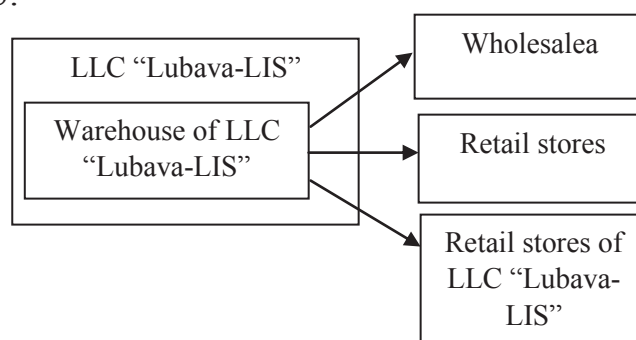
Scheme of material and financial flows of the LLC “Lubava-LIS” is presented in figure 2.2.



**Figure 2.2. – The material and financial flows scheme of LLC “Lubava-LIS”**

Note – own elaboration based on the studied documentation of the organization

Logistics channels of the organization during the product distribution phase are depicted in figure 2.3.



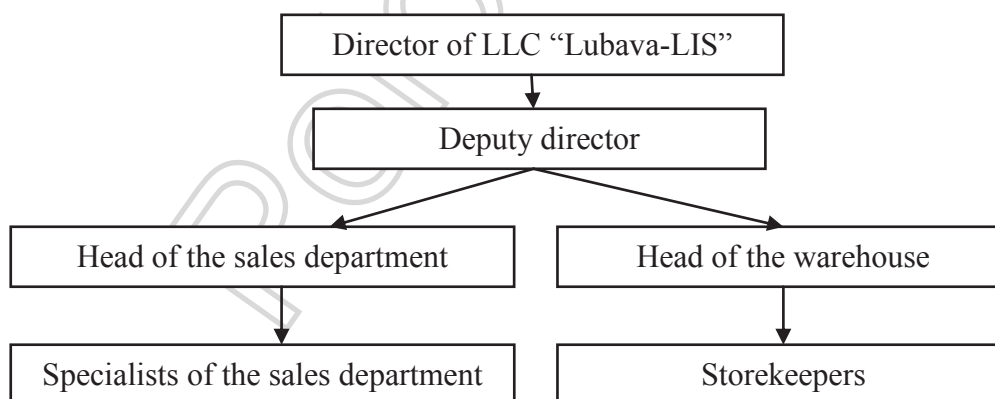
**Figure 2.3. – Logistics channels of LLC “Lubava-LIS” at the stage of product distribution**

Note – own elaboration based on the studied documentation of the organization

Thus, LLC “Lubava-LIS” is not engaged in the delivery of the products produced, and only provides access to products at the warehouse for customers after receiving the payment and all the necessary information on order. However, the organization owns a network of its own retail stores, where it sales its manufactured products.

## 2.5 Analysis of the organizational structure of management and staffing of the distribution system of LLC “Lubava-LIS”

The organizational structure of management of the distribution system of LLC “Lubava-LIS” is presented in figure 2.4.



**Figure 2.4. - The organizational structure of management of the distribution system of LLC “Lubava-LIS”**

Note – own elaboration based on the studied documentation of the organization

The staff composition of the distribution system of LLC “Lubava-LIS” is presented in table 2.15.

Table 2.15. – The staff composition of the distribution system of LLC “Lubava-LIS”

Category	Number of people	Specific gravity,%
1	2	3
Head of the sales department	1	9.09



Head of the warehouse	1	9.09
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PolotskSU

The end of table 2.15

1	2	3
Specialists of the sales department	5	45.46
Storekeepers	4	36.36
Total	11	100

Note – own elaboration based on the studied documentation of the organization

Thus, in the distribution system of LLC “Lubava-LIS” there are 11 people employed, 6 of them (or 54.55 %) work in the sales department, and the remaining 5 people (or 45.45 %) work in the warehouse.

## 2.6 Analysis of the information and documentation provision of the distribution system of the organization

Document management scheme of the distribution system of LLC “Lubava-LIS” is presented in table 2.16.

Table 2.16. – Document management scheme of the distribution system of LLC “Lubava-LIS”

Types of documents, forms or data arriving at the division	Source of arrival	Types of documents, forms or data leaving the division	The addressee	Frequency
The text of the contract	Customer	Contract	Sales department	upon the arrival of orders
Payment order	Bank of the customer	Payment order	Accounting division	upon the arrival of orders
Accounting data on customers	Accounting division	Classifiers of customers	All units on request	as changes happen
Stockkeeping card	Warehouse	Stockkeeping card	All units on request	1 time per month
Documents on settlements with customers	Accounting division	The book of balances	Accounting division	1 time per month
Database on customers (codes, addresses, details)	Sales department	An index card of customers	All units on request	constantly
Information about the balance of goods in stock	Warehouse	Statistical report	Directorship	on demand of the directorship of organization (1 time per month)
Information on orders	Sales department	Shipment schedule	Warehouse	upon receipt of orders

Note – own elaboration based on the studied documentation of the organization

Thus, main documents of the distribution system of LLC “Lubava-LIS” are:

- a contract;
- a payment order;
- a classifier of customers;

- the book of balances;
- a card file on customers;
- a statistical report;
- shipment schedules.

## 2.7 Analysis of logistic functions and business processes of LLC “Lubava-LIS”

Using the services of 3PL-providers for the distribution of goods requires rebuilding of the existing business processes. However, for this purpose it is necessary to determine the composition of functions of the business process “Distribution” of the focus organization, which is presented in annex F.

As shown in annex F, the business process “Distribution” of LLC “Lubava-LIS” consists of eight main phases: receipt of application, request for information about the availability of goods in stock, signing a contract, the preparation of the goods to be handed over, transfer of the goods to the customer, monitoring, claim processing and completion of order. Monitoring the implementation of the order takes place during the entire process of transfer of goods. Delivery times are more dependent on the customer, as LLC “Lubava-LIS” does not deliver goods to a customer but only provides them in its warehouse.

## 2.8 Analysis of technical and software provision of the distribution system of LLC “Lubava-LIS”

Data on technical equipment of the distribution system of LLC “Lubava-LIS” is presented in table 2.17.

Table 2.17. – Technical equipment of the distribution system of LLC “Lubava-LIS”

Type of office equipment	Quantity, pcs
1	2
Computer equipment	11
Printer, plotter, copier	6
Office equipment (digital wired telephone, fax, calculator, etc.)	12

Note – own elaboration based on the studied documentation of the organization

As shown in table 2.17, the distribution system of LLC “Lubava-LIS” has a high enough level of technical equipment, each employee is provided with computers, but there is a noticeable lack of scanning, printing and photocopier devices. In particular, there is only one photocopier device in the sales department and one at the warehouse.

Table 2.18 provides information on the software equipment of the distribution system of LLC “Lubava-LIS”.

Table 2.18. – Software equipment of the distribution system of LLC “Lubava-LIS”

Type of software	Quantity, pcs
1	2
I. System software	
Windows 7 operating system	11

The end of table 2.18.

1		2
The anti-virus package Kaspersky		11
2. Application software		
2.1. Software tools for managing common business processes		
MSWord 2007	MS Office 2007 Pro	11
MS Excel 2007		
MS Access 2007		
MS PowerPoint 2007		
2.2. Professionally-oriented software "1C: Enterprise"		11
3. Communication tools		
Skype		11
Microsoft Office Outlook		11
Telegram		11

Note – own elaboration based on the studied documentation of the organization

Data from table 2.18 suggests high level of software equipment of the distribution system of LLC “Lubava-LIS”, with means of communication with customers and other employees of the organization in particular. It should be noted, however, that many of these tools (especially MS Windows 7 and MS Office 2007) are obsolete. There is also a visible lack of specialized software.

## 2.9 Analysis of the assortment of goods of LLC “Lubava-LIS”

Analysis of the assortment of goods of the organizations is carried out using the methods of the ABC and XYZ-analysis. ABC-analysis allows to research the product for its profitability for the seller, and XYZ-analysis allows to research the marketability of individual products as well as product groups.

ABC analysis is a ranking of goods on certain attributes. It is used to determine the highest priority items and positions the production of which can be refused. The idea of ABC analysis is based on Pareto method, which applied to sales claims that 20 % of the products bring 80 % of store profits and 80 % of customers are satisfied with 20 % of the assortment of goods [28].

The purpose of the analysis is the distribution of goods by groups. The classic methodology of ABC-analysis assumes 3 groups: A, B, and C. An improved version implies the existence of another 2 groups: D and F [28]:

- A. Goods, the sale of which brings the store 80 % of revenue.
- B. Goods, the sale of which brings the store 15 % of revenue.
- C. Goods, the sale of which brings the store 5 % of revenue.
- D. Goods that come exclusively under the order.
- F. New products or completely illiquid goods.

Table 2.19 presents the results of the ABC analysis of products of LLC “Lubava-LIS”.

Table 2.19. – ABC-analysis of products of LLC “Lubava-LIS”

№	Product	Sales for the quarter, BYN	Share in total sales, %	Share in total cumulative sales, %
1	Children's collection (underwear)	245651	12.86	12.86
2	Women's collection (underwear)	261095	13.67	26.53
3	Men's collection (underwear)	107029	5.60	32.14
4	Teenage collection (underwear)	26994	1.41	33.55
5	Knitted children's collection	79328	4.15	37.71
6	Knitted women's collection	359561	18.83	56.53
7	Knitted men's collection	70992	3.72	60.25
8	Knit teenage collection	1069	0.06	60.31
9	Scarves	11606	0.61	60.91
10	Children's collection (sewed)	361827	18.95	79.86
11	Women's collection (sewed)	368634	19.30	99.16
12	Men's collection (sewed)	15141	0.79	99.96
13	Teenage collection (sewed)	825	0.04	100.00
Total		1909752	100	

Note – own elaboration based on the studied documentation of the organization

Based on the data presented in table 2.19, products of the organization can be divided into three groups according to the classical method, as shown in table 2.20.

Table 2.20 – A, B and C groups of products of LLC “Lubava-LIS”

Group	Product	Sales for the quarter, BYN	Specific gravity,%
1	2	3	4
A	Women's collection (sewed)	368634	19.30
	Children's collection (sewed)	361827	18.95
	Knitted women's collection	359561	18.83
	Women's collection (underwear)	261095	13.67
	Children's collection (underwear)	245651	12.86
B	Men's collection (underwear)	107029	5.60
	Knitted children's collection	79328	4.15
	Knitted men's collection	70992	3.72
	Teenage collection (underwear)	26994	1.41
C	Men's collection (sewed)	15141	0.79
	Scarves	11606	0.61
	Knitted teenage collection	1069	0.06
	Teenage collection (sewed)	825	0.04
Total		1909752	100

Note – own elaboration

XYZ-analysis provides a clear picture on demand for each product. It can be used to identify the most popular goods and goods that for some reason are not in

demand constantly. The results of XYZ-analysis allows organizations to optimize inventory.

XYZ-analysis involves dividing products into 3 groups [28]:

- group X. Products which have a stable demand. The coefficient of variation of such goods is up to 10 %.

- group Y. Goods, demand for which slightly fluctuates. The coefficient of variation of such products ranges from 10 % to 25 %.

- group Z. Goods, demand for which is almost impossible to predict. The coefficient of variation of such goods is more than 25 %.

The coefficient of variation can be calculated by the formula:

$$(2.4)$$

wherein  $\sigma$  - the mean deviation;

$x_{cp}$  - average sales volume.

Mean deviation can be calculated by the formula:

$$(2.5)$$

wherein  $x_i$  -sales value of the i-th period;

n -number of periods.

Table 2.21 presents the results of XYZ-analysis.

Table 2.21 – XYZ-analysis of the products of LLC “Lubava-LIS”

Product	September	October	November	Total for the quarter	$x_{cp}$	$\sigma$	V	Group
1	2	3	4	5	6	7	8	9
Children's collection (underwear)	92955	103155	49541	245651	81884	165408.90	2.02	X
Women's collection (underwear)	83287	85279	92529	261095	87032	174108.63	2.00	
Men's collection (underwear)	45818	29770	31441	107029	35676	71715.38	2.01	
Teenage collection (underwear)	12249	4516	10229	26994	8998	18291.53	2.03	
Knitted children's collection	36353	16807	26168	79328	26443	53484.30	2.02	
Knitted women's collection	142628	123966	92967	359561	119854	240580.75	2.01	

PolotskSU



The end of table 2.21

1	2	3	4	5	6	7	8	9
Knitted men's collection	29147	20182	21663	70992	23664	47490.39	2.01	X
Knitted teenage collection	313	245	511	1069	356	721.54	2.02	
Scarves	687	8137	2782	11606	3869	8349.08	2.16	
Children's collection (sewed)	114220	144008	103599	361827	120609	241823.66	2.01	
Women's collection (sewed)	136691	118516	113427	368634	122878	245958.79	2.00	
Men's collection v	2253	6479	6409	15141	5047	10285.57	2.04	
Teenage collection (sewed)	79	35	711	825	275	630.77	2.29	

Note – own elaboration based on the studied documentation of the organization

Based on the results of ABC- and XYZ-analysis it can be concluded that the sewed and underwear women's and children's collections, as well as knitted women's collection are the most profitable products. They are in demand and therefore should always be available. Men's sewed and knitted collection, as well as knitted children's and teenager's clothes collection bring rather good profits for the organization, but its quantity is considerably less compared to the above collections. Sewed men's collection, sewed and knitted teenage collection, as well as scarves bring the least amount of profit. However, as with the other collections, the demand for them is stable enough, allowing the organization to purchase only as much as clients consume.

### Conclusions on the second chapter

Thus, Limited Liability Company “Lubava-LIS” is one of the leaders of the Belarusian market of knitwear. LLC “Lubava-LIS” has eight shopping facilities located in different cities of the Republic of Belarus. The head office is located in Polotsk. In addition to the production of clothing, LLC “Lubava-LIS” provides a number of additional services: laser cutting, embroidery, sublimation, silkscreen, production of thermo-application made of rhinestones and souvenirs manufacturing.

SWOT-analysis of the organization made it possible to conclude that extensive experience in the market of sewing services, competitive price and high quality of manufactured products would enable the organization to attract more new partners and customers, and maintaining close relations with them will lay the foundation for future cooperation. Maintaining close relationships with customers and partners, as well as providing quality services at competitive prices contributes to the preservation of organization's place in the market even in the face of increasing competition and instability of the economic situation in the country. The development of information technology makes it possible to identify and address deficiencies in the system of information support of decision-making, as well as to pay more attention to the

advertising policies of the organization (use of its own website, advertising in social networks and dedicated websites). In addition, the emergence of new clients will help to cope with the falling demand for products and services. However, insufficient attention to the advertising policy of the organization, a narrow range of provided services and a drop in demand for them can lead to a loss of customers due to the increased competition, and shortcomings in the system of information support of decision-making may affect the speed of decision-making in crisis situations.

LLC “Lubava-LIS” has a lot of competitors on the market of sewing services, some of which are such well-known Belarusian organizations as JSC “Kupalinka”, JSC “Svitanak”, JSC “Polesie”, CJSC “Milavitsa”. According to SNW-analysis, LLC “Lubava-LIS” has quite high assortment of goods and a relatively low price but is inferior to competitors in terms of the reach to the market and the number of additional services.

Based on the results of the analysis of solvency of LLC “Lubava-LIS” it was concluded that by the beginning of 2017 the organization has greatly improved its ability to meet short-term obligations. The increase of organization’s own current assets can also be traced. However, there has been a reduction of assets needed to cover the long-term financial liabilities. After the analysis of indicators of liquidity, there is no reason to recognize the organization as insolvent. Due to the fact that the level of the indicators of the LLC “Lubava-LIS” meets standards and ensures its solvency, there is no need to calculate additional liquidity indicators in the context of the past four quarters.

During the analysis of the dynamics and structure of assets of LLC “Lubava-LIS” for year 2016, it was revealed that most of them are current assets, in particular, short-term receivables. At the end of the period, an increase of short-term receivables and cash took place, the proportion of short-term assets in the assets of the organization has also increased. At the end of year 2016 there had been a significant reduction of stocks of finished products, as well as fixed assets. Most of liabilities of LLC “Lubava-LIS” are the capital and reserves of the organization, in particular, retained earnings. Long-term liabilities of the organization are represented by long-term loans. Short-term liabilities of the organization are presented mostly by short-term loans and payables, most part of which is owed to suppliers and contractors, as well as to the owner of the property.

LLC “Lubava-LIS” is not in a position to pay its most urgent obligations in cash or financial investments, as evidenced by the ratio of assets and liabilities in the first group, namely: throughout the period the value of the most liquid assets is a lot less than of the most urgent obligations, i.e. the balance of the studied organizations is not absolutely liquid. However, the organization has no short-term loans, allowing it to use its quickly realizable assets. There is a stable trend for the remaining groups of assets and liabilities, indicating the ability of LLC “Lubava-LIS” to meet its obligations with available assets.

Current liquidity ratio shows what part of ongoing obligations on loans and accounts can be redeemed by mobilizing all current assets. Intermediate liquidity ratio shows the portion of short-term debt the organization can pay off in the shortest

possible time at the expense of cash and receivables. These coefficients for the LLC “Lubava-LIS” have fairly high values that are exceeding standards, despite the mismatch of the value of the intermediate liquidity ratio to the normative in year 2014. Throughout the period under review, there has been an increase in liquidity ratios, mainly due to the growth of the amount of short-term receivables and short-term assets. This means that the organization is increasing its ability to repay current liabilities on loans and calculations and short-term debt. Absolute liquidity ratio shows the portion of short-term obligations the organization can pay off in the near future at the expense of cash and short-term valuable papers. The value of this coefficient is also high enough to enable the LLC “Lubava-LIS” to repay its short-term obligations.

Net profit of LLC “Lubava-LIS” increased by 79 thous. BYN in 2015. The major part of profit is profit from current activities, while investment and financial activities in year 2015 brought significant loss – 408 thous. BYN, rising by 7 times compared to year 2014. In 2016 all articles on profit decreased, while the amount of income tax has increased. However, at the same time, losses from investing and financing activities have also decreased – by 407 thous. BYN, or 99.5 %.

Values of indicators of profitability of LLC “Lubava-LIS” increased considerably in 2015, however, by 2016 these indicators have undergone a sharp decline with the significant decrease of the profits from realization of products (goods, works, services) and net profit. In 2016, one BYN of costs of goods and services accounted for 0.14 BYN of profits, one BYN of sold goods and services – for 0.12 BYN of profits. One unit value of the assets of LLC “Lubava-LIS” accounted for 0.04 BYN of net income. Decrease of this indicator in 2016 shows a fall in demand for the services of the organization and an overaccumulation of assets. One BYN of long-term assets of LLC “Lubava-LIS” accounted for 0.14 BYN of net income. The value of this indicator has also significantly decreased, which is associated with the accumulation of long-term assets of the organization.

The values of the turnover ratios noticeably decreased in 2016 (total capital turnover ratio by 0.36 BYN/BYN, turnover ratio of current assets – by 0.66 BYN/BYN). This is due to the significant growth of the assets of LLC “Lubava-LIS”, including current assets, amid the declining amounts of revenue of the organization.

The values of the indicators of financial sustainability over the entire period of research correspond to the regulatory values. Autonomy ratio reflects the degree of independence of the organization from borrowed funds. The higher the value of this coefficient, the more financially stable and independent from external creditors is the organization. LLC “Lubava-LIS” in general has a fairly high level of autonomy ratio, indicating the financial independence of the organization, the reduced risk of financial difficulties in future periods, raising the guarantee of repayment of its obligations. The value of the capitalization rate of LLC “Lubava-LIS” is also consistent with the normative value

The business process, which will be transferred to outsourcing, is business process “distribution”. To analyze the effectiveness of the transfer of the distribution system to outsourcing it is necessary to conduct a review of the existing distribution system.

The analysis of material, financial and information flows of organization showed that LLC “Lubava-LIS” is not engaged in the delivery of the products produced, and only provides access to products at the warehouse for customers after receiving the payment and all the necessary information on order. However, the organization owns a network of its own retail stores, where it sales its manufactured products.

During the analysis of the organizational structure of management and staffing of the distribution system of LLC “Lubava-LIS”, it was concluded that there are 11 people employed, 6 of them (or 54.55 %) work in the sales department, and the remaining 5 people (or 45.45 %) work in the warehouse.

The main documents of the distribution system of LLC “Lubava-LIS” are a contract; a payment order; a classifier of customers; the book of balances; a card file on customers; a statistical report; shipment schedules.

The business process “Distribution” of LLC “Lubava-LIS” consists of eight main phases: receipt of application, request for information about the availability of goods in stock, signing a contract, the preparation of the goods to be handed over, transfer of the goods to the customer, monitoring, claim processing and completion of order. Monitoring the implementation of the order takes place during the entire process of transfer of goods. Delivery times are more dependent on the customer, as LLC “Lubava-LIS” does not deliver goods to a customer but only provides them in its warehouse.

The distribution system of LLC “Lubava-LIS” has a rather high level of technical equipment, each employee is provided with computers, but there is a noticeable lack of scanning, printing and photocopier devices. In particular, there is only one photocopier device in the sales department and one at the warehouse.

It was also concluded that there is a high level of software equipment of the distribution system of LLC “Lubava-LIS”, with means of communication with customers and other employees of the organization in particular. It should be noted, however, that many of these tools (especially MS Windows 7 and MS Office 2007) are obsolete. There is also a visible lack of specialized software.

Based on the results of ABC- and XYZ-analysis it can be concluded that the sewed and underwear women's and children's collections, as well as knitted women's collection are the most profitable products. They are in demand and therefore should always be available. Men’s sewed and knitted collection, as well as knitted children's and teenager's clothes collection bring rather good profits for the organization, but its quantity is considerably less compared to the above collections. Sewed men's collection, sewed and knitted teenage collection, as well as scarves bring the least amount of profit. However, as with the other collections, the demand for them is stable enough, allowing the organization to purchase only as much as clients consume.

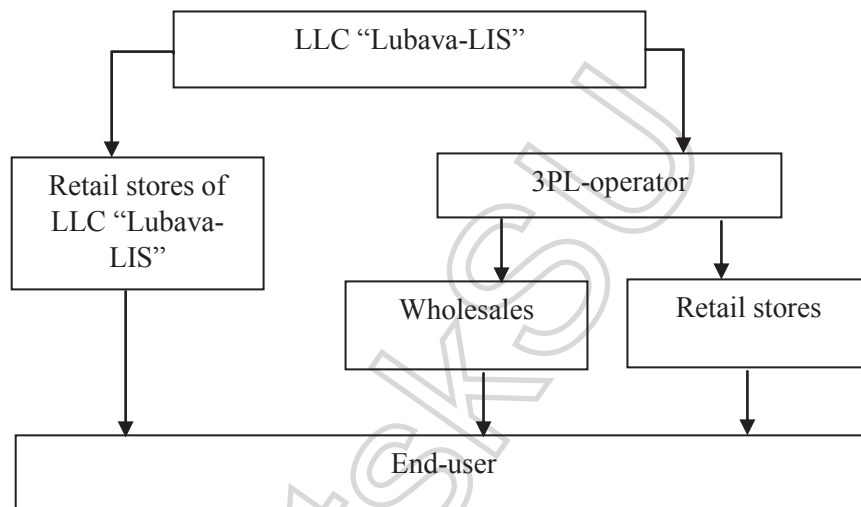
Thus, in the course of writing the second chapter the following main problems in the activities of LLC “Lubava-LIS” were identified:

- insufficient level of logistics service;
- high costs of ongoing activities;
- deficiencies in the information and software provision of the organization.

CHAPTER 3  
OPTIMIZATION OF THE DISTRIBUTION SYSTEM OF THE FOCUS ORGANIZATION USING THE SERVICES OF A 3PL-PROVIDER

3.1 Improvement of the supply chain of LLC “Lubava-LIS”

In paragraph 2.5 figure 2.3 a scheme of supply channels of LLC “Lubava-LIS” at the stage of product distribution was considered. However, the use of services of a 3PL-operator requires a revision of the existing supply channels, therefore the figure 3.1 features a redesigned scheme of supply channels based on the data from the focus organization.



**Figure 3.1. – The scheme of the supply channels of the focus organization at the stage of product distribution after using the services of 3PL-operator**

Note – own elaboration

Thus, using the services of a 3PL-operator will enable the organization to abandon their own finished products warehouse and to store products at the 3PL-operator’s warehouse, where wholesale and retail shops will be able to pick up the products by themselves or using the services of a 3PL-operator.

3.2. The calculation of costs of maintaining organization’s own distribution system

To evaluate the effectiveness of using 3PL-operators, the cost of maintaining organization’s own distribution system should be calculated.

To calculate the cost of maintaining organization’s own distribution system the data provided in table 3.1 was used.

Table 3.1. – Initial data for calculating the cost of organization’s own distribution system

Expenditures	Indicators	Frequency
1	2	3
The number of employees in the sales department, people	6	
The number of employees in the warehouse, people	5	
The normative of office space per employee, sq. m.	6	



The end of table 3.1.

1	2	3
The price of renting office space, BYN/sq.m.	9	monthly
Utilities for the office premises, BYN /sq.m.	0.97	monthly
An average consumption of Internet services per 1 employee, BYN	5.68	monthly
An average consumption of stationery goods per 1 employee, BYN	2.75	monthly
An average consumption of telecommunication services per 1 employee, BYN	2.28	monthly
The wage of the head of the sales department, BYN	700	monthly
The wage of the head of the warehouse, BYN	700	monthly
The wages of specialists of the sales department, v	400	monthly
The wages of storekeepers, BYN	350	monthly
Insurance, %	34.6	monthly
The costs of transporting the products to the warehouse, BYN	279	annually
“1C accounting” software product, including:		1 time in 10 years
the cost of “1C accounting” software product, BYN/workstation	218.4	
updating the software product, BYN/month	80	monthly
training of staff in the use of software product, BYN/person	336.60	1 time in 10 years
Software product Microsoft Office 2007, BYN/workstation	27.8	1 time in 10 years
Updating automated workstation, including:		1 time in 5 years
system unit	440.37	
monitor	152.15	
printer	173.88	
miscellaneous	32.51	

Note – own elaboration based on the studied documentation of the organization

Based on the data presented in table 3.1, the costs of maintaining organization’s own distribution system were calculated and presented in table 3.2.

Table 3.2. – Calculation of the costs of maintaining organization’s own distribution system

Expenditures	1st quarter	2nd quarter	3rd quarter	4th quarter	1 year
1	2	3	4	5	6
Operating costs of the organization, total, including:					
renting office premises	1782	1782	1782	1782	7128
utilities	192.06	192.06	192.06	192.06	768.24
Internet services	187.44	187.44	187.44	187.44	749.76
Stationery	90.75	90.75	90.75	90.75	363
Telecommunication services	75.24	75.24	75.24	75.24	300.96
Staff wages, including:	14400	14400	14400	14400	57600

The end of table 3.2.

1	2	3	4	5	6
the wage of the head of the sales department, BYN	2100	2100	2100	2100	8400
the wage of the head of the warehouse, BYN	2100	2100	2100	2100	8400
the wages of the specialists of the sales department, BYN	6000	6000	6000	6000	24000
the wages of the storekeepers, BYN	4200	4200	4200	4200	16800
Insurance, BYN	4982.4	4982.4	4982.4	4982.4	19929.6
Transportation costs, BYN	69.75	69.75	69.75	69.75	279
Automated workstation, including:	8788.01	0	0	0	8788.01
system unit, BYN	4844.07	0	0	0	4844.07
monitor, BYN	1673.65	0	0	0	1673.65
printer, BYN	695.52	0	0	0	695.52
miscellaneous, BYN	357.61	0	0	0	357.61
“1C accounting” software product, including:					
the cost of “1C accounting” software product, BYN	2402.4	0	0	0	2402.4
updating the software product, BYN	2640	2640	2640	2640	10560
training of staff in the use of software product, BYN	3702.6	0	0	0	3702.6
Software product Microsoft Office 2007, BYN	305.8	0	0	0	305.8

Note – own elaboration based on the studied documentation of the organization

Thus, the non-recurrent costs of creating organization’s own distribution systems are 15198.81 BYN, while current (operating) costs are 97678.56 BYN for the period of one year.

### 3.3. The calculation of costs for distribution after using the services of a 3PL-operator

The parameters in accordance to which the calculation of storage costs is made are defined according to the data from logistic company «Logiston», and are presented in table 3.3.

Table 3.3. – The costs of using the services of 3PL-operator

Name of services	Units of measurement	Selling rate used in calculations (without VAT), BYN	VAT amount (20 %), BYN	Selling rate used in calculations (with VAT at the rate of 20 %), BYN
1	2	3	4	5
Goods storage services on a pallet the size of 1200 * 800 mm	Pallet * day	0, 40	0.08	0, 4 8



The end of table 3.3.

1	2	3	4	5
Goods storage services on a pallet the size of 1200 * 1000 mm	Pallet * day	0.60	0.12	0.72
Mechanized unloading/loading services	Pallet	1.00	0.20	1.20
Services for selection and completion of order in packages, boxes, etc.	Box	0.05	0.01	0.06
Services for selection and completion of order in pieces	Pcs	0.025	0.005	0.03

Note – source [29]

Initial data for calculating the storage costs is shown in table 3.4.

Table 3.4. – Initial data for calculating the storage costs

Parameter	Quantity
The average annual number of pallets, stored in the warehouse, pcs	232
The quantity of items requiring completion, pcs/year	842444
The number of pallets requiring unloading, pcs/year	1134

Note – own elaboration based on the studied documentation of the organization

In table 3.5 the calculation of the storage costs for the products of LLC “Lubava-LIS” is presented.

Table 3.5. – The calculation of the storage costs for the products of LLC “Lubava-LIS”

Name of services	Calculation	Price, BYN
Goods storage services on a pallet the size of 1200 * 800 mm	$0.48 * 232 * 365$	40646.4
Mechanized unloading/loading services	$1.20 * 1374$	1360.8
Services for selection and completion of order in pieces	$0.03 * 842444$	25273.32
Total		67280.52

Note – own elaboration

Total storage costs for the products of LLC “Lubava-LIS” amount to 67280.52 BYN. The warehouse is located in Minsk, which will provide customers of LLC “Lubava-LIS” from different Belarusian cities with an easier access to the products of the organization.

Calculation of the costs for transporting the products of LLC “Lubava-LIS” has been conducted using the calculator of transportation cost on the site of the 3PL-operator. According to the results of calculation the transportation costs of products to the warehouse will amount to 11038.71 BYN, including VAT [29].

Thus, the total costs for the distribution after using the services the 3PL-operator will amount to  $67280.52 + 11038.71 = 78319.23$  BYN.

Lowering operating costs in connection with the transition to logistics outsourcing would result in additional profit, which in turn will increase payments to budget for income tax. Additional income taxes due to lower cost will amount to:

$$\text{AIT} = (\text{Oc.} - \text{Oouts.}) * \text{Rit}, \quad (3.1)$$

wherein AIT - additional income tax;

Oc. - operating costs from using organization's own distribution system;

Oouts. - operating costs from using logistics outsourcing;

Rit - the rate of income tax, 18 %.

As LLC "Lubava-LIS" cannot completely abandon its own sales department staff because of the necessity to accept orders and monitor sales, it is proposed to reduce the number of sales department personnel to 2 people. Taking into account the salary of the head of the sales department and specialists of the sales department, the operating costs from using logistics outsourcing in this case would amount to  $78319.23 + 8400 + 400 * 2 * 12 = 96319.23$  BYN.

Thus, the income tax will amount to  $(97678.56 - 96319.23) * 0.18 = 244,68$  BYN.

To calculate the economic efficiency of the transfer of distribution process to outsourcing, the conditionally-annual savings must be calculated:

$$\text{Sca} = \text{Oc} - \text{Oouts.} - \text{AIT}, \quad (3.2)$$

wherein Sca - conditionally-annual savings;

Oc. - operating costs from using organization's own distribution system;

Oouts. - operating costs from using logistics outsourcing;

AIT - additional income tax.

Thus, the savings from using an outsourcing company are  $97678.56 - 96319.23 - 244.68 = 1114.65$  BYN. for the period of one year.

### 3.4 Improving the business processes of the organization

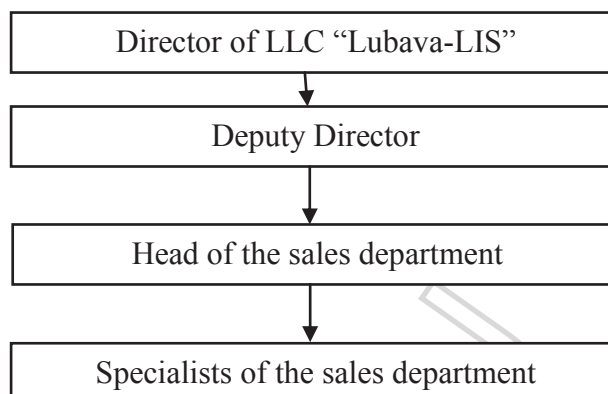
In chapter 2 the composition of functions of the business process "Distribution" of LLC "Lubava-LIS" was considered, but after the implementation of the services of a 3PL-operator in organization's activities this business process must be rebuilt.

Annex G shows an example the composition of functions of the business process "Distribution" based on the data of the focus organization.

Thus, the business process "Distribution" after the implementation of the services of a 3PL-operator in LLC "Lubava-LIS" activities will consist of seven functions. LLC "Lubava-LIS", after the conclusion of the contract for the sale of products will pass the order to 3PL-operator.

### 3.5 Recommendations on the staffing of the organization

Implementation of the services of a 3PL-operator will allow the focus organization to restructure the staffing by reducing the number of staff employed at the warehouse (5 people). The organizational structure of management of the distribution system of LLC “Lubava-LIS” after the implementation of the proposed changes is shown in figure 3.2.



**Figure 3.2. – The organizational structure of management of the distribution system of LLC “Lubava-LIS” after the implementation of the services of a 3PL-operator**

Note – own elaboration

Recommendations on the staffing of LLC “Lubava-LIS” are presented in table 3.6.

Table 3.6. – Recommendations on staffing of LLC “Lubava-LIS”

Post	Requirements	Number of people
1	2	3
Head of the sales department	higher economic education; work experience - 7 years; age is from 30 to 45 years; advanced PC users	1
Specialists of the sales department	higher economic education; work experience - 2 years; age from 21 to 45 years; advanced PC users	2
Total		3

Note – own elaboration

To improve the skills of the employees of the sales department, they are invited to undergo a detailed training course for sales managers (with the issuance of a state certificate of professional development) “Sales Manager”. This course includes 44 hours during which employees of LLC “Lubava-LIS” will study the following courses [30]:

- Introduction to active sales:
- roles and tasks of sales manager;
- development of sales market;
- methods, sales techniques;
- development of competencies of sales managers.
- A search for clients:

- the process of segmentation of clients, distribution channels;
- features of customer search in modern conditions;
- formation of a loyal relationships with customer.
- Motivational and incentive programs for customer development:
  - classic sales model;
  - methods of raising the average cheque;
  - methods of dealing with customers' objections.
- Conducting business negotiations with customers:
  - preparation for business negotiations;
  - evaluation and prediction of capabilities of the client;
  - identification of needs;
  - formation of needs;
  - information retrieval;
  - working with the aggression of a client.
- Conducting tough negotiations:
  - convincing customers;
  - conducting business review;
  - renegotiation of contracts with customers.

The cost of the training course for the employees of LLC “Lubava-LIS” is 1500 BYN. After the courses the employees of LLC “Lubava-LIS” will receive certificates of professional development.

Because of the downsizing of the warehouse personnel and specialists of the sales department, the opportunity to sell technical equipment, namely computers and printers, has appeared. The value of these technical means, according to table 3.1, is  $(440.37 + 152.15 + 32.51) * 8 + 173.88 * 2 = 5348$  BYN. Income tax from the sale of these technical means will be  $5348 * 0.18 = 962.64$  BYN. Thus, the savings from the sale of the technical equipment will amount to  $5348 - 962,64 = 4385,36$  BYN.

### 3.6 Introduction of modern specialized software

As noted in Chapter 2, the sales department of LLC “Lubava-LIS” has rather low level of equipment with modern specialized software. The use of 3PL-operators’ services also requires for the focal organization to implement modern software and its synchronization with 3PL-operator’s software.

It is therefore proposed to install a software solution “1C: Managing a small company for Belarus” based on “1C: Enterprise”. Because LLC “Lubava-LIS” has already installed the system “1C: Enterprise” and one of its modules “1C: Accounting”, the introduction of “1C: Managing a small company for Belarus” will not only help to manage the processes of the organization, but to also link selling and accounting activities.

“1C: Managing a small company for Belarus” allows to organize a unified information system for managing various aspects of activities of the organization and the following functions [31]:

- customer orders;

- wholesale;
- reservation of goods;
- retail sales;
- accounting of production;
- accounting of contracts;
- orders for suppliers;
- managing stages and phases of sales;
- sales and returns of goods;
- rendering works;
- warehousing, shipment, shipping waybill;
- rendering services, acts of completion of works;
- address storage, WMS;
- procurement planning and calculation of average daily consumption;
- prices, discounts, bonuses, promotions;
- bank, cashbox;
- payment schedule;
- analysis of receivables;
- personnel records;
- calculation of hourly and piece-rate wages;
- accounting of fixed assets and intangible assets;
- commission trade;
- work with accountable people;
- integration with an online store;
- ability to work through WEB-client and thin client;
- mobile apps;
- flexible reporting system;
- full exchange with “1C: Accounting 8”.

The costs for the development and installation of “1C: Managing a small company for Belarus” are presented in table 3.7.

Table 3.7. – Non-recurrent costs for implementation of “1C: Managing a small company for Belarus”

Costs	Value, BYN
1	2
Purchase of the license for installation of “1C: Managing a small company for Belarus” for the 3 work places	2192.40
The cost of staff training	268.20
Total	2460.60

Source – own elaboration based on [31]

Thus, the total cost of the purchase, installation and training of staff for the use of “1C: Managing a small company for Belarus” will amount to 2460.6 BYN. Installing this software will greatly reduce the time for the formation of the documentation, will allow to promptly prepare a variety of analytical reports, to monitor and plan different activities of LLC “Lubava-LIS”. All of this will greatly increase the speed and the

quality of work performance, reduce errors in documentation and improve the reliability of execution of customer orders.

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### 3.7 Identifying sources of funding for the development and implementation of the proposed activities

To implement the above-mentioned activities, the amount of the costs of their implementation, as well as the sources of their funding must be calculated. These indicators are presented in table 3.8.

Table 3.8. – Expenses for the implementation of the proposed activities and their funding sources

Type of source	Price, BYN	Source
1	2	3
Sources of costs		
Costs for staff development	1 500	Paragraph 3.5.
Purchase of the license for installation of “1C: Managing a small company for Belarus” for the 3 work places	2192.40	Table 3.7
The cost of staff training	268.20	Table 3.7
Total	3960.60	
Sources of funding		
Savings from using the services of the 3PL-operator	1114.65	Paragraph 3.3
Savings from the sale of technical equipment	4385.36	Paragraph 3.5
Total	5500.01	
Cost savings	1539.41	

Note – own elaboration

Based on the data from table 3.8, to implement the proposed activities the organization will need 3960.6 BYN, profit from the implementation of the activities will be 5500.01 BYN. The cost savings will amount to 1539.41 BYN.

To determine the payback period of the proposed activities, calculations should be made using the formula:

$$T=K/\Pi \quad (3.3)$$

wherein T – the payback period of a project;  
 K - capital investments in the project;  
 Π - annual profit from the project.

Thus, the payback period of the proposed activities will amount to  $3960.6/5500.01 = 0.72$ , or 262.8 days.

### 3.8 The mechanism of introduction of proposed activities to the organization

The mechanism of implementation of the proposed activities to the organization provides a description of the composition of the activities. Composition of the activities is presented in table 3.9, in the form of a plan indicating each of the activities, timelines and responsible people.



Table 3.9. – The mechanism of implementation of the proposed activities to the focus organization

Stage	Events	Duration	The person responsible
1	2	3	4
Planning	notification of implementation of changes to the staff of the organization	1 month	Deputy director of the organization
	delegation of authority for the transfer of logistics functions to outsourcing	1 month	Deputy director of the organization, head of the sales department
	coordination and signing of documents for staff training	2 weeks	Deputy director of the organization, head of the sales department
	coordination and signing of documents on selling technical equipment	1 month	Head of the sales department, chief engineer
Organization	preparation of the system of the organization for the implementation of the new software	1 month	Chief engineer
	preparation of the staff to undergo training, to use the services of 3PL-operator in their activities	1 month	Head of the sales department
	preparing technical equipment for sale	1 month	Chief engineer
	negotiating with 3PL-operator, contract preparation	2 months	Deputy director of the organization, head of the sales department
Introduction	software installation, configuration and training of the staff	1 month	Chief engineer
	training of the employees of the organization	2 months	Head of the sales department
	selling technical equipment	2 months	Deputy director of the organization, chief engineer
	conclusion of a contract with 3PL-operator	1 month	Deputy director of the organization, head of the sales department
Control	launch of the software	1 day	Chief engineer, head of the sales department
	use of the services of 3PL-operator	daily	Head of the sales department
	evaluation of software performance	daily	Chief engineer
	assessment of the work of the staff	daily	Head of the sales department
	evaluation of the performance of 3PL-operator	daily	Head of the sales department

Note – own elaboration

According to table 3.9, introduction of all the proposed activities to the focus organization can take up to 5 months. Those responsible for implementation of these

activities are deputy director of the organization, head of the sales department and chief engineer.

### 3.9 Handling the risks, the uncertainties and the security of implementation of the proposed activities to the focus organization

The proposed activities will affect the functioning of the logistics system through a number of factors, which may entail a risky situation.

Accounting of risks of the organization begins with the formulation of the risk spectrum of logistics system, presented in table 3.10.

Table 3.10. – Risk spectrum of logistics system of the focus organization

Logistics subsystem	The cause of the risk situation	Possible risks
1	2	3
Distribution	<ul style="list-style-type: none"> <li>- saturation of the market and a high level of demand satisfaction;</li> <li>- insolvency of consumers;</li> <li>- reduction of the quality of the finished product;</li> <li>- an emergence of new competitors;</li> <li>- 3PL-operator's failure to fulfill its obligations</li> </ul>	<ul style="list-style-type: none"> <li>- difficulties in selling products;</li> <li>- revenue shortfall;</li> <li>- reduced competitiveness</li> </ul>
Storage	<ul style="list-style-type: none"> <li>-inappropriate storage conditions;</li> <li>-3PL-operator's failure to fulfill its obligations, delivery schedules failures, incorrect handling of goods</li> </ul>	<ul style="list-style-type: none"> <li>- loss of inventory;</li> <li>- damage to stocks</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>- increase in transportation fares;</li> <li>-non-optimal transportation routes;</li> <li>- failures in transportation system</li> </ul>	<ul style="list-style-type: none"> <li>- an increase of transport costs;</li> <li>- a disruption of cargo movement schedule;</li> <li>- a loss or damage of cargo;</li> <li>- a failure to comply with the scope of delivery</li> </ul>
Staff composition	<ul style="list-style-type: none"> <li>- inadequate training of personnel;</li> <li>- insufficient level of discipline of the staff</li> </ul>	<ul style="list-style-type: none"> <li>- increased sales costs;</li> <li>- malfunctions of hardware and software;</li> <li>- a loss of customers</li> </ul>
Dataware	<ul style="list-style-type: none"> <li>- failures or errors in the software</li> </ul>	<ul style="list-style-type: none"> <li>- a loss of data on customers, documents, goods;</li> <li>- increased sales costs</li> </ul>

Note – own elaboration

After identifying potential risks, each risk is evaluated on the basis of determination of the probability of occurrence and the size of potential losses. The criteria for assessing the likelihood of risky situations and possible damage are shown in table 3.11.

Table 3.11. – Assessment of the likelihood of a risky situation and the size of damage

Score	Probability of occurrence	The size of the damage
1	2	2
1	High	Significant. Primarily affects the functional subsystem of the logistic system and can affect the logistics system as a whole. The losses will be high, and it is not easy to recover
0.5	Low	Minor. Temporary problems, rapidly surmountable and not having long-term negative consequences.

Note – own elaboration

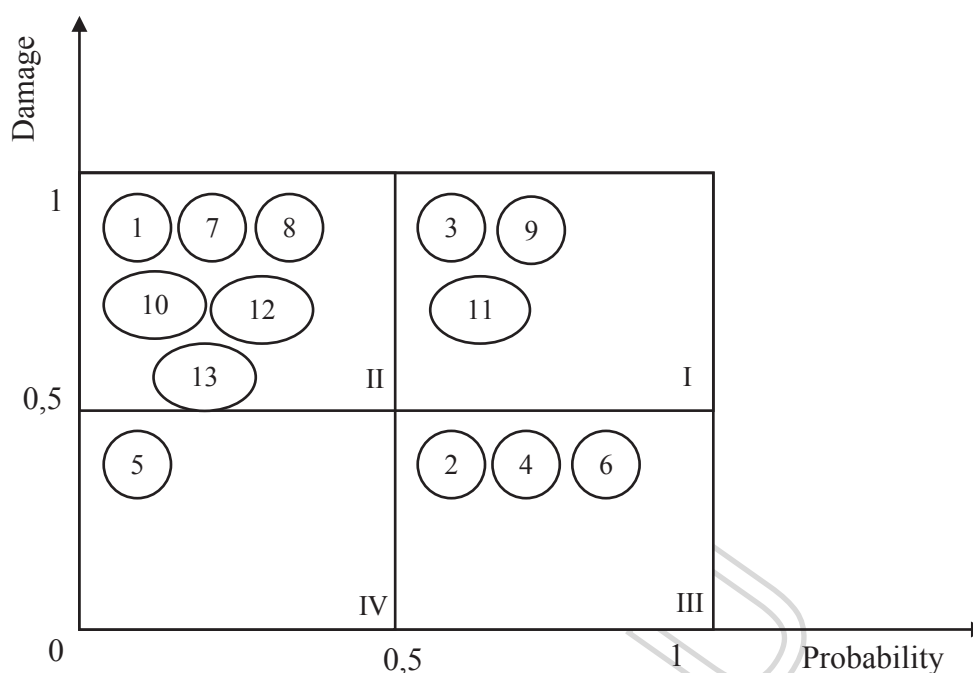
Risk assessment results are presented in table 3.12.

Table 3.12. – Assessing risk situations for the focus organization

No.	Risk	The probability of occurrence	The size of the damage
1	2	3	4
1	Crashes or failures of hardware and software	0.5	1
2	An incorrect data processing	1	0.5
3	An increase in transportation costs	1	1
4	A disruption of cargo movement schedule	1	0.5
5	A loss of or damage to cargo	0.5	0.5
6	A failure to comply with the scope of delivery	1	0.5
7	A loss of customers	0.5	1
8	A loss of data on customers, documents, goods	0.5	1
9	Increased sales costs	1	1
10	Difficulties in selling products	0.5	1
11	Revenue shortfall	1	1
12	Reduced competitiveness	0.5	1
13	A loss of or damage to stocks	0.5	1

Note – own elaboration

To develop activities to address identified risks a preliminary classification of risks was carried out, which is presented in figure 3.3.



**Figure 3.3. – Risk classification graph of the proposed activities**

Note – own elaboration

As can be seen from figure 3.3, the majority of risks can bring significant damage, but has a low probability of occurrence. These include the risk of crashes or failures of hardware and software, the risk of a loss of customers, a loss of documents, customer and products data, the risk of difficulties with selling the products, reduced competitiveness, as well as a loss of or damage to stocks.

Three risks have a high probability of risk occurrence and can bring significant damage. They are the risks of an increase in transportation costs, increased sales costs and revenue shortfall.

Three risk have a high probability of occurrence but bring little damage. These risks include the risk of incorrect data processing, a disruption of cargo movement schedule, as well as the risk of failure to comply with the scope of delivery.

One of the identified risks has a low probability of occurrence and does not bring a lot of damage – it is a risk of a loss of or damage to cargo.

On the basis of a classification of risks presented in figure 3.3, the method to minimize them is chosen.

Risk management methods and rationale for their use are presented in annex H.

Thus, reducing the damage from risks can be achieved through the transfer of control over risks, search of information, loss prevention, minimization of losses and self-insurance.

### Conclusions on the third chapter

Thus, using the services of a 3PL-operator will enable the organization to abandon their own finished products warehouse and to store products at the 3PL-operator's warehouse, where wholesale and retail shops will be able to pick up the

products by themselves or using the services of a 3PL-operator. In addition, the transfer of the storing and transporting functions to outsourcing will significantly raise the level and quality of the logistics service.

After the implementation of the services of a 3PL-operator in organization's activities, its business processes must be rebuilt. The business process "Distribution" after the implementation of the services of a 3PL-operator in the focus organization's activities will consist of seven functions. The focus organization, after the conclusion of the contract for the sale of products will pass the order to 3PL-operator.

After conducting the appropriate calculations it was revealed that the non-recurrent costs of creating organization's own distribution systems are 15198.81 rubles, while current (operating) costs are 97678.56 rubles for the period of one year. The operating costs from using logistics outsourcing will amount to 96319,23 BYN.

The savings from using an outsourcing company are 1114,65 BYN for the period of one year.

Implementation of the services of a 3PL-operator will allow the focus organization to restructure the staffing by reducing the number of staff employed at the warehouse (5 people) and at the sales department (3 people).

To improve the skills of the employees of the sales department, they are invited to undergo a detailed training course for sales managers (with the issuance of a state certificate of professional development) "Sales Manager". The cost of the training course for the employees of LLC "Lubava-LIS" is 1500 BYN. After the courses, the employees of LLC "Lubava-LIS" will receive certificates of professional development.

Because of the downsizing of the warehouse personnel and specialists of the sales department, the opportunity to sell technical equipment, namely computers and printers, has appeared. The savings from the sale of the technical equipment will amount to 4385,36 BYN.

The sales department of the focus organization has rather low level of equipment with modern specialized software. The use of 3PL-operators' services also requires the focus organization to implement modern software and its synchronization with 3PL-operator's software. It is therefore proposed to install a software solution "1C: Managing a small company for Belarus" based on "1C: Enterprise". The total cost of the purchase, installation and training of staff for the use of "1C: Managing a small company for Belarus" will amount to 2460.6 BYN. Installing this software will greatly reduce the time for the formation of the documentation, will allow to promptly prepare a variety of analytical reports, to monitor and plan different activities of the focus organization. All of this will greatly increase the speed and the quality of work performance, reduce errors in documentation and improve the reliability of execution of customer orders.

To implement the proposed activities the organization will need 3960.6 BYN, profit from the implementation of the activities will be 5500.01 BYN. The cost savings will amount to 1539.41 BYN. The payback period of the proposed activities will amount to 262.8 days.

Introduction of all the proposed activities to the focus organization can take up to 5 months. Those responsible for implementation of these activities are deputy director of the organization, head of the sales department and chief engineer.

The proposed activities will affect the functioning of the logistics system through a number of factors, which may entail a risky situation. A risk spectrum for a focus organization was drawn up, an assessment and a preliminary risk classification were carried out, after which risk management methods were developed. It was revealed that reducing the damage from risks could be achieved through the transfer of control over risks, search of information, loss prevention, minimization of losses and self-insurance.

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## CONCLUSION

By far one of the most promising areas of improving competitiveness and reducing costs is to transfer the main logistics functions for outsourcing. With the adoption of the Programme for the development of logistic system and transit potential, logistics infrastructure is being actively developed in the Republic of Belarus. However, the measures described in the program are primarily aimed at attracting transit flows and insufficient attention is paid to the development of domestic flows. In this connection, the relevant direction of the research is to optimize the distribution of the finished products of domestic manufacturers involving the use of 3PL-providers.

There are five main approaches to the definition of the notion “third party logistics”. The term “third party logistics” can mean:

1. The concept of transferring logistics functions to outsourcing.
2. The process of providing complex logistic services.
3. The combination of various logistics operations.
4. The relationships between shipper and third party logistics providers.
5. Organizations that perform logistics functions.

One of the methods to evaluate the quality of logistics is the logistics performance index (LPI) calculated by the World Bank. The Republic of Belarus is 120th out of 160 places in the LPI ranking. A considerable gap between Belarus and its closest neighbors is noticeable, especially in the field of customs services, logistics infrastructure and tracking the passage of goods. However, rather high levels of timeliness of provided logistic services were identified, with the Republic of Belarus approaching some of the countries of the European Union. Belarus is characterized by a relatively small proportion of logistics cost in total GDP compared to other European Union countries, which is around 5.5 %. The percentage of organizations providing customs brokerage, information and consulting services, cargo labeling, packaging, assembly and kitting, transportation and cargo placement planning exceeds world averages. However, there are no logistics intermediaries in Belarus providing services in the field of reverse logistics, information technology, fleet management, 4PL and sustainability.

In accordance with the Programme for the development of logistic system of the Republic of Belarus for the period of up to 2015, 20 logistics centers were built in the country during Programme period, with another 9 planned for construction for the year 2021. Most logistics centers are constructed or planned for construction in Minsk and Brest regions. Implementation of the Programme made it possible to intensify the development of third party logistics in the Republic of Belarus and to encourage the expansion of warehouse and transport infrastructure.

However, the Republic of Belarus still has fairly low utilization rates of logistics outsourcing in comparison with neighboring countries. This is due to the following reasons:

- most organizations declared as logistics operators provide only warehousing services;



- the lack of complexity in service fees: many logistics operators bill every action with cargo, thereby significantly complicating the process of determining the cost of services and increasing the final cost;
- higher price compared to logistic operators in Poland and Lithuania, which is especially important for enterprises that sell goods abroad;
- lack of warehousing space in the regions of the country;
- major Belarusian enterprises already have their own warehouses;
- skepticism of the heads of domestic enterprises with respect to the possibility of reducing costs through the use of the services of logistic operators.

Logistics activities of intermediaries in the Republic of Belarus is governed by the following legal acts: Law of the Republic of Belarus of June 13, 2006 No. 124-Z “On transportation and forwarding activities”, Law of the Republic of Belarus of May 5, 1998 No. 140-Z “On fundamentals of transport activity”, Law of the Republic of Belarus of January 6, 1999 No. 237-Z “On railway transport”, The air code of the Republic of Belarus of May 16, 2006 No. 117-Z, Decree of the President of the Republic of Belarus from March 27, 2008 No. 178 “On the order of conduct and control of foreign trade operations”, The Republican programme for the development of logistics and transit capacity for years 2016-2020, STB 2046-2010 Transport-logistic center. Requirements for technical equipment and transport-expeditionary services, STB 2047-2010 Logistic operations. Terms and definitions, STB 2133-2010 Classification of warehousing infrastructure, STB 2306-2013 Logistics services. General requirements and certification procedure, STB 2345-2013 Logistic activities. Requirements for the professional competence of the executors of logistics services and certification procedure.

Limited Liability Company “Lubava-LIS” is one of the leaders of the Belarusian market of knitwear. LLC “Lubava-LIS” has eight shopping facilities located in different cities of the Republic of Belarus. The head office is located in Polotsk. In addition to the production of clothing, LLC “Lubava-LIS” provides a number of additional services: laser cutting, embroidery, sublimation, silkscreen, production of thermo-application made of rhinestones and souvenirs manufacturing.

SWOT-analysis of the organization made it possible to conclude that extensive experience in the market of sewing services, competitive price and high quality of manufactured products would enable the organization to attract more new partners and customers, and maintaining close relations with them will lay the foundation for future cooperation. Maintaining close relationships with customers and partners, as well as providing quality services at competitive prices contributes to the preservation of organization's place in the market even in the face of increasing competition and instability of the economic situation in the country. The development of information technology makes it possible to identify and address deficiencies in the system of information support of decision-making, as well as to pay more attention to the advertising policies of the organization (use of its own website, advertising in social networks and dedicated websites). In addition, the emergence of new clients will help to cope with the falling demand for products and services. However, insufficient attention to the advertising policy of the organization, a narrow range of provided services and a

drop in demand for them can lead to a loss of customers due to the increased competition, and shortcomings in the system of information support of decision-making may affect the speed of decision-making in crisis situations.

LLC “Lubava-LIS” has a lot of competitors on the market of sewing services, some of which are such well-known Belarusian organizations as JSC “Kupalinka”, JSC “Svitanak”, JSC “Polesie”, CJSC “Milavitsa”. According to SNW-analysis, LLC “Lubava-LIS” has quite high assortment of goods and a relatively low price but is inferior to competitors in terms of the reach to the market and the number of additional services.

Based on the results of the analysis of solvency, there is no reason to recognize the organization as insolvent.

During the analysis of the dynamics and structure of assets of LLC “Lubava-LIS” for year 2016, it was revealed that most of them are current assets, in particular, short-term receivables. Most of liabilities of LLC “Lubava-LIS” are the capital and reserves of the organization.

LLC “Lubava-LIS” is not in a position to pay its most urgent obligations in cash or financial investments, as evidenced by the ratio of assets and liabilities. However, the organization has the ability to meet its obligations with available assets. The values of current, intermediate and absolute liquidity show that the organization is increasing its ability to repay current liabilities on loans and calculations and short-term debt.

In 2016 all articles on profit of the focus organization have decreased, while the amount of income tax has increased. However, at the same time, losses from investing and financing activities have also decreased. Values of indicators of profitability of LLC “Lubava-LIS” show a fall in demand for the services of the organization and an overaccumulation of assets.

The values of the turnover ratios noticeably decreased in 2016, which is due to a significant growth of the assets of LLC “Lubava-LIS”, including current assets, amid the declining amounts of revenue of the organization.

The values of the indicators of financial sustainability over the entire period of research correspond to the regulatory values, indicating the financial independence of the organization, the reduced risk of financial difficulties in future periods, raising the guarantee of repayment of its obligations. The value of the capitalization rate of LLC “Lubava-LIS” is also consistent with the normative value

The business process, which will be transferred to outsourcing, is business process “Distribution”. To analyze the effectiveness of the transfer of the distribution system to outsourcing a review of the existing distribution system was conducted, including the analysis of material, financial and information flows of organization, the analysis of the organizational structure of management, staffing, documentation, technical and software provision of the distribution system of the focus organization.

The analysis of the business process “Distribution” shown that this business process consists of eight main phases: receipt of application, request for information about the availability of goods in stock, signing a contract, the preparation of the goods to be handed over, transfer of the goods to the customer, monitoring, claim processing and completion of order. Monitoring the implementation of the order takes place during

the entire process of transfer of goods. Delivery times are more dependent on the customer.

Based on the results of ABC- and XYZ-analysis the most profitable products with a stable demand were identified.

Thus, in the course of writing the second chapter the following main problems in the activities of LLC “Lubava-LIS” were identified:

- insufficient level of logistics service;
- high costs of ongoing activities;
- deficiencies in the information and software provision of the organization.

In the third chapter, it was concluded that using the services of a 3PL-operator will enable the organization to abandon its own finished products warehouse and to store products at the 3PL-operator’s warehouse, where wholesale and retail shops will be able to pick up the products by themselves or using the services of a 3PL-operator. In addition, the transfer of the storing and transporting functions to outsourcing will significantly raise the level and quality of the logistics service.

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Thus, the use of a third party logistics will significantly reduce the time and costs of performing logistics functions, as well as improve the level and quality of logistics services, as demonstrated by the example of a focus organization.

To calculate the savings from the transfer to logistics outsourcing, organizations need to calculate the following costs:

- costs for the maintenance of organization’s own distribution system, including current expenses (renting office space, utilities, communications and Internet services, stationery, salaries and insurance, transportation, software update) and one-time costs (for the purchase of an automated workstations, software products, for staff training in the use of software products);

- cost for distribution after using the services of a 3PL-operator, including storage costs, mechanized unloading/loading, selection and completion of the order, as well as transportation of products to the storage location.

Organizations also need to:

- rebuild the supply chain;
- modify business processes;
- transform the staffing of the departments that performed functions, which will be outsourced in the future.



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POLOTSKSU



PoloteksSU

ANNEXES

## A list of locations of logistic centers in the Republic of Belarus

Table A.1. – A list of locations of logistic centers

The name of logistic center 1	Address 2
1. Transport-logistics center JE «Transit» LTD	Brest, Krasnogvardeiskaya St., 148 <a href="http://www.transit.by">http://www.transit.by</a>
2. Transport-logistics center «Brest-Beltamozhservice»	Brest, Lieutenant Ryabcev St., 45 A <a href="http://www.btslogistic.by">http://www.btslogistic.by</a>
3. Transport-logistics center JLTD «Bresvneshttransc»	Brest, Dubrovski St., 36 <a href="http://www.brestvneshttrans.by">http://www.brestvneshttrans.by</a>
4. Logistics center LTD «Eurotorg»	Baranovichi, industrial zone «Borovtsy» <a href="http://www.euroopt.by">http://www.euroopt.by</a>
5. Transport-logistics center «Brest-Beltamozhservice-2»	Brest region, Kleinikovskiy vil., 11 <a href="http://www.btslogistic.by/">http://www.btslogistic.by/</a>
6. Transport-logistics center «Gomel-Beltamozhservice»	Gomel, Borisenko St., 3 <a href="http://www.declarant.by">http://www.declarant.by</a>
7. Transport-logistics center LTD «Belagroterminal»	Smorgon', Logistic St., 4/15, <a href="http://www.sodrugestvo.ru">http://www.sodrugestvo.ru</a>
8. Transport-logistics center «Belmagistralavtotrans»	Minsk, industrial zone «Kolyadichi», Babushkina St., 39 <a href="http://www.bmat.by">http://www.bmat.by</a>
9. Trade and logistics center «Ozertso-Logistic»	Minsk region, Ozertso vil. <a href="http://www.ozerco.by">http://www.ozerco.by</a>
10. Logistics center «L-Bit Group»	Minsk area, Volozhinsky region, Rakov vil., Radoshkovichskaya St., 77 <a href="http://www.bit-union.by">http://www.bit-union.by</a>
11. Logistics center FPETUE «BLT-Logistic»	Minsk region, Obchak vil., FEZ «Minsk» <a href="http://www.bltlogistic.com">http://www.bltlogistic.com</a>
12. Logistics center OOO «24»	Minsk region, Hatezhinsky vil., 1, administrative building <a href="http://www.mlc24.by">http://www.mlc24.by</a>
13. Transport-logistics center «Minsk-Beltamozhservice»	Minsk region, 17th km of the motorway Minsk-Dzerzhinsk <a href="http://www.declarant.by/">http://www.declarant.by/</a>
14. Trade and logistics center OOO «InterStroiPortalPlus»	Minsk region, Schomislitskiy vil., TLC «Schomislitsa» <a href="http://ispplus.by/ru/">http://ispplus.by/ru/</a>
15. Transport-logistics center «Minsk-Beltamozhservice-2»	Minsk region, дер. Schitomirichy, 7th km of the motorway Minsk-Slutsk <a href="http://www.declarant.by">http://www.declarant.by</a>
16. Logistics center FLTD «Prilesie» (first round)	Minsk region, Lugovoslobodskoi, 1, 18th km of Mogilev highway <a href="http://www.prilesie.com">http://www.prilesie.com</a>
17. Logistics center FPUE «Shate-M Plus»	Minsk region, Privolny vil. <a href="http://logistic.shate-m.by">http://logistic.shate-m.by</a>
18. Logistics center JCJSC «Belrusinvest»	Minsk, Montazhnikov 4 <sup>th</sup> per., 6, office 307 <a href="http://belrusinvest.by">http://belrusinvest.by</a>

The end of table A.1.

1	2
19. Logistics center ЗАО «Point Logistics»	Minsk region, Papernyansky vil., 45/1, office 309, region of the vil. Duboblyany <a href="http://plogistiks.by/">http://plogistiks.by/</a>
20. Transport-logistics center «Mogilev-Beltamozhservice»	Mogilev, Krupskoi St., 230 <a href="http://www.declarant.by">http://www.declarant.by</a>
Planned for commissioning in 2016	
1. Transport-logistics center on the territory of JSC "Orsha Aviation Plant"	Vitebsk area, Orsha region, Bolbasovo vil.
2. Transport-logistics center LTD «Limo-Star»	Minsk region, Privolny vil.
3. Trade and logistics center OSC «Mogilevsouzpechat'»	Mogilev, Mira avenue
4. Container terminal JLTD «STL Logistik»	Mogilev area, FEZ «Mogilev»
Planned for commissioning in 2017	
1. Transport-logistics center FLTD «VLATE Logistic»	Near the checkpoint "Bruzgi"
2. Transport-logistics center FLTD «VLATE Logistic»	Near the checkpoint "Berestovitsa"
Planned for commissioning in 2018	
1. Logistics center LTD «Russkie Sladosti»	Gomel area, 11th km of the Chernigov highway
2. Transport-logistics center «Grodno-Beltamozhservice»	Grodno area, Ostrovetsk region, checkpoint «Kamenny Log»
Planned for commissioning in 2021	
1. Transport-logistics center «AOI Logistic Park»	Minsk region, Smolevichsky region, near the National Airport Minsk

Note – source [32]

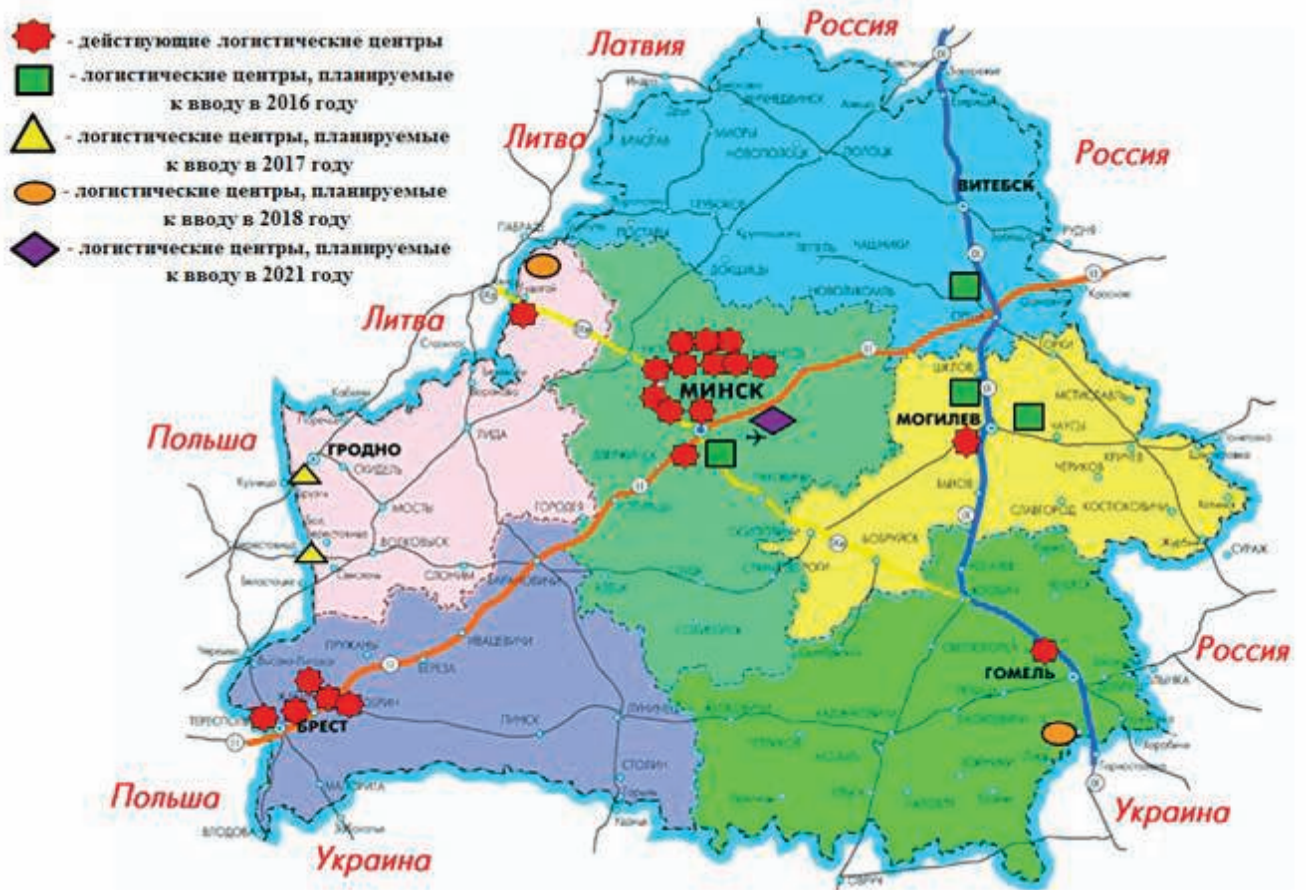


Figure A.1. – The layout of logistics centers in the Republic of Belarus

Note – source [32]

## The balance sheet of LLC "Lubava-LIS" for year 2015

Приложение 1  
к постановлению Министерства финансов  
Республики Беларусь

31.10.2011 № 111

**БУХГАЛТЕРСКИЙ БАЛАНС**

На 31 декабря 2015 года

Организация	ООО "Любава-ЛИС"
Учетный номер плательщика	391000393
Вид экономической деятельности	Производство трикотажной одежды
Организационно-правовая форма	Общество с ограниченной ответственностью
Орган управления	Юридическое лицо без ведомственной подчиненности
Единица измерения	млн.руб.
Адрес	Витебская обл., г.п.Боровуха, ул.Армейская 86

Дата утверждения	
Дата отправки	
Дата принятия	

Активы	Код строки	На 31 декабря 2015 года	На 31 декабря 2014 года
1	2	3	4
<b>I. ДОЛГОСРОЧНЫЕ АКТИВЫ</b>			
Основные средства	110	16 559	16 350
Нематериальные активы	120	4	3
Доходные вложения в материальные активы	130	-	-
В том числе:			
инвестиционная недвижимость	131		
предметы финансовой аренды (лизинга)	132		
прочие доходные вложения в материальные активы	133	-	-
Вложения в долгосрочные активы	140	705	543
Долгосрочные финансовые вложения	150	-	-
Отложенные налоговые активы	160	-	-
Долгосрочная дебиторская задолженность	170	-	-
Прочие долгосрочные активы	180	-	-
<b>ИТОГО по разделу I</b>	<b>190</b>	<b>17 268</b>	<b>16 896</b>
<b>II. КРАТКОСРОЧНЫЕ АКТИВЫ</b>			
Запасы	210	16 072	17 580
В том числе:			
материалы	211	6 062	7 363
животные на выращивании и откорме	212	-	-
незавершенное производство	213	62	39
готовая продукция и товары	214	9 948	10 178
товары отгруженные	215	-	-

## Continuation of annex B

1	2	3	4
прочие запасы	216	-	-
Долгосрочные активы, предназначенные для реализации	220	-	-
Расходы будущих периодов	230	39	25
Налог на добавленную стоимость по приобретенным товарам, работам, услугам	240		932
Краткосрочная дебиторская задолженность	250	20 074	10 438
Краткосрочные финансовые вложения	260	-	-
Денежные средства и их эквиваленты	270	120	440
Прочие краткосрочные активы	280	-	-
<b>ИТОГО по разделу II</b>	<b>290</b>	<b>36 305</b>	<b>29 415</b>
<b>БАЛАНС</b>	<b>300</b>	<b>53 573</b>	<b>46 311</b>
<b>Собственный капитал и обязательства</b>	<b>Код строки</b>	<b>На 31 декабря 2015 года</b>	<b>На 31 декабря 2014 года</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>III. СОБСТВЕННЫЙ КАПИТАЛ</b>			
Уставный капитал	410	54	54
Неоплаченная часть уставного капитала	420	-	-
Собственные акции (доли в уставном капитале)	430	-	-
Резервный капитал	440	-	-
Добавочный капитал	450	7 619	3 980
Нераспределенная прибыль (непокрытый убыток)	460	29 259	24 410
Чистая прибыль (убыток) отчетного периода	470		-
Целевое финансирование	480	-	-
<b>ИТОГО по разделу III</b>	<b>490</b>	<b>36 932</b>	<b>28 444</b>
<b>IV. ДОЛГОСРОЧНЫЕ ОБЯЗАТЕЛЬСТВА</b>			
Долгосрочные кредиты и займы	510	3 979	3 684
Долгосрочные обязательства по лизинговым платежам	520	-	-
Отложенные налоговые обязательства	530	-	-
Доходы будущих периодов	540	-	-
Резервы предстоящих платежей	550	-	-
Прочие долгосрочные обязательства	560	-	-
<b>ИТОГО по разделу IV</b>	<b>590</b>	<b>3 979</b>	<b>3 684</b>
<b>V. КРАТКОСРОЧНЫЕ ОБЯЗАТЕЛЬСТВА</b>			
Краткосрочные кредиты и займы	610	360	998
Краткосрочная часть долгосрочных обязательств	620	1 528	1 772
Краткосрочная кредиторская задолженность	630	10 774	11 413
В том числе:			
поставщикам, подрядчикам, исполнителям	631	6 952	9 700
по авансам полученным	632	109	40

## The end of annex B

1	2	3	4
по налогам и сборам	633	1 683	178
по социальному страхованию и обеспечению	634	266	409
по оплате труда	635	780	1 017
по лизинговым платежам	636	-	-
собственнику имущества (учредителям, участникам)	637	792	4
прочим кредиторам	638	192	65
Обязательства, предназначенные для реализации	640	-	-
Доходы будущих периодов	650	-	-
Резервы предстоящих платежей	660	-	-
Прочие краткосрочные обязательства	670	-	
<b>ИТОГО по разделу V</b>	<b>690</b>	<b>12 662</b>	<b>14 183</b>
<b>БАЛАНС</b>	<b>700</b>	<b>53 573</b>	<b>46 311</b>

Руководитель

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*(подпись)*

Е.К.Фёдорова

\_\_\_\_\_

*(инициалы, фамилия)*

18 марта 2016г.

РОЛОЖ



## The balance sheet of LLC "Lubava-LIS" for year 2016

Приложение 1  
к Национальному стандарту  
бухгалтерского учета и  
отчетности "Индивидуальная  
бухгалтерская отчетность"

**БУХГАЛТЕРСКИЙ БАЛАНС**на 1 января 2017 года

Организация	Общество с ограниченной ответственностью "Любава - ЛИС"
Учетный номер плательщика	391000393
Вид экономической деятельности	Производство трикотажной одежды
Организационно-правовая форма	Общество с ограниченной ответственностью
Орган управления	Общее собрание учредителей
Единица измерения	тыс. руб
Адрес	211502 Витебская обл., г.п.Боровуха, ул. Армейская 86

Дата утверждения	
Дата отправки	
Дата принятия	

Активы	Код строки	31 На <u>декабря</u> 2016 года	На 31 декабря 2015 г.
1	2	3	4
<b>I. ДОЛГОСРОЧНЫЕ АКТИВЫ</b>			
Основные средства	110	829	1 656
Нематериальные активы	120	3	-
Доходные вложения в материальные активы	130	604	-
в том числе:			
инвестиционная недвижимость	131		
предметы финансовой аренды (лизинга)	132		
прочие доходные вложения в материальные активы	133	604	
Вложения в долгосрочные активы	140	-	71
Долгосрочные финансовые вложения	150	-	
Отложенные налоговые активы	160		
Долгосрочная дебиторская задолженность	170		
Прочие долгосрочные активы	180		

## Continuation of annex C

1	2	3	4
<b>ИТОГО по разделу I</b>	<b>190</b>	<b>1 436</b>	<b>1 727</b>
<b>II. КРАТКОСРОЧНЫЕ АКТИВЫ</b>			
Запасы	210	1 041	1 607
в том числе:			
материалы	211	577	606
животные на выращивании и откорме	212		
незавершенное производство	213	-	6
готовая продукция и товары	214	464	995
товары отгруженные	215		
прочие запасы	216		
Долгосрочные активы, предназначенные для реализации	220		
Расходы будущих периодов	230	4	4
Налог на добавленную стоимость по приобретенным товарам, работам, услугам	240	4	
Краткосрочная дебиторская задолженность	250	2 940	2 007
Краткосрочные финансовые вложения	260	-	
Денежные средства и их эквиваленты	270	22	12
Прочие краткосрочные активы	280	-	
<b>ИТОГО по разделу II</b>	<b>290</b>	<b>4 011</b>	<b>3 630</b>
<b>БАЛАНС</b>	<b>300</b>	<b>5 447</b>	<b>5 357</b>
Собственный капитал и обязательства	Код строки	На <u>31 декабря</u> 2016 года	На 31 декабря 2015 г.
1	2	3	4
<b>III. СОБСТВЕННЫЙ КАПИТАЛ</b>			
Уставный капитал	410	5	5
Неоплаченная часть уставного капитала	420		
Собственные акции (доли в уставном капитале)	430		
Резервный капитал	440		
Добавочный капитал	450	762	762
Нераспределенная прибыль (непокрытый убыток)	460	3 112	2 926
Чистая прибыль (убыток) отчетного периода	470		
Целевое финансирование	480		
<b>ИТОГО по разделу III</b>	<b>490</b>	<b>3 879</b>	<b>3 693</b>
<b>IV. ДОЛГОСРОЧНЫЕ ОБЯЗАТЕЛЬСТВА</b>			
Долгосрочные кредиты и займы	510	322	398

## The end of annex C

1	2	3	4
Долгосрочные обязательства по лизинговым платежам	520		
Отложенные налоговые обязательства	530		
Доходы будущих периодов	540		
Резервы предстоящих платежей	550		
Прочие долгосрочные обязательства	560		
<b>ИТОГО по разделу IV</b>	<b>590</b>	<b>322</b>	<b>398</b>
<b>V. КРАТКОСРОЧНЫЕ ОБЯЗАТЕЛЬСТВА</b>			
Краткосрочные кредиты и займы	610	597	36
Краткосрочная часть долгосрочных обязательств	620	76	153
Краткосрочная кредиторская задолженность	630	573	1 077
в том числе:			
поставщикам, подрядчикам, исполнителям	631	389	695
по авансам полученным	632	2	11
по налогам и сборам	633	48	168
по социальному страхованию и обеспечению	634	17	27
по оплате труда	635	37	78
по лизинговым платежам	636		
собственнику имущества (учредителям, участникам)	637	68	79
прочим кредиторам	638	12	19
Обязательства, предназначенные для реализации	640		
Доходы будущих периодов	650		-
Резервы предстоящих платежей	660		
Прочие краткосрочные обязательства	670		
<b>ИТОГО по разделу V</b>	<b>690</b>	<b>1 246</b>	<b>1 266</b>
<b>БАЛАНС</b>	<b>700</b>	<b>5 447</b>	<b>5 357</b>

Руководитель

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Е.К.Фёдорова

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(инициалы, фамилия)

14 марта 2017г.

## ANNEX D

## Analysis of formation, distribution and use of profits of LLC "Lubava-LIS"

Table D.1. – Analysis of formation, distribution and use of profits of LLC "Lubava-LIS" for the 2014-2015

No	Name of indicator	2014		2015		Change	
		absolute value, mln	specific gravity, %	absolute value, mln	specific gravity, %	in absolute value, mln	in specific gravity, %
1	2	3	4	5	6	7	8
1	Total income (loss)	572	100.00	966	100.00	394	0.00
2	Profit (loss) without tax	523	91.43	603	62.42	80	-29.01
2.1	Profit (loss) from current activity	580	101.40	1011	104.66	431	3.26
2.2	Profit (loss) from investing and financing activities	-57	-9.97	-408	-42.24	-351	-32.27
3	Tax on profit	0	0.00	1	0.10	1	0.10
4	Other taxes and fees, calculated from the profit (income)	0	0.00	0	0.00	0	0.00
5	Net profit (loss)	523	91.43	602	62.32	79	-29.11
6	Result from revaluation of long-term assets not included in net income (loss)	49	8.57	364	37.68	315	29.11

Note – own elaboration based on an examination of the income statement of LLC "Lubava-Lis" for the 2015

Table D.2. – Analysis of formation, distribution and use of profits of LLC “Lubava-LIS” for the 2015-2016

No	Name of indicator	2015		2016		Change	
		absolute value, mln	specific gravity, %	absolute value, mln	specific gravity, %	in absolute value, mln	in specific gravity, %
1	2	3	4	5	6	7	8
1	Total income (loss)	601	100.00	199	100.00	-402	0.00
2	Profit (loss) without tax	602	100.17	339	170.35	-263	70.19
2.1	Profit (loss) from current activity	1011	168.22	341	171.36	-670	3.14
2.2	Profit (loss) from investing and financing activities	-409	-68.05	-2	-1.01	407	67.05
3	Tax on profit	1	0.17	140	70.35	139	70.19
4	Other taxes and fees, calculated from the profit (income)	0	0.00	0	0.00	0	0.00
5	Net profit (loss)	601	100.00	199	100.00	-402	0.00

Note – own elaboration based on an examination of the income statement of LLC “Lubava-Lis” for the 2016

## ANNEX E

## The analysis of the financial sustainability of LLC "Lubava-LIS" for the 2014-2016

Name of indicator	By 01.01.201 5	By 01.01.201 6	By 01.01.201 7	Nor m	Change, +/-				
					For the period		compared with the normative value		
					2011	2012	by 01.01.201 5	by 01.01.201 6	by 01.01.201 7
1	2	3	4	5	6	7	8	9	10
Liabilities, mln	1786	1664	1568	-	-122	-96	-	-	-
Own capital, mln	2844	3693	3879	-	849	186	-	-	-
The amount of assets (liabilities), mln	4631	5357	5447	-	726	90	-	-	-
Capitalization ratio	0.63	0.45	0.40	≤ 1	- 0.18	- 0.05	-0.37	-0.55	-0.60
Coefficient of financial independence (autonomy)	0.61	0.69	0.71	≥ 0.4	0.08	0.02	0.21	0.29	0.31

Note - own elaboration based on the study of the balance sheet of LLC "Lubava-LIS" for the 2014-2016

## The analysis of the business process “Distribution” of LLC “Lubava-LIS”

№	Executed business processes/functions	Composition of procedures	Main documents	Executors
1	2	3	4	5
1	Receipt of application for the purchase of goods	getting information on the required product, its quantity, the customer; approval of deadlines	Application for the purchase of goods	Head of the sales department; sales department specialist
2	Request for information about the availability of goods in stock	Getting information about the availability of a product, its quantity	Documentation on the product, invoice	Head of the sales department; sales department specialist, head of the warehouse; storekeeper
3	Signing a contract for the purchase of products	signing the contract with the customer; contract registration in the registering contracts in organization's software	Contract	Head of the sales department; sales department specialist
4	Preparation of the goods to be handed over	Completion of the order in the warehouse, packaging; preparation of the necessary documentation	The contract, invoice, loading schedule	Sales department specialist, storekeeper
5	Transferring goods to a customer	Loading the goods on the customer's vehicle (customer's freight forwarder's vehicle)	Loading schedule, contract, invoice	Sales department specialist, storekeeper
6	Monitoring the implementation of the order	Control of timely loading of goods; control of compliance with quantity and quality of goods	Loading schedule, contract, invoice	Sales department specialist, storekeeper
7	Claim processing	Registration of incoming claims from the client; registration of the outbound customer complaints; exhibiting claims to the client; registration of claims in intra-corporate register, software; providing the accounting department with necessary documentation; control of claims	Claims	Head of the sales department; sales department specialist
8	Completion of order	Formalization of order in internal software; transfer to the accounting department data for the invoice and other required documents	Certificate of completion, contract, invoice	Head of the sales department; sales department specialist

Note –own elaboration based on the studied documentation of the organization



Composition of functions of the business process “Distribution” after the implementation of the services of a 3PL-operator

№	Executed business processes/functions	Composition of procedures	Main documents	Executors
1	2	3	4	5
1	Receipt of application for the purchase of goods	getting information on the required product, its quantity, the customer; approval of deadlines	Application for the purchase of goods	Head of the sales department; sales department specialist
2	Request for information about the availability of goods in stock	Getting information about the availability of a product, its quantity	Documentation on the product, invoice	Sales department specialist, specialists of the 3PL-operator
3	Signing a contract for the purchase of products	signing the contract with the customer; contract registration in the organization's software	Contract	Head of the sales department; sales department specialist
4	Transferring the order to a 3PL-operator	Preparation of the necessary documentation for order transfer; providing the necessary information to 3PL-the operator	Contract, invoice	Sales department specialist, specialists of the 3PL-operator
5	Monitoring the implementation of the order	Control of timely loading of goods; control of compliance with quantity and quality of goods	Loading schedule, contract, invoice	Sales department specialist, specialists of the 3PL-operator
6	Claim processing	Registration of incoming claims from the client; registration of the outbound customer complaints; exhibiting claims to the client; registration of claims in intra-corporate register, software; providing the accounting department with necessary documentation; control of claims	Claims	Head of the sales department; sales department specialist
7	Completion of order	Formalization of order in internal software; transfer to the accounting department data for the invoice and other required documents	Certificate of completion, contract, invoice	Head of the sales department; sales department specialist

Note – own elaboration based on the studied documentation of the organization

## Risk management methods and rationale for their use

Risk	Method	Rationale for the choice of the method
1	2	3
Group I		
An increase in transportation costs	Search of information	To prevent an increase of the expenses the staff of the organization should regularly monitor the transport tariffs and prices of various 3PL operators
Increased sales costs	Search of information, loss prevention	Preventing the increase of unreasonable sales costs is possible if the employees of the organization have the necessary qualifications, and also regularly search for information on legislative changes, maintain contacts with customers, and also if regular software updates are carried out
Revenue shortfall	Loss prevention	The risk of revenue due to the insolvency of customers can be reduced by introducing prepayment, as well as imposing strict terms of payment in the contract
Group II		
Crashes or failures of hardware and software	Loss prevention	To prevent losses, it is recommended to create a backup copy of data and documents and, in case of equipment failure, to use a spare one, or store spare parts for quick repair. To prevent loss of customers, one should think about their interests and provide services of high enough quality
A loss of documents, data on customers and goods		
A loss of customers		
Difficulties in selling products	Search of information, evading risks, loss prevention	In order to prevent losses, it is possible to search for information on demand and to enter new markets, to expand the range of products sales and to timely eliminate unsold products.
Reduced competitiveness		
Loss of or damage to stocks	The transfer of risk	To prevent expenditures from a loss of or damage to stocks, there is a possibility of transferring the responsibility for production to 3PL-operator
Group III		
Incorrect data processing	The transfer of a control over risk	Software maintenance can be carried out by specialized organizations monitoring its condition and providing guarantees for their work
Disruption of cargo movement schedules	Minimizing losses, loss prevention	In order to minimize losses due to disruption of cargo movement schedules or a failure to comply with the scope of delivery, organizations should strive to improve the quality of provided services, as well as to diversify their activities by carrying out as much supplies as possible and thereby reducing the percentage of failed deliveries in their total number
Failure to comply with the scope of delivery		

The end of annex H

1	2	3
Group IV		
Loss of or damage to cargo	Self-insurance	Use of the organization's own resources will help to minimize the damage from these risks

Note – own elaboration

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