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# BACHELOR THESIS

(EXPLANATORY NOTES)  
OF GRADUATE OF ACADEMIC DEGREE  
«BACHELOR»

THEME: **“Investment support for the development of a seaport”**

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Academic degree Bachelor  
Speciality 073 «Management»  
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## TASK

### FOR COMPLETION THE BACHELOR THESIS OF STUDENT

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1. Theme of the bachelor thesis: “Investment support for the development of a seaport” was approved by the Rector Directive №553/сг. of May 4, 2020.
2. Term performance of thesis: from May 25, 2020 to June 21, 2020.
3. Date of submission work to graduation department: June 05, 2020.
4. Initial data required for writing the thesis: general information about national logistics infrastructure, the concept of port concession, existing Ukrainian and EU legislation on port investment, financial performance results of the “Stevedoring company “Olvia”, cargo throughput of the port of Olvia.
5. Content of the explanatory notes: introduction, scientific background of private investments in seaports, analytical justification of investment expediency in the port of Olvia, financial, economic and risk assessment of investment into the port of Olvia, conclusions and recommendations, references.
6. List of obligatory graphic matters: tables, figures, a bar chart demonstrating a throughput growth projection, a flowchart of the implementation of port concession under the Law of Ukraine “On Concession”.

7. Calendar schedule:

| №  | Assignment   | Deadline for completion | Mark on completion |
|----|--|-------------------------|--------------------|
| 1  | 2  | 3                       | 4                  |
| 1. | Study and analysis of scientific articles, literary sources, normative legal documents, preparation of the first version of the introduction and the theoretical chapter | 25.05.20-27.05.20       | Done               |
| 2. | Collection of statistical data, timing, detection of weaknesses, preparation of the first version of the analytical chapter  | 28.05.20-29.05.20       | Done               |
| 3. | Development of project proposals and their organizational and economic substantiation, preparation of the first version of the project chapter and conclusions           | 30.05.20-01.06.20       | Done               |
| 4. | Editing the first versions and preparing the final version of the master thesis, checking by standards inspector   | 02.06.20-03.06.20       | Done               |
| 5. | Approval for a work with supervisor, getting of the report of the supervisor, getting internal and external reviews, transcript of academic record                       | 04.06.20                | Done               |
| 6. | Submission work to Logistics Department  | 05.06.20                | Done               |

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8. Consultants of difference chapters of work:

| Chapter   | Consultant<br>(position, surname and name) | Date, signature    |                       |
|-----------|--|--------------------|-----------------------|
|           |  | The task was given | The task was accepted |
| Chapter 1 | Senior lecturer, Volovyk O.I.              | 25.05.20           | 25.05.20              |
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9. Given date of the task May 25, 2020.

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## **ABSTRACT**

The explanatory notes to the bachelor thesis “Investment support for the development of a seaport” comprises of 101 pages, 7 figures, 6 tables, 19 appendices, 52 references.

**KEY WORDS:** NATIONAL LOGISTIC INFRASTRUCTURE, FOREIGN DIRECT INVESTMENT, GLOBALISATION, CONCESSION, LEGISLATION, SEAPORT, PUBLIC-PRIVATE PARTNERSHIP, RETURN-ON-INVESTMENT.

The purpose of the research is to analyse the expediency of public-private partnership to develop the logistic infrastructure of Ukraine from the national and business perspectives and to study existing legal framework regulating the issue of port concession in Ukraine and the European Union.

The subject of the investigation is the transition of the “Stevedoring company “Olvia” into a concession.

The object of the research is the business model of the “Stevedoring company “Olvia”.

Methods of research are scientific enquiry, empirical, probabilistic, analysis, modelling and expert assessments.

Materials of the thesis are recommended for use during scientific research, in the educational process and in the practical work of specialists of logistics departments.

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## NOTATIONS

|         |  |
|---------|--|
| CEO     | – Chief Executive Officer                                  |
| EU      | – The European Union                                       |
| FDI     | – Foreign Direct Investment                                |
| GBP     | – British Pound Sterling                                   |
| GDP     | – Gross Domestic Product                                   |
| HPH     | – Hutchison Ports Holding                                  |
| IT      | – Information Technology                                   |
| MNC     | – Multinational Corporation                                |
| MNE     | – Multinational Enterprise                                 |
| MSC     | – Mediterranean Shipping Company                           |
| NPV     | – Net Present Value  |
| OECD    | – Organisation for Economic Co-operation and Development   |
| PPP     | – Public-Private Partnership                               |
| PSA     | – Port of Singapore Authority                              |
| R&D     | – Research and Development                                 |
| ROI     | – Return-on-Investment                                     |
| SME     | – Small and Medium Enterprises                             |
| SPFU    | – State Property Fund of Ukraine                           |
| STS     | – Ship-to-Shore  |
| SWOT    | – Strengths, Weaknesses, Opportunities and Threats         |
| TEU     | – Twenty-Foot Equivalent Unit                              |
| TRACECA | – Transport Corridor Europe-Caucasus-Asia                  |
| UAH     | – Ukrainian Hryvnia  |
| UK      | – The United Kingdom of Great Britain and Northern Ireland |
| US      | – The United States of America                             |
| USPA    | – Ukrainian Sea Ports Authority                            |

## INTRODUCTION

Ports are an essential element of the national transport infrastructure not only because they bring together trading partners that provide demand for transport services, but also due to the role in connecting the national market to the global networks. Indeed, the trend for globalisation set a new reality, where the prosperity of the nation is linked to its ability to look beyond its borders and expand its commercial interests overseas. However, the concept of international trade evolved dramatically over the last fifty years. From the economic point of view, the states were striving for integration, which entailed the creation of massive economic blocks with the most renown example of the European Union. Nevertheless, not only the regional cooperation arose: large business saw massive benefits in bringing their services overseas bolstered by loose legislation, permanent growth, developing markets and, undoubtedly, cost savings. It is no longer sensational to wear the clothes of an American brand produced in Vietnam or China, neither it is extraordinary to assemble the finished product in Germany using the parts supplied from totally different parts of the world. Although recent movements raised concerns over the future of globalisation, the economic benefits and cost efficiencies cannot be disputed.

On this stage, it is possible to bring a question about the role of logistics in such a development. What has been done is, in fact, a total rethinking of the global fleet with larger and specialised vessels entering the game along with tremendous investment in the national logistics infrastructure through both public and private incentives. The latter fact is the turning point for the discussion, which the text of this thesis universally unveils. speaking of the national logistics infrastructure, it is of utmost importance to determine the core elements playing the most paramount role in linking the local market to the global networks. After a rather superficial observation, the fact of seaborne transportation being accountable for more than 90 per cent of trade in commodities barely leaves any doubts as to the prime role of ports as the connecting points between the country and the rest of the world. The evidence is equivocal: the

largest global exporting and importing states host the largest commercial harbours globally on their soil, with the examples including Shanghai, Rotterdam, Long Beach, Hamburg, and Hong Kong. The developing nations are also striving to be in line with the development and initiated major infrastructural projects, particularly in South-East Asia.

However, there is a new question arising, specifically how to finance the construction of the efficient port facilities with the most modern equipment applying masterly planned technical and operational solutions, while the public funds are either insufficient or largely depleted? The mentioned issue called for the engagement of the private interests in the regular port operations, demonstrated by the emergence of the global players on the verge of the millennium. A certain degree of resistance was put as complete privatisation of the strategic industries could potentially go against the national interests of the state and, indeed, against the anti-monopoly legislation. All mentioned factors lead to the development of the concept of concession- an agreement between the government and the private entity to pursue the operating activities in the port, e.g. container handling, along with developing the physical infrastructure while following the directives of the governments set out in the contract between both parties. Such form of collaboration became known as a landlord port and gained massive popularity all over the world. Until recently, the trend boomed in the developed countries, however, driven by vigorous economic growth and potential gains, the investments flew in the developing countries as well. So far, the effects have been highly favoured, as the national governments are often struggling to bring the same funding and expertise as the private investors do. Here the ultimate two questions arise: does Ukraine follow the same path and, if not, what are the potential benefits (or flaws) of such a strategy for the national economy and society?

The purpose of the research is to increase the understanding of port policy in Ukraine, its strategy and enforcement. Taking country's involvement in the global transport process into account, a clear vision of the modern harbour concept, together with the appropriate actions to implement the plans, are necessary to facilitate the interaction of national businesses with foreign markets. Accordingly, the purpose of

the study envisages the expediency of attracting foreign capital in modernization and expansion projects at Ukrainian port facilities.

To achieve this goal, the following tasks are to be solved:

- Review the international practice of private port business along with examples of successful implementation in the emerging economies;
- Comprehensively describe the Ukrainian port infrastructure;
- Analyse the state's policies on the national maritime industry, its changes during the Independence period along with existing challenges;
- Outline the main provisions of the Law of Ukraine "On Seaports of Ukraine";
- Discuss the financial performance of the "Stevedoring Company "Olvia", conduct expert diagnostics of the financial state of the company, form a financial screening model;
- Analyse the economic expediency granting the "Stevedoring Company "Olvia" into a concession, make a relevant conclusion based on obtained results.

The methodologies for conducting the research include the empirical analysis of currently existing policies, methods and practices, evidential assessment of the actual state of affairs, Porter's Five Forces analysis, Altman's Z-score model to determine the company's solvency, "diagnostics by signals" screening model to reveal the bottlenecks in the financial outlook, accumulated capacity and export growth formula to forecast the long-term cargo throughput, a probabilistic method to assign weights of possible scenarios and net present value method to conduct the return-on-investment analysis.

The actuality of the topic stems from the ambitions of Ukraine to move further towards the integration with the European Union, which presumes the alignment of standards, laws and business practices. As the societal pressure to reform the nation's economy intensifies, the government would inevitably need to concede and back profound reforms at some point, hence the awareness of the contemporary public-private partnership schemes is necessary to be properly prepared for the nearest future.

# **CHAPTER 1**

## **SCIENTIFIC BACKGROUND OF PRIVATE INVESTMENTS IN SEAPORTS**

### **1.1 State's policies on the development of national logistic infrastructure**

The research encompasses numerous issues related to the development of the national logistic strategy and its relation to foreign economic activity. The actuality of the topic can be traced to the worldwide trend of an intercontinental economic integration, which accelerated dramatically in the second part of the 20th century. As the wealth is spread unequally across the globe, some nations experience a vast surplus of capital, while others, in turn, are in a dire need of liquidity. The mentioned fact leads to a phenomenon of a global flow of capital, where investors from developed countries see the opportunities for tremendous gains by investing in rapidly developing economies, which are in demand of funding to grow its infrastructure. To conduct the analysis of the overseas business engagement in the maritime sector of Ukraine, it is crucial to determine the scientific grounds of the topic in question. Accordingly, the theoretical part of work contains an elaborate notion on the concepts of national logistics infrastructure and strategy, investment, foreign direct investment and progress of global shipping in a globalized economy.

National logistics strategy or logistics policy can take many forms. However, the overarching purpose of a national logistics strategy is to set out the national priorities and goals in the area of logistics in the short-, medium- or long-term, and to bring together the key steps that are considered necessary for the achievement of the national aims. A key driver for the national logistics strategies is to increase policy coherence across the management of the industry and to systematically address the changing global environment.

While generally under one ministry, such as the ministry for transport or a ministry in charge of economy or commerce, the development process can involve the participation of a wider range of stakeholders. In addition to relevant government agencies, such as customs, ministry of trade and ministry of industry, private sector actors (most commonly represented by logistics associations and chambers of commerce) and academics can also contribute to the development of the strategy. In addition, national logistics operators, such as the railway company authority, port operator or national carrier, need also to be included in the strategy development process [17].

Many national policies identify priority infrastructure developments. The priorities can be determined by the identification of transport corridors, key terminals (in particular ports), preferred transport modes (for example rail or inland waterways) or priority facilities (e.g. logistics centres), or be directed through the selection of key industries. Infrastructure development contributes to the creation of a more efficient and effective logistics system and promotes intermodality, which is recognised in the plans as a key element to modern logistics. For this reason, logistics centres and terminals are emphasised in several national logistics plans. A national strategy can also outline the required steps for the streamlining of logistics regulation and policy. Facilitation measures, such as the introduction of national single windows and review of customs procedures, contribute to the efficiency of the logistics sector and enhance the competitiveness of the country as a contributor to global supply chains [17].

Many national strategies recognise the changing nature of logistics service providers and commit to the development of domestic industry in line with international trends. This may involve assistance for companies entering 3PL services, preferential treatment of companies expanding their service offering, and support for mergers and acquisitions to improve efficiency and competitiveness of domestic companies. Public institutions may also be encouraged to outsource their logistics functions as a way to offer more opportunities for the domestic industry to develop their services.

The industry can be promoted through initiatives and aims relating to skills and qualifications. This can include plans to introduce professional accreditation and promoting further education in the industry, in addition to the measures aimed at liberalising the employment of foreign nationals to fill in gaps in national know-how. Domestic logistics courses may be upgraded to international standards to provide more opportunities for capacity development. While focusing on industry-specific skills, general business skills may also be included to take into account the need for a change in the skillset for the logistics workforce.

As a related aim, the development of the industry can be supported with the promotion of harmonisation and minimum standards in the industry, either through the development of regulation or other means, such as providing incentives to those who adopt standardised systems. The working conditions of employees working in the logistics sector, particularly truckers, may be addressed through a national strategy and master plan [17].

National strategies may also develop new forms of institutional support for the development of the logistics industry. The most comprehensive approach can be the development of a national logistics council/committee in charge of the implementation and further development of logistics policy. Institutional support can also include the establishment of logistics research institutes to promote innovation and creation and sharing of knowledge.

Finally, national plans may outline the plans for implementation, including timeline and implementing agencies. According to national priorities, additional categories can be added, such as support for SMEs, promotion of e-logistics or the enhancement of green logistics.

While the development of a national strategy can be a time-consuming and costly exercise, a national logistics plan has several benefits. Firstly, it outlines a common understanding of national priorities in the fields relevant to logistics. Coordination of actions by various government agencies and the private sector is very complicated, and the various stakeholders may have different views on the appropriate action at different stages of industry development. By going through the consultation processes related to

the development of a national strategy, stakeholders can agree on a common direction, and thus better determine their contribution to the development of the industry. A related benefit is the use of logistics capacity development funds in a more efficient way because actions are consistent and do not duplicate work by other agencies. A high-profile national strategy can also serve as a sign of government commitment to the development of the logistics industry and national and international connectivity. By setting concrete targets, the performance of the relevant agencies can be measured against the national strategy and implementation plans [17].

## **1.2 Approaches for the establishment of national logistic infrastructure**

There are several tools behind the setting of national logistics infrastructure. Logistics is an activity consuming space and the location of these activities plays a significant part in their efficiency. Providing a land base for logistics infrastructures and activities involves the setting of logistics zones and inland ports as well as other supportive activities. The most common strategies are demonstrated in Figure 1.1 and involve the following [13]:

- Logistics park. Develop zones supporting logistics activities, particularly through the principle of economies of agglomeration. This lowers operational costs and promotes the setting of logistics services firms. However, the setting of logistics parks has been a strategy followed by many jurisdictions with the expectation of job creation and economic growth, leading in many cases to an oversupply of logistics zones, many with a low level of occupancy. Another risk is that the designed function of the logistics park may not be meeting market demands.

- Port-centric logistics zone. Develop logistics zones adjacent to port terminal facilities to use the scarce port real estate more effectively. This facilitates imports and exports since the zone has direct access to the port terminal, often not requiring to use the terminal gates. Since many of the freight does not need to enter the local transport

system, this can help reduce congestion. However, the land base nearby port facilities usually have higher land values, which can put some pressures on the returns on investment and the type of activities that can locate there.

- Inland/ dry port. Develop inland terminal facilities co-located with logistics zones for the purpose of servicing more effectively a regional market. They can promote a modal shift if the facility is connected by rail or barge services, which may also reduce port terminal congestion if some port-related logistical activities are relocated inland. An important aspect relates to the setting of economies of scale along the corridor, enabling to service more cost-effectively the inland facility. Similar co-location benefits to those observed at port-centric logistics zones are taking place at inland ports. Like logistics zones, there is a risk for the duplication of inland ports and having many facilities underused.

- Inland container depot. Develop facilities for users to pick up and drop containers outside terminals. This provides a pool of containers for exporters with the potential of reducing port congestion since import containers do not need to be brought back to the terminal facility. The main risk involves an unsuitable location for the inland container depot, leading to longer drayage costs. There may also be not enough demand to support such a facility, which is more suitable when a terminal (port) reaches a high level of activity [13].

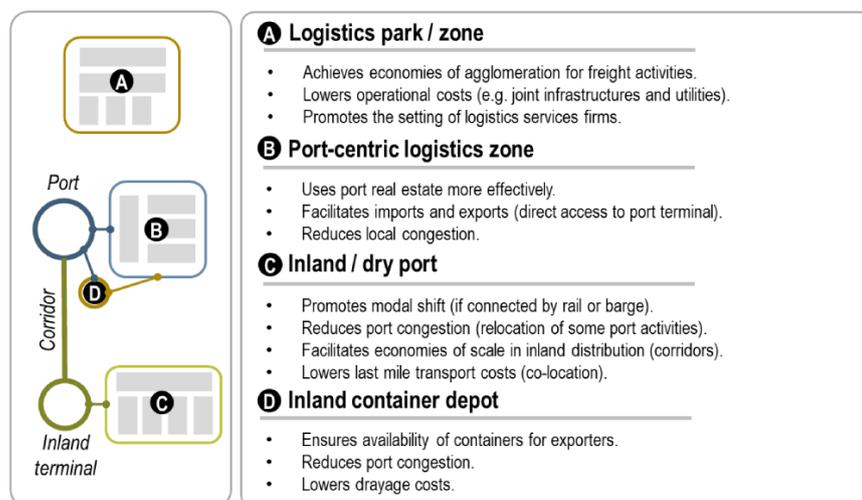


Figure 1.1 - Coordination and implementation of national logistics policies: providing a land base for logistics infrastructure and activities

### **1.3 Foreign direct investments: concept, types, benefits and challenges**

Foreign direct investment is defined as investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy'. The lasting interest means the existence of a long-term relationship between the direct investor and the enterprise. A significant degree of influence by the direct investor on the management of the direct investment enterprise is also required. The basic criterion for influence used by international organisations such as OECD is the ownership of at least 10 per cent of the voting power. Control by the foreign investor is not required but lower shares than 10 per cent count as portfolio investments [11].

FDI is usually undertaken by a multinational corporation (MNC). MNCs are companies that have established operating units via FDI in at least two countries. Via FDI, MNCs establish a so-called foreign or local subsidiary. The MNC or investor owning this foreign subsidiary is usually called the parent company. An investment involves both the initial transaction between the parent and the subsidiary and all subsequent transactions.

FDI has three components:

- Equity capital is the foreign direct investor's purchase of shares of an enterprise in a foreign country.

- Reinvested earnings comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested.

- Intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between parent enterprises and affiliate enterprises.

There are two types of FDI:

1. Greenfield investments take place in new facilities or the expansion of existing facilities. An example is a beverage company establishing a new production unit in

Nigeria to produce and sell beverages for the Nigerian market. Greenfield investments are the primary target of a host nation's promotional efforts because they create new production capacity, jobs and transfer technology and know-how. However, in the case of establishing an entirely new subsidiary, greenfield investments also involve a high risk for the investor who will have to build up an entirely new unit and faces the risk of not being able to build relationships with customers or suppliers or not being able to recruit the necessary personnel.

2. Mergers and acquisitions take place through a transfer of existing assets from local firms to foreign companies. Cross-border mergers occur when the assets and operation of firms from different countries are combined to establish a new legal entity. Cross-border acquisitions take place when the control of assets and operations is transferred from a local to a foreign company, with the local company becoming an affiliate of the foreign company. Typical risks of performing mergers and acquisitions are the integration of the acquired company causing problems due to cultural, structural, technological, or procedural obstacles. A famous example of the materialisation of such risks was the acquisition of Chrysler by Daimler Benz in 1998, eventually resulting in the divestment of the acquired unit in 2007 [11].

FDI may also take different forms:

- A wholly-owned subsidiary is a company controlled by another company or corporation. Subsidiaries are separate, distinct legal entities for the purposes of taxation and regulation. They are distinct from divisions, which are entities fully integrated within the main company, and not legally or otherwise distinct from it.

- A joint venture is a strategic alliance between two or more parties to undertake economic activity together. The parties agree to create a new entity together by both contributing equity and then share the revenues, expenses and control of the enterprise. The venture can be for one specific project only or a continuing business relationship. Other than wholly-owned subsidiaries the partners in a joint venture are and remain independent units with partly common but partly conflicting objectives.

- Minority holdings are investments by a foreign direct investment that exceed that threshold of 10 per cent (see Section 5.2) and allow some influence on the local

subsidiary. Nevertheless, the foreign investor does not exceed full or joint control over the company. An example would be an MNC acquiring a 20 per cent 'seed investment' in a local telecommunications company with the remaining 80 per cent owned by a local investor. In this case, the foreign investor does not exceed full control but may still influence the business, for example by nominating one or two persons for the board of directors. MNCs might use such minority investments to gain a first foothold into a country while later expanding their participation. Also, some countries such as China exceed restrictions on majority holdings [11].

There are a number of popular misconceptions about FDI.

- FDI does not necessarily imply control of the enterprise since only a 10 per cent ownership is required to establish a direct investment relationship.

- FDI does not constitute a "10 per cent ownership" (or more) by a group of "unrelated" investors domiciled in the same foreign country—FDI involves only one investor or a "related group" of investors in one or more countries.

- FDI is not based on the nationality or citizenship of the direct investor—FDI is based on the residence of the direct investor.

- Borrowings by direct investment enterprises from unrelated parties abroad that are guaranteed by direct investors are not FDI [11].

The different forms of FDI may be used to realise horizontal as well as vertical investments [12]:

- Horizontal investments refer to the reproduction abroad of company processes which are already carried out home. Examples are Volkswagen's automotive operations in Brazil and Mexico producing for the Latin American market.

- Vertical investments relate to the setting up of business processes which are not carried out at home. For instance, Cemex, a Mexican building materials firm, has offshored parts of its R&D activities to Switzerland due to better access to qualified labour and closeness to technical universities. Another example is Swiss banks, such as Credit Suisse, having offshored parts of their human resource activities to Eastern European countries such as Poland. Similarly, some large consulting companies such as McKinsey have allocated a share of their back-office processes to India.

Local companies usually have a better understanding of the local market, the local customers and other country-specific conditions. MNCs are able to compete successfully with local competitors because they are often in possession of advanced technologies, management, marketing know-how and economies of scale. But what motivates multinational corporations to internationalise and perform FDI in the first place? There is a variety of reasons [12]:

- Acquisition of resources: a company may decide to invest in a foreign country to exploit resources which it does not possess in its home country. For example, in the nineteenth-century industrial companies in Europe and North America moved overseas to exploit raw materials such as oil, bauxite, rubber, or iron ore.

- The exploitation of country-specific factors: companies may also decide to perform FDI to take advantage of country-specific production factors. For instance, global toy and textile manufacturers have established production units in China because of lower labour costs. Such expansions can also be directed towards the acquisition of knowledge or technological skills: European and Japanese IT companies have established research units in California's Silicon Valley because they want to take advantage of the available qualified labour and the benefits of industry clusters. For similar reasons, US textile manufacturers have established design studios in Italy.

- Realise profit and growth opportunities: a firm may decide to invest abroad because a foreign country can offer better opportunities for growth or profit than the domestic market. For example, a weak domestic economy may motivate an MNC to seek FDI. Also, an MNC may go abroad because a domestic market may have reached saturation for a certain product [12].

- Risk diversification: the internationalisation of operations permits the spreading of country-specific risks. The riskier the domestic economy is perceived to be, the more attractive FDI becomes compared to domestic investments. For example, in the global economic crises of 2008 and 2009, many MNCs were able to stabilize their earnings because of their global presence. While volumes and prices in Europe and the United States were often negatively affected by the global recession, many emerging markets, such as India, Brazil, or China performed reasonably well. Another phenomenon in this

context are emerging market companies such as the Indian steel producer Mittal Steel consequently seeking FDIs in the United States and Europe in order to reduce their emerging market risk.

- Overcoming trade barriers: FDI is an alternative to exporting. The greater the cost of exporting, either from transportation or tariffs, the more attractive it becomes to establish a foreign production unit. For instance, the imposition of tariffs and quota restrictions on Japanese automobile exports to the United States was a principal factor in establishing Japanese plants in the United States [12].

Friction between the home and host countries of multinational enterprises (MNEs) generally arises because of their different laws, regulations, and policies, which MNEs can counteract or exploit, and by so doing, affect the cross-border distribution of the costs and benefits. Perhaps the most obvious examples can be found in the areas of taxation and transfer pricing, where the nature of the competition for the benefits of MNEs' activity is not always very transparent- but each country would certainly like to gain as high a share of the taxable income as it can. Similarly, conflicts between home and host countries might arise over the remission of dividends and the repatriation of capital between the foreign subsidiaries and their parent companies. Clearly, such conflicts will also arise whenever the assets of a foreign affiliate are expropriated by a host government without adequate compensation. In a variety of other fields, the MNE may act as a transferring agent, or even an arbitrager, of country-specific institutional differences. Take, for example, the contemporary issues related to labour and environmental standards, or those relating to securities legislation, information disclosure, and accounting procedures. The cultural clashes are also among possible risks for the spread of MNEs.

Perhaps the most sensitive issue surrounding the effects of MNEs' activity is its perceived impact on national security. Even the most liberal of countries, which otherwise practice a policy of neutrality toward inward investment, impose restrictions on the participation of foreign firms in its security-sensitive industries. Indeed, before the current focus on security-related issues, such restrictions were already quite prevalent, in developed countries like the United States, France, Japan, and Israel, as

well as in a number of emerging economies like Brazil, China, India, Russia, and Pakistan [12].

#### **1.4 Impact of globalisation processes on shipping**

Globalisation and the changes in international trade patterns have significant influences on port and shipping industries, leading to alliances and competitions at the regional and international levels. Recently, we have witnessed the consolidation of shipping routes, globalisation of shipping lines and cooperation of port operators. In addition, production has moved from being “firm-focal” to “port-focal”, in which the port region plays an increasingly important role. Such a process has comprehensively transformed the port system, and many proximate ports that initially competed with each other have started to cooperate in various aspects and/or establish a more complementary relationship. Such a process has led to the formation of port regions around the world.

The evolution from firm-focal production to port-focal logistics, and the rise of the port region, can be explained basically as a result of some major drivers and trends. To make a clearer and more precise analysis, the description is focused on the container sector. The majority of conclusions can be easily extended to the rest of the shipping sectors but introducing some changes from the idiosyncrasy of each of them. For that, the starting point is the fact that the shipping network has shaped port systems and so the drivers governing the shipping networks can provide part of the answer. The other parts come from the hinterland side and the ports in themselves [9].

There are six main types of drivers acting on transportation: demography and social changes, energy and environment, technology, economy, finance and policy. In general terms, the demographic drivers will still keep increasing international trade. The economic situation is increasing the short-term risk of the shipping business, making higher the investment cost and making then easier the consolidation of the

sector, as a reaction. The energetic cost will play an important role in any modal shift, due to its importance in the transport cost. Finally, regarding policy measures, the most important impacts are allocated in the efficiency of the transport system, reduction of the administrative efforts and climate change [9].

A global view of the port's evolution will help to particularize these drivers and trends to the specific case of the container sector. develop a four-phase model of shipping line development, which can be used to explain the port evolution. In the first phase, shipping service is one-to-one with local or regional cargo and high government involvement in the port sector. In the second phase, the region gets better overseas markets. A first hub-and-spoke structure appears and the connectivity to overseas markets makes the region more attractive to international shipping and port operators, the process in which there is a change of port regulation and governance model to make this entrance easier. In the third stage, there is more traffic growth consolidating the hub-and-spoke network and inclusion of other ports into the system. In many cases, in this stage, the role of government has been substantially reduced. Finally, in the fourth phase, the market size allows shipping lines to offer services from these ports to the overseas and the hub seeks more connectivity to ports without access to overseas regions. It is noted that the main elements describing each phase are as follows: the topology of the shipping network (from one-to-one to hub-and-spoke with several levels of complexity), shipping companies, terminals operators, port regions, and port governance.

Regarding the consolidation of the shipping sector, during the last two decades, an important consolidation tendency has occurred in different formats, such as consortia and strategic alliances. Currently, the three largest shipping lines– Maersk, MSC and CMA-CGM– concentrate nearly 40 per cent of the world's container capacity (in terms of TEUs) The use of large container ships as a result of the growing market and a decrease of economic and financial risk from cooperation serve as the main reasons for such a tendency [9].

The same factors governing the dynamics of the shipping sector help to explain the consolidation process in the port sector. Here three stakeholders play the major

roles: stevedoring companies, shipping lines and financial holdings. With market growth, stevedoring companies expand their business to other ports (from local to regional/international levels) but keeping themselves as the port terminal operator (horizontal integration). Illustrative examples include Hutchinson Port Holdings (HPH), Port of Singapore Corporation (PSA), and Dubai Ports World (DPW). This is not the case of some shipping lines, of which they have extended their activities to the port sector (both public and dedicated terminals), such as Maersk (and its APM Terminals). This vertical integration allows shipping lines to ensure their port performance needs, a key element for shipping business, especially with the mega vessels, and to take over the market expansion. In the last decades, the competition for cargoes has transformed the competitive framework: from the port perspective to the logistics corridors, making a vertical integration (investing in the port and the hinterland) necessary for the maritime shippers in order to take over the market. Of course, this has also facilitated the globalisation of production and accelerated the process of developing port-focal logistics as stated earlier. All these important port expansions required huge investments, not just because of the increase in the number of terminals, but also the fact that terminals are becoming more automated, that is, more capital-intensive. In addition, the long-term expected revenues have made attractive the shipping and port sectors. Both factors explain the entrance of the financial holdings, through acquisitions, mergers and reorganisation of assets, to shipping and port industries. Morgan Stanley Infrastructure serves as an illustrative example. The horizontal and vertical integrations in the shipping and port sector have been reflected in the shipping network. Hence, port selection is based not only on the physical characteristics and location of ports but also on their efficiency, hinterland access and the market strategies of shipping lines [9].

## **CHAPTER 2**

### **ANALYTICAL JUSTIFICATION OF INVESTMENT EXPEDIENCY IN THE PORT OF OLVIA**

#### **2.1 Global port privatisation trends**

Globalization has contributed to the development of networks and led as to the emergence of extended supply chains. Ports as the independent segments of independent of such chains gradually turned to become their integral parts, which have a strong relationship with end suppliers. As a result, major port operators face the problem of ensuring cohesion between port facilities with inland infrastructure, logistics processes and the market in general. Ways in which the port to achieve competitive advantages include investment in equipment, space, infrastructure and new assets, as well as streamlining operations and developing internal network areas.

In order to identify areas for progress in port operations, it is necessary to find out the relevant areas of activity that are related to the company's strategy. As integration has become a core concept of 21st-century's port strategy, the author mentions areas such as cargo handling and storage, information exchange between departments, agencies, parties involved and business, and the creation of IT networks and software that covers the entire supply chain as the most important vectors of port development. Thus, the existing strategy of operational progress is focused on ensuring communication and smooth coordination between segments of the chain [8].

From a strategic point of view, the journalist in an interview with Jeremy Yim, CEO of Hutchison Ports Holding, revealed the basic principles of port investment and cooperation implemented in the company. According to the manager, "when considering port investments now, the share of gateway traffic is the main determinant. If it is purely congestion, then the risks are very high." A strict view of transshipment nodes is justified by the high variability due to dependence on the external market

factors such as demand and existing constraints. Thus, Hutchison Ports focuses mainly on the gateway ports with the largest number of cargoes going to the domestic market of the importing country at the level of at least 80 per cent of cargo turnover [32].

A compelling example of this approach is the port of Laem Chabang in Thailand. Recently, the facility received a unique fully remote-controlled system of rubber-tire and STS gantry cranes, the latter of which is one of the most innovative in the world, so that the 14000-TEU ship of Ocean Network Express could enter the Thai port [20]. According to forecasts, this technology will increase operational efficiency, safety standards and a favourable working environment. A special advantage of the facility operated in Hutchison is its location near the capital with a strong rail connection. The port of Laem Chabang also received an electronic tracking system. Capacity is expected to increase to 13 million TEU, showing a 40 per cent growth [33].

The company's main assets in Europe are in the UK [26]. In addition to the main facility in Felixstowe [28], the Holding owns the Thamesport Terminal in south-east London, which has undergone redevelopment and has become a facility focused mainly for heavy cargo. The change of specialisation was caused by a failure of competition to the Tilbury terminal and construction of the London Gateway port; this shortcoming was caused by poor railway and road infrastructure [31]. Responding to the current Brexit enquiry, the company's position seems very confident in the flexibility of its ports, operations and supply chains, thus dispelling doubts about the readiness of British harbours to the expected challenges [15]. As for other places in Europe, Hutchison has recently been granted a concession to operate the new Stockholm port of Norvik in Nynashamn, 60 km south of Stockholm. The only deep-water terminal on the east coast of Sweden is scheduled to start processing cargo in 2020 with an expected capacity of 450,000 TEU per year [14].

Major developments can be detected in the Middle East, particularly in Iraq and the United Arab Emirates [29]. Hutchison has signed a port management agreement at the port of Al-Makal in Basrah through cooperation with the port authorities of North America and West Asia. This decision was part of the company's regional strategy, as Basrah has historically been the gateway to the country [30]. The holding received a

25-year concession at the port of Sakr in Ras-al-Khaimah, located near the laissez-faire zone of the maritime city of Ras-al-Khaimah. The new 350,000 TEU facility has a strong export orientation and provides convenient access to the foreign market for manufacturers of ceramics, pharmaceuticals, glass, cement, gravel and other products [34].

## **2.2 Description of Ukrainian port infrastructure**

The mainland of Ukraine on the Black Sea and Azov basins, as well as in the Danube Delta boasts 13 seaports: Reni, Izmail, Ust-Dunaisk, Belgorod-Dniestrovsky, Chernomorsk, Odesa, Yuzhny, Mykolaiv, Olvia, Kherson, Skadovsk, Berdyansk and Mariupol, the total processing capacity of which is 240 million tonnes per year. The length of the berthing front of seaports is about 43 km, and the length of the canals (Kherson Sea Canal, Bug-Dnieper- Lyman Canal and Deep Sea Navigation of the Danube - Black Sea through the mouth of the Bystre) is 124.768 km (40 km, 81.368 km and 3, 4 km respectively) [21].

The largest seaports in Ukraine today are the ports of Yuzhny, Odesa, Mykolayiv and Chernomorsk, which account for about 80% of the total capacity of seaports in Ukraine. The key advantages of these seaports are the availability of deep-sea approaches, which make it possible to service large-capacity seagoing vessels, including those involved in the provision of services by non-state-owned entities. Other seaports in Ukraine can accommodate vessels with less draft, and the service of cargo flows, in the vast majority, is provided by state-owned stevedoring companies. [16]

Ukraine also has a network of ferry services, sea container lines connecting Ukraine with the ports of the Black Sea basin and is part of international transport corridors, such as TRACECA, "New Silk Road", Pan-European corridor no. 9 and others. Container lines are currently serviced by container terminals located in the ports of Odesa, the Black Sea and Yuzhny with a total capacity of 3,130,000 TEU per year.

This volume will soon be increased by 600 thousand TEU due to the newly created capacity of the container terminal at the Karantynnyi Pier of the Odesa Seaport. International and domestic passenger and cruise ships are serviced by seaports of Reni, Izmail and Ust-Dunaisk (with a port in Vilkovo), as well as a passenger complex in the seaport of Odesa. The study focuses on improving the understanding of port policy in Ukraine, its strategy and implementation. Thus, the study provides for the feasibility of attracting foreign capital in modernization projects and development of Ukrainian port facilities [21].

### **2.3 Current development of Ukrainian port infrastructure**

The port industry plays a key role in the growth of the Ukrainian economy and is part of the EU transport system: the total revenue generated by the market for services in Ukraine's seaports, according to the latest reports, was at least \$1.7 billion, equal to 2% of nation's gross domestic product.

According to statistics, the Ministry of Infrastructure of Ukraine received a little more than 3 billion UAH from the state budget in 2019. UAH 477 million went to the staff, of which UAH 113 million- to general management and administration in the field of infrastructure, UAH 163 million to ensure the operational safety of shipping locks, and management and administration in the field of sea and river transport was worth UAH 49 million [2].

In 2019, the Seaports Administration of Ukraine (USPA) plans to complete five major infrastructure projects in five ports. More than UAH 3.5 billion was invested by USPA in the development of port infrastructure, which exceeds the volume of investments by 3.3 times compared to 2015. More than \$100 million has been spent by USPA in port development over the past two years. In the coming years, Ukraine's port industry plans to raise \$ 926.65 million. The largest share of this amount is public-

private partnership projects, and thirty of them should raise more than one billion dollars [2].

The changes, however, began after the new government-approved preliminary appointments to the Ministry of Infrastructure. In particular, it identified two key areas: 1) privatization of facilities that are state property, and 2) the transfer of state strategic assets to the concession. In the case of the latter, revenues will increase at least 2.5-3 times, state property will be managed by the world's leading companies, which will be interested in investing their funds to develop the production base, new jobs and, consequently, make a profit. As a result, the state receives a significant effect in attracting investment from leading companies. Today, the port industry is facing the challenge of implementing such a model of investment and management. Thus, within the requirements of the current Law of Ukraine "On Concessions", measures are taken to form a tender commission to determine the concessionaire for state property of the state enterprise "Kherson Sea Commercial Port" and the state enterprise "Stevedoring Company "Olvia", as well as measures to initiate concession projects in the seaports "Southern" and "Chernomorsk". The implementation of concession projects is also provided by the indicative investment plan, which is designed to emphasize the importance of road safety, as well as digital solutions in new projects and bring design standards in line with existing EU practice.

The main advantages of the concession for Ukraine are that the concessionaire incurs all costs for financing, management and repair of facilities under his leadership, so the financial burden is removed from the state; the budget is replenished with the help of concession payments; long-term, stable relations between the state and the concessionaire are established; it is allowed to attract foreign capital without losing control over the land.

The disadvantages are that part of the risk passes to the state and the concessionaire may demand a refund, as the state as its partner is responsible for maintaining a minimum level of profitability.

Although no ambitious claims were made regarding the start of concession processes in major Ukrainian ports, no further action was taken, despite the interest of

global players, including Hutchison [16]. However, the management of seaports of Ukraine is intended to gradually move to the landlord port concept, and the first phase is the privatization of stevedoring companies in the ports of Olvia and Kherson. The goal is to eliminate all forms of state stevedoring services by 2030. For example, the port of Olvia, which may be one of the first to fall under the concession project, can bring the state at least UAH 87 million in fines a year. Currently, several companies are interested in the port- "Nibulon", one of the largest exporters and the Chinese port operator China Harbour. During the first three years, the plan is to build a new grain terminal in "Olvia" with a capacity of 2 million tonnes a year (investment of 1.56 billion UAH) and to conduct an immediate overhaul of assets in the port "Kherson" (investment of UAH 216 million) [2].

Thus, it is possible to conclude that Ukrainian ports should not compete with each other but compete with European and global ports. With the help of concessions, the country can restore obsolete transport infrastructure within 3-4 years, the unsatisfactory condition of which is an obstacle to the use of Ukraine's huge transit potential.

#### **2.4 Legal features of port concession**

The basics of privatization of port infrastructure were laid down in the Law of Ukraine "On Seaports of Ukraine", which entered into force on 13.06.2013 and divided port infrastructure into strategic (not subject to privatization) and non-strategic (subject to privatization). However, due to the imperfection of legislative regulation and the presence of all ports in the List of objects of state property that are not subject to privatization, approved by the Law of Ukraine №847-XIV of 07.07.1999, privatization did not work 4].

The Law of Ukraine "On Privatization of State and Communal Property" adopted in 2018 improved and systematized the legislation, in particular, provided for the possibility of privatization of individual property, which is the most acceptable

scenario for most ports given the existence of lease relations. However, there have been no global changes in the system- the issue of port privatization remained unresolved [4].

On 2nd October 2019, an important event took place in reforming the privatization system- the Parliament deemed the Law of Ukraine "On the List of State Property Objects Not Subject to Privatization "as null and void, which entered into force on 20 October 2019. The explanatory note to the Law states that the List contains information that has lost relevance in terms of the names of public administration bodies and enterprises, and also does not contain grounds for their inclusion in the lists. Thus, there are currently no formal obstacles to the privatization of port infrastructure, and therefore the further development of the process depends primarily on the political will of the state leadership [42].

The position of the Minister of Economy is that strategically important state-owned enterprises will not be privatized. Given this criterion, seaports are not subject to privatization, as they are included in the list of state-owned objects of strategic importance for the economy and security of the state (Resolution of the Cabinet of Ministers of Ukraine of 04.03.2015 №83). Recent public speeches by the Minister of Infrastructure in the context of the development of the port sector also indicate that concessions are preferred over privatization. In any case, it will be possible to assess the prospects of port privatization more objectively after 1 December 2019, when the Government will fulfil the President's order to form and include the State Property Fund of Ukraine (SPFU) in the list of enterprises for small-scale privatization.

Concessions are considered to be one of the most widespread, effective and progressive forms of public-private partnership (PPP) worldwide. For the state, the concession is always an instrument of economic growth and increasing the level of market competition, attracting managerial resources, the latest equipment, technology and modern organization of production processes while reducing budget costs. The investor is also interested in the concession given the possibility of risk sharing, guarantees of protection of the rights of the concessionaire, the imposition on the state of obligations to facilitate the implementation of projects.

Most large-scale concession projects in recent history is a tunnel under the English Channel (the date of the contract- 1986, the volume of investments – GBP 9 billion, the term of the contract- 99 years), Kai Tak Airport, Hong Kong (1994 g., USD 20 billion), 407 Express Toll Route, Canada (1999, USD 3.1 billion, for 99 years).

To date, about 83% of PPP projects in the port industry have been implemented in the form of concessions. Successful examples include the construction of a new container terminal in the port of Samsun, Turkey (2008, USD 125.2 million, for 36 years), the modernization of three terminals in the port of Burgas, Bulgaria (2013, USD 127 million, for 35 years), construction of a container terminal in the port of Constanta, Romania (2003, USD 100 million, for 46 years). In 1993, four public ports in Colombia were leased to a private partner, which increased competition and the quality of services and conditions for dockers. The concession of Mexican ports in the mid-1990s helped to compete with the southern ports of the United States, taking away part of their cargo flow due to economically attractive transshipment tariffs [42].

According to the SPFU, 144 concession agreements have been concluded in Ukraine so far, of which 136 related to communal property and only 8 to state property in the field of roads, energy and coal industry, and both agreements on road construction were terminated shortly after their signing in early 2000. Such disappointing data of the Fund clearly shows that, contrary to the experience, the concession mechanism in Ukraine did not work, because no large-scale infrastructure project has been implemented. The reasons were outdated and inconsistent concession legislation, lack of clear and understandable rules, and excessive bureaucratisation [42].

Finally, on 3 October 3,2019, the Parliament adopted the long-awaited Concession Law №155-IX, which entered into force on 20 October 2019. The law provides for a number of innovations and changes to the legislation to revive the concession mechanism, creating conditions for investment, first of all, in sea and river ports, highways, airports. Described above legal regulations of privatization and concession are systematized in Table 2.1.

| The legislative basis for the privatization of Ukrainian ports  | The legislative obstacle to privatization   | The legislative basis for the concession of Ukrainian ports  |
|---|---|--|
| The Law of Ukraine "On seaports of Ukraine", which came into force 13.06.2013 – attributed facilities of port infrastructure to strategic (not subject to privatization) and non-strategic (for privatization). | The Law of Ukraine №847 XIV of 07.07.1999 ports are included in the List of objects of state property rights that are not subject to privatization<br>-<br>REPEALED ON 20/10/2019 | The Law of Ukraine “On Concession” №155 IX of October 20, 2019 – a number of innovations and changes to the legislation that should revive the concession mechanism, creating conditions for investment, primarily in the sea and river ports, highways, airports. |

Table 2.1 - Development of legislation on concession activity in Ukrainian ports

The concession provides for granting the concessionaire the right to create, build, manage the object of the concession, provide socially significant services under the conditions specified in the concession agreement. The law defines, in particular, a single procedure for initiating and deciding on the implementation of a PPP in the form of a concession; introduction of a transparent procedure for selecting a concessionaire (concession tender, competitive dialogue); the possibility of involving advisors and independent experts; replacement of a concessionaire with another concessionaire; simplification of land allocation procedures for concession projects; the procedure for transforming the lease into a concession; the possibility of transferring the settlement of disputes to international commercial or investment arbitration; the possibility of initiating a concession by a potential concessionaire; clear mechanism of control and

monitoring over the implementation of concession agreements; regulation of ownership of the concession object, etc. It is worth focusing on some key innovations of the Law [1].

Currently, the vast majority of PPP projects in Ukrainian ports are implemented on the basis of state real estate lease agreements, but this form is outdated and involves passive use of leased facilities with limited rights and opportunities for the lessee to improve and modernize them. The significant depreciation of fixed assets in Ukrainian ports does not allow tenants to effectively use the leased property, and the procedure for obtaining the consent of the SPFU for the implementation of non-negative improvements is delayed for many years. In addition, the lack of land rights does not allow tenants to carry out reconstruction and new construction. Under such conditions, the issue of transition to a concession through direct negotiations is very important for many port workers [1].

The law establishes the conditions under which a concession agreement may be concluded by conducting direct negotiations with a tenant of state property without a tender [3]. In particular, the conclusion of a lease agreement before the entry into force of the Law; the lessee's intention to implement a concession project using leased property that requires additional investment; proper fulfilment by the lessee of the terms of the lease agreement and the absence of significant violations of its obligations, which is established by the SPFU based on the results of a special inspection; the term of the concession agreement shall not exceed the term of the lease agreement and shall be not less than 5 years and not more than 50 years.

The Law clearly regulates the actions that must be performed by all interested parties to the contract to implement the mechanism of transformation of the lease into a concession. The procedure can be initiated only by the lessee, and the final decision on the transition to the concession is made at a meeting of the Government subject to prior approval of the Ministry of Economy on the feasibility of the PPP. However, a significant shortcoming of the Law is the lack of deadlines for consideration of materials by the Ministry of Economy and the Cabinet of Ministers of Ukraine, which hides the risk of delaying the procedure indefinitely [3].

An important stage of transformation is the inventory of property that is part of the leased object. Inalienable improvements, regardless of the presence or absence of the Fund's consent, are state property subject to the transfer of such improvements, devices and objects to the concession. The cost of these improvements is not taken into account when determining the amount of the concession fee. In the case of concluding a concession agreement, non-negative improvements made with the consent of the Fund are not subject to compensation. The flow chart depicted in Figure 2.1 gives a simplified idea of the process of putting the port infrastructure in a concession in accordance with current legislation [3].

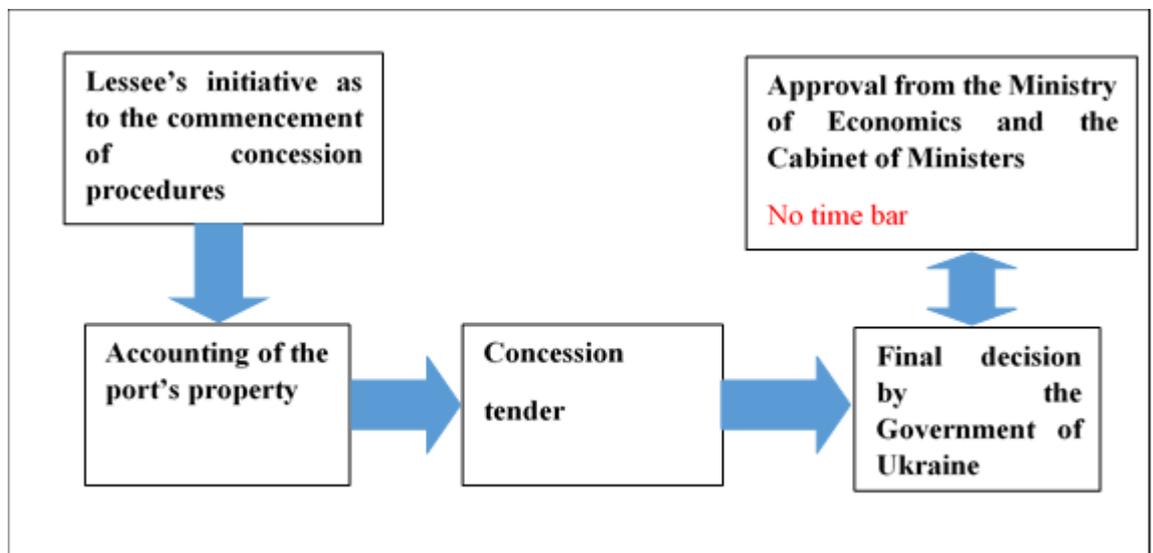


Figure 2.1 – The process of transition of the port into a concession in accordance with the Law on Concession №155 IX of 20.10.2019

The lease agreement is considered terminated from the moment of concluding the concession agreement. If the object of the concession is a part of the leased property, the contract is terminated in the relevant part. At the same time, the Law does not provide for the need to return the property to the landlord under an act and that is a positive decision, given the possible delay in the process by the Fund.

The objects of concession may be integral property complexes and individually identified property that is not the object of lease. The transfer of the existing object of concession to the concessionaire, including its further reconstruction, restoration,

overhaul, technical re-equipment by the concessionaire, does not presuppose the transfer of ownership to the concessionaire. Real estate newly built by the concessionaire under the contract also remains in the state/ municipal ownership. The concessionaire has the right to lease part of the concession object, which may be due to the peculiarities of the production process. The list of such property and the conditions of its transfer must be established directly in the concession agreement [3].

An important provision of the Law is the directly established possibility of pledging property rights under a concession agreement, but only the entire set of such rights subject to agreement with the concessionaire. Besides, foreclosure on the subject of the pledge is carried out exclusively by replacing the concessionaire and is implemented by signing an additional agreement between the concessionaire and the new concessionaire [42].

Comparing the institution of the pledge of property rights under the concession and lease agreement, we can say that as security for credit obligations, international financial organizations are ready to pledge the property rights of stevedoring companies under real estate lease agreements in the port, because such rights are certainly a valuable asset. under which the company can attract additional funding. However, unlike the concession, the pledge of property rights under the lease agreement is not directly provided by law, and therefore should be guided by the general provisions of the law on the procedure for replacing the debtor in the obligation (Article 520 of the Civil Code of Ukraine), which assumes receiving getting a permit from the lender-lessor in a person of the Regional Branch of the SPFU. However, in practice, the SPFU has never granted such a permit, without which it is impossible to recover the property rights of the lessee and effectively protect the interests of the mortgagee [3].

The law provides for the lease to the concessionaire of land plots of state or communal ownership for the term of the agreement, necessary for the implementation of the concession project. Authorised bodies of executive power, bodies of local self-government are obliged to transfer to the concessionaire for using the land plot (plots) determined by the concession agreement. Relevant amendments were made to the Land

Code. The procedure for providing land plots for project implementation and their detailed list is considered by the Law to be essential conditions of the concession agreement.

The law provides for the right to freely choose dispute resolution mechanism at the request of the parties, including mediation, expert opinion, national or international commercial or investment arbitration, including arbitration and location of a party abroad [3].

Due to reform of the judicial authorities and certain unstable processes in the proceedings, such a step is justifiable, as the guarantee of fair trial proceedings is one of the first requirements of the investor. A concession agreement is governed by the legislation of Ukraine, but the design rules allow to apply different procedural rules, probably, on the regulation of its individual provisions.

In summary, it can be argued that the Law contains a number of positive and progressive provisions that correspond to the world practice of regulating concession relations. In addition to the adoption of the Progressive Law, the priority of the concession scenario for port development is also evidenced by such documents as the provisions of the Seaports Development Strategy of Ukraine until 2038 and the recent concession announcement by the Ministry of Infrastructure for the “Stevedoring company “Olvia” and Kherson Seaport [2]. According to preliminary estimates, within the framework of the projects, it is planned to attract investments in the amount of 250,280 million US dollars. The successful holding of concession tenders and the successful start of pilot projects will be a litmus test for investors and will demonstrate the state's readiness for systemic changes in the port sector.

## **2.5 Description and business analysis of the “Stevedoring Company “Olvia”**

Port point was organized in the Bug estuary, which was awarded the title of "Oktyabrsk" by ministerial order of Navy of USSR from February 12, 1966, № 29. Port point has been built on the left bank of the Dnieper-Bug estuary, at a distance of 1.5 miles from Mykolaiv and 37.6- from Ochakov. In 1992 State Enterprise "Specialized seaport "Oktyabrsk" was founded, Order of the Ministry of Infrastructure of 17.10.2016 №354 renamed the State Enterprise "Stevedoring Company "Olvia". According to the Cabinet of Ministers of Ukraine on January 25, 2017, №46 Specialized seaport "Oktyabrsk" renamed to specialized seaport Olvia. The port belongs to a group of ports in the North-West Black Sea. There are 8 harbours: Belgorod-Dniester, Chornomorsk, Odesa, Yuzhny, Olvia, Mykolaiv, Kherson, Skadovsk. Vessel's approach into the port is carried out on the Dnieper-Bug estuary channel. According to the rules of navigation on the channel, the depth and length of the mooring line can accommodate vessels up to 230 meters in length, a width of up to 32.5 metres, deadweight up to 80 thousand tonnes. Project depth at the berths - from 9.75 metres to 11.5 metres, but straight depth of BDLC restricts the capabilities of the enterprise for receiving vessels is 10.3 m. The port is located on the left bank of the Dnieper-Bug estuary. The approach of the vessels in port carries through the Dnieper-Bug estuary channel. The distance from Ochakov to Olvia– 37.6 miles. The navigation season lasts the whole year [51].

The unique enterprise that conducts stevedoring operations at the seaport is the state enterprise “Stevedoring company “Olvia”. The territory of enterprise is classified as transport land providing port service and constitutes 178.8 hectares. The depth and length of the mooring line– 1.53 kilometres (7 berths), it will be able to handle ships with the depth up to 230 metres, width up to 32.5 metres, deadweight up to 80 thousand tonnes. The declared draft in the port which is limited by Dnieper-Bug estuary channel checkpoint depth -10,3 metres. For storage of goods, there are provided about 277.2 thousand square metres m open and 41.1 thousand square metres of covered storage

areas (some of them- 19 thousand square metres- long rear warehouses). The whole warehouse infrastructure is provided by road and rail access roads. Cargoes entire through the railway station "Zhovtnevaya" of Odesa railway. Passport processing capacity of the SE "Stevedoring company "Olvia"- 2570 thousand tonnes of dry cargo per year. Loading and unloading operations are carried out by universal gantry cranes of the types Albatros, Albrecht, Sokol, Kondor, Siberian Crane, with capacity varying from 10 to 40 tonnes, in total 22 units.

There are the following types of handling equipment:

- Mobile hydraulic excavator Terex Fuchs, cargo capacity is 20 tonnes;
- Forklift Toyota, Konecranes, Kalmar, Hyster, Komatsu, Maximal, capacity from 1.5 to 25 tonnes;
- Bucket loaders Chanling, Amkodor, capacity up to 5 tonnes;
- Bobcat loaders with a carrying capacity of 0.5 tonnes;
- Shunting tractors, equipped with rail outcoupling devices;
- Terminal tractors Sisu, Terberg, Kalmar;
- Park of roll-trailers [51].

Olvia is the eighth-largest port in the country by cargo turnover, handling 3.1 million tonnes in 2019 [22]. The structure of the port sector in Ukraine is rather diverse and even volatile, as there are hardly any harbours persistently keeping a leading position in any segment of the trade. The text below indicates a SWOT (strengths-weaknesses-opportunities-threats) analysis of the port of Olvia, which is also depicted in Figure 2.2.

The core strength of Mykolaiv-region-based harbour is its geographical location. An existing issue with Ukrainian logistics is the necessity to carry cargoes from the industrial powerhouses of Eastern Ukraine to the terminals in Odesa region, which contributes to noticeably higher inland transportation expenses for both road and railway routing. Along with a harbour in Mykolaiv, Olvia boasts a convenient rail link to the major cities of Kryvyi Rih, Dnipro and Zaporizhia. The former is particularly important for the rise of the discussed terminal due to the role in the nation's steel production and iron ore mining. At this stage, the next strength can be revealed, namely

specialisation on bulk cargoes [22]. As Ukraine gradually moves towards becoming a raw-materials- exporting country, the share of such trade in the nation's GDP will inevitably leap. Considering the first mentioned advantage, the port of Olvia can flourishingly specialise in iron ore and other heavy dry bulk transit from central and eastern parts of Ukraine to overseas destinations [51].

The weaknesses are not negligible, however. The first one to be reviewed is the current state of facilities. Particularly attributable to inefficient governmental management, lack of strategy and funding along with tough competition, the harbour's equipment and spaces can easily be classified as derelict and outdated. Neither the wealth of Ukrainian state nor own cash inflows allow Olvia to finance required infrastructural updates. It is possible to claim the port has long been neglected by the local authorities. The second vice has a rather similar nature. While the railway connection between Mykolaiv and Dnipro region is rather suitable, the state of a road leading to central Ukrainian agglomerations is highly dissatisfactory. As a result, any smaller batches carried by lorries instead of trains face a peril of commodity damage during inland transit. Accordingly, the hinterland infrastructure has to be brought up to a sustainable level in order to achieve better connectivity of the harbour [22].

The opportunity of Olvia stems from shifting Ukrainian exports towards dry bulk cargoes and, specifically, agricultural products. Besides a reliable connection to the traditional heavy-industrial centres, the terminal is also fortunately located to accumulate food commodities from bordering Kyrovohrad and Kherson regions. Moreover, the long-term expectation is to gain volumes from spiking grains' production in the east, as residents are gradually leaving established sectors in favour of more internationally advantageous affairs [22]. Consequently, the port of Olvia is determined to become a number one dry-bulk hub for the central and eastern parts of the country with a specialisation in ore, agriculture and fertilisers. Such a motion is encouraging for investors due to a close correlation with Ukrainian export trends.

In the current position, the main threat for the harbour is political and economic instability in Ukraine. Although the outlook might be not as intimidating as in 2015, yet the development is substantially strained by Russian trade restrictions, concerns of

foreign businesses and internal volatility. Should any escalation arise, the consequences for Olvia as well as for the country in general can take any direction and exacerbate to a fairly unforeseeable extent. Such a gut-feeling-based argument deters many investors from participating in the infrastructural projects in Ukraine along with any other tenders or partnerships. The business of Olvia can be jeopardised by intensifying competition from both Ukrainian harbours experiencing large capital inputs and other foreign ports located on the Black Sea. Should it be no infrastructural improvements in the nearest future, the terminal would likely become obscure compared to more modern counterparts.

|   |  |
|---|--|
| <p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>-Location in the proximity of both industrial powerhouses and agricultural sites;</li> <li>-The convenient rail link to Dnipro region;</li> <li>-Focus on dry bulk commodities.</li> </ul> | <p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>- Outdated facilities and equipment;</li> <li>- Underinvestment;</li> <li>- The poor condition of cross-regional roads.</li> </ul>       |
| <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>-Diversification to agricultural cargoes;</li> <li>-The overall growth of the nation’s grain exports;</li> <li>-Large volumes from Eastern Ukraine.</li> </ul>                         | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>- Political and economic insecurities;</li> <li>- Competition from neighbouring harbours and overseas Black-Sea-based terminals.</li> </ul> |

Figure 2.2 – SWOT-analysis of the “Stevedoring company “Olvia”

As seen from the information above, the future of the port of Olvia is rather uncertain with ample possible scenarios. The only fact is clear: the terminal requires generous investment to keep moving forward and succeed. By taking a sober look into the practice of Ukrainian governmental management of the enterprises from both

operational and financial perspective, it seems hardly realistic to expect such efficient funding from the state. Accordingly, private engagement appears to be a viable alternative.

To finalise the description of the current state of business affairs, a brief look into the financial performance of the “Stevedoring company “Olvia” is required. Appropriate information can be retrieved from the Appendices A, D and E, representing the enterprise’s income/ loss and cash flow statements respectively. As seen from the former, the port of Olvia experienced slumping net earnings over the last three years, which deteriorated from UAH 133023 million in 2017 to just UAH 5091 million in 2019 [47]. The factor causing such a pessimistic result is the weak global dry bulk market performance in the last year and the resulting volume decline. While the revenues collapsed, the operating expenses gained slightly over the period of three years, hence the final value became alarming.

Another salient factor is liquidity, which can be evidenced in the cash flow statements. On par with net income, the total amount of retained cash halved since 2017, reaching the bottom line of UAH 68559 million by the end of the last year [45]. Such a tremendous contraction can also be attributed to the fluctuations in the national currency’s exchange rate, as claimed in the company’s financial document, however, considering a relative stabilisation of Ukraine’s financial performance, the inflows should normally compensate any such shortcomings. In the case of the “Stevedoring company “Olvia”, however, such an overlap could not be attested, thus the conclusion arises as to the imperfection of the harbour’s business model.

## **2.6 Conclusions to Chapter 2**

As a summary of the subchapter, Olvia demonstrates some lucrative opportunities attributable to evolving dry bulk and, specifically, grain bulk trade along potentially large share in Eastern Ukrainian exports. However, the empirical evidence suggests the

harbour is not likely to survive tightening competition from other regional harbours without sufficient investment in its largely obsolete infrastructure. The subsequent enquiry arises as to the possible ways of funding, which triggers the observation of key financial performance parameters. The net income and available cash amount figures indicated a steady decline in the enterprise's business performance as the port consistently failed to bring profit and generate liquidity for upcoming investment and maintenance activities. Based on the outcomes of the research, it is possible to manifest the inability of the state authorities to keep the "Stevedoring company "Olvia" viable, competitive and up-to-date. It is highly unlikely the approach would change in the future due to the known practice of Ukrainian governmental management along with insufficiency of own financial resources. Under such conditions, the only best solution to completely reshape the port of Olvia and transform it into a prosperous, technologically advanced and commercially successful harbour is to delegate the steering functions to a private entity by arranging a port concession. With such a cooperation model in place, the state would benefit from improving employment and ability to affect the development strategy of the port, while the investing company can anticipate skyrocketing profits along with a solid market share. Following the introduction of new Concession Law №155 IX in 2019, a globally-applied PPP concept becomes an available option for Ukrainian state after almost two decades of protraction.

## **CHAPTER 3**

### **FINANCIAL, ECONOMIC AND RISK ASSESSMENT OF INVESTMENT INTO THE PORT OF OLVIA**

#### **3.1 The economic arguments behind the port concession**

Considering the general overview of the financial figures in the previous part of the thesis, it is possible to draw some ideas about the company's financial situation and assert the transition into a private-public type of ownership could potentially be a proper solution for the "Stevedoring company "Olvia". Specifically, the net income along with other profitability indicators clearly showed inefficiencies in the state's management of the port and its inability to establish a commercially-driven business. Besides, what becomes apparent after reviewing the balance sheet and the information about "Olvia" is stark obsolescence of the equipment and facilities of the terminals.

Taking both external and internal competition factors into account, the future of the port seems uncertain as it may no longer be able to compete with more modern harbours boasting better technologies and hinterland infrastructure, particularly with Pivdenny terminal in Odesa region and the port of Constanta in Romania. The decision of the Ukrainian government to attract private capital in "Olvia", thus, appears to be long-awaited for the whole region. Situated in proximity to both agricultural locations of Central Ukraine along with giant manufacturing and iron ore-mining sites in Kryvyi Rih, Dnipro and Zaporizhia, the geographical position is a major bonus for Olvia [25]. Currently, most of the cargoes originating from the Eastern regions of Ukraine have to pass through the port of Odesa, Chornomorsk and Pivdenny on the way abroad, which results in substantial inland transportation costs. The options located closer to the industrial sites have been drastically affected by the military confrontation in Donetsk and Luhansk regions along with the annexation of Crimea, which put the large harbour in Mariupol into a technical lockdown due to Russian control over the strait of Kerch.

The negative aspect of the new transportation route is the necessity to pass long distances to Odesa region using road and rail infrastructure. The former has been marked by a dramatic deterioration with a staggering share of motorways being close to the derelict condition, reaching 95 per cent just a couple of years ago. The railways have historically been well-established in Ukraine and until now constitute the country's most reliable mode of transportation. However, ample complaints can be notified about the performance of the state-owned monopolist "Ukrzaliznytsia", which, like many other businesses in the public ownership, could not efficiently steer its commercial activity and failed to modernise the vehicles, with the locomotives being in a dire deficit and the machinery manufactured in the Soviet Union being still in use. As a consequence, the emergence of a port serving the markets of Eastern Ukraine under existing political, economic and infrastructural conditions would result in considerable savings for businesses and improved connectivity with both internal and overseas markets [25].

### **3.2 Implementation of port concession: challenges and legal discrepancies**

The pilot concession tenders of the ports of Kherson and Olvia signed willingness of both Ukrainian and foreign companies to invest in public-private partnership (PPP) projects. The Ministry of Infrastructure of Ukraine announced plans to expand the scope of possible partnerships in aviation, road construction and other areas of infrastructure, to which foreign companies are actively invited. Ensuring the transparency and non-discriminatory nature of tenders shall be a priority in order to attract investors into the country. Since the moment of submitting an application for participation in a PPP competition, a comprehensive assessment of the project, disclosure of commercial information and significant organizational resources from candidates are required to ascertain the seriousness of the state's intentions [52].

One of the guarantees of equal conditions for engagement in the tender is an effective procedure for appealing the decision to choose a private partner until the conclusion of the contract or other decisions that restrict competition or deemed as discriminatory. As mentioned above, in 2019, the legislation of Ukraine in the field of PPP and concession was substantially reformed, however, the new standards do not fully guarantee the protection of the interests of all participants in the competition. Although an option was granted for applicants to demand elimination of violations during the concession tender before the deadline for applications, the procedure at the level of by-laws has not been detailed. At the same time, it is stipulated that the state has the right to cancel the competition in case of rejection of all competitive offers or if there is no longer a need to implement the project. In this case, the state does not bear any liability for losses incurred by applicants and participants. Disputes related to tenders are considered solely in court. Plaintiffs may only be individuals who have the status of an applicant or participant in a competition [1].

European legislation in this regard provides for a wider range of tools that allow interested parties to protect their interests in tenders to identify private partners. The procedure for conducting tenders for the implementation of PPPs and concessions falls under the general regulation of public procurement by Directive No. 89/665 / EEC of 21 December 1989, on the harmonisation of laws, regulatory legal acts and administrative provisions regarding the application of appeal procedures for awarding contracts for the purchase of goods and work on public funds, and Directive No. 92/13 / EEC of 25 February 1992 on the harmonisation of laws, regulations and administrative provisions regarding the application of Community rules for the implementation of procurement procedures by institutions working in the fields of water supply, energy, transport and telecommunications, taking into consideration the amendments introduced by Directive No. 2007/66 / EC, aimed specifically at improving the effectiveness of the mechanism for verifying the validity of decisions in the field of public procurement (Directive). The directives establish several mechanisms to protect the interests of the parties [52].

First, a contracting moratorium. One of the main elements of guaranteeing competitive conditions and legality in PPP competitions is the obligation to legislatively establish a moratorium on concluding contracts - the period between the decision to choose the winner of the competition and the direct conclusion of the contract, which cannot be less than 10 days (standstill period). During this period, interested parties may initiate an appeal of the selection results.

Next, the interim measures should be pointed out. Considering the inability of an unsuccessful party to influence the validity of the contract, an important securing measure is the provision of interim measures. They can be manifested in the suspension of the procedure for determining the winner of a tender or the validity of a decision on the selection of a private partner so that the contract is not concluded until the authorised body makes a decision [52].

Another way of protection is the ability of authorised parties to invalidate decisions on the selection of winners of tenders, as well as to exclude discriminatory provisions in the tender documentation. Such measures can also be applied only until the conclusion of an agreement with the winner.

In addition to the revocation of the interim decisions in the procedure for determining a private partner, the Directives also provide for the possibility of invalidating agreements that have already been concluded. This is possible if the participant did not have access to protection before concluding such an agreement and in this connection, he could not conclude an agreement. Retroactive cancellation of the contractual obligations of the parties to the public contract is also provided.

The possibility of damages to the injured party is provided both before and after the conclusion of the disputed agreement. A feature of this method of protection is that the decision on violation of the procedure for selecting the winner of the tender and conclusion of the contract can be made by authorized bodies (both judicial and administrative), however, the decision to award compensation for losses is made only by the judicial authorities [52].

Alternative ways to ensure the lawfulness of competitive procedures are fining the state authority that committed the violation, or reducing the term of the contract concluded in violation of the law.

According to the European Commission, the provisions of the Directives have been implemented in the laws of all countries of the European Union. In most countries, the consideration of violation allegations during tenders in the field of PPP is carried out in the courts by specially created bodies or antitrust authorities, which ensures the speed of decision-making. The most effective method of protection was the establishment of a standstill period.

The need to implement EU rules in the legislation of Ukraine in the field of public procurement and concessions is provided for in chapter 8 of the Association Agreement between Ukraine and the EU. Appendices XXI-C and XXI-E stipulate that all the above protection mechanisms are basic elements of the Directives and are mandatory for implementation.

Paragraphs 13 and 14 of the Action Plan regarding the implementation of the Reform Strategy for the public procurement system, approved by order of the Cabinet of Ministers of Ukraine No. 175-p of 24 February 2016 (the Plan), assumes that the harmonisation of legal remedies with the requirements of the Directives is carried out by amending the Law of Ukraine “ On public procurement” until the end of 2018 (for Directive No. 89/665 / EEC) and 2019 (for Directive No. 92/13 / EEC) [1]. As a result, this law provides that, in order to ensure the right to appeal against decisions of the customer, a procurement contract cannot be concluded earlier than ten days from the date of publication of the intention to conclude a contract, and it is possible to file a complaint when conducting procurement out of court, which should be considered within fifteen days, it is forbidden to conclude a contract when considering a complaint, there are cases of rescission of the contract [5].

However, the Laws of Ukraine “On Concession” and “On Public-Private Partnership” expressly state that the relations that arise in connection with the choice of a private partner/concessionaire are not covered by the law on public procurement.

In accordance with the Law of Ukraine “On Concession”, the concession issuer is obliged, within three days after determining the winner of the tender and approval of the protocol, to invite the participant, whose tender proposal has received the highest rating, to conclude an agreement, which does not assume the enforcement of a standstill period. The Law of Ukraine “On Public-Private Partnerships” does not provide for any deadlines for concluding an agreement with a private partner. The interim measures provided for by the Directives can be applied as part of a judicial appeal by filing an application for securing a claim, however, the practice of approving such applications by the courts is not particularly common (in this context, case No. 855/2/20 regarding the Kherson port concession, which was pending before being judged the Supreme Court). Also, the legislation on PPP does not establish a time limit for the consideration of such disputes and guarantees that it is impossible to conclude an agreement during the contestation of the competitive procedure [3].

Thus, although EU legislation expressly provides that the provisions of the Directives also apply to the procedures for selecting private partners and concessionaires, when reforming Ukrainian legislation in the field of PPPs, the mechanisms for protecting the rights of tender participants were not given proper attention. It can be assumed that these guarantees will be implemented in the future, since the adaptation of the provisions regarding the concession is provided for in the fourth stage of the Plan from 1 January 2020 to December 31, 2021 (Chernetsova, 2020) [3].

Accordingly, Ukraine’s Seaport Authority is responsible for conducting a comprehensive and fair tender to enable concession of the “Stevedoring company “Olvia” in accordance with existing European standards. Unfortunately, the relevant laws do not completely resemble the ideas of the EU legislation in giving a window to expedited contract conclusion after the publication of tender results. Such provisions limit the opportunity of the defeated participants to appeal the decision in the court claim violation of tender conditions. The regulations on rescinding an existing contract and setting deadlines are not properly outlined either. Consequently, it would be completely up to the Seaports Authority to select the winner in a lawful manner,

however, possible appeal procedures are still challenging due to a stringent timeframe to conclude a concession agreement with a selected private partner within three days after the declaration of tender results. The provisions can be amended in alignment with the EU legislation in 2020 or 2021 during the fourth stage of the Plan, thus constituting the only opportunity to arrange a competition with adequate protection of the bidders' rights 3]. The most recent news announces the Qatar-based terminal operator QTerminals became a winner of the concession competition for the stake in the port of Olvia with a pledge to invest UAH 3.4 billion into its facilities (Kuchuk, 2020).

### **3.3 Financial screening of the “Stevedoring company “Olvia”- diagnostic by signals**

In order to provide a fair assessment of business performance and worthiness for investment, it is necessary to look into the financial figures of the enterprise in question. Indeed, it is not likely to obtain funding for the assets, which are either not profitable enough or do not have a room for growth. Another factor from the legal point of view is the freedom of encumbrances. Lastly, the investors overview an existing condition of the object, specifically its technical state and necessity of modernisation.

Before making a growth projection, relevant data on the current state of affairs is sufficient, hence there is a need for financial analysis. The common methodology suggests the division of the indicators into five groups, namely the indicators of financial stability, liquidity, business activity, balance sheet structure and profitability. The question then arises as to what figures can be used to describe relevant elements of business performance. For “Stevedoring Company “Olvia”, the following ratios were selected for each group

- for the indicators of financial stability:

$$\text{Equity ratio} = \frac{\text{Total Equity}}{\text{Total Assets}}; \quad (3.1)$$

$$\text{Debt to equity ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}; \quad (3.2)$$

$$\text{Debt ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}; \quad (3.3)$$

- for the indicators of liquidity:

$$\text{Cash ratio} = \frac{\text{Cash} + \text{Cash equivalents}}{\text{Total Current Liabilities}}; \quad (3.4)$$

$$\text{Quick ratio} = \frac{\text{Cash} + \text{Cash equivalents} + \text{Short-term investments} + \text{Current receivables}}{\text{Current liabilities}}; \quad (3.5)$$

- for the indicators of business activity:

$$\text{Total Asset Turnover} = \frac{\text{Revenue}}{\text{Average Total Assets}}; \quad (3.6)$$

- for the indicators for assessing the balance sheet structure:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}; \quad (3.7)$$

$$\text{Working capital to current assets ratio} = \frac{\text{Equity} - \text{Non-current assets}}{\text{Current assets}}; \quad (3.8)$$

$$\text{Equity to total debt ratio} = \frac{\text{Stockholders' equity}}{\text{Short-term debt} + \text{Long-term debt}}; \quad (3.9)$$

- for the indicators of profitability:

$$\text{EBIT Margin} = \frac{\text{Earnings before interest and taxes}}{\text{Revenue}}; \quad (3.10)$$

$$\text{Return on Equity} = \frac{\text{Net income}}{\text{Shareholders' equity}}; \quad (3.11)$$

$$\text{Return on assets} = \frac{\text{Net income}}{\text{Average Total Assets}}; \quad (3.12)$$

The formulas were picked based on the most crucial aspects of consideration for the investors, which unambiguously show the overall financial success of the state-owned enterprise. In such a way, it is possible to evaluate prospective yields and risks. The financial figures present in the ratios are retrieved from the income and loss statement, a balance sheet and a cash flow statement of the “Stevedoring company “Olvia”, which can be found in Appendices A, B, C, D and E.

On the first stage, the calculation of the aforementioned indicators is conducted. It is then necessary to evaluate the results with zero-score given if the obtained number is in a risk zone, one-grade- in a danger zone, three-grade- in a stability zone and, respectively, five-grade in a well-being zone. It is worth noting, that every single criterion has its own range of results that enables distribution into different performance areas. Such figures were retrieved using empirical evidence and academic sources and are represented in Table 3.1 along with the calculation of indicators. Ultimately, it is required to grade each group of factors for the last three years by computing the average of all indicators belonging to the group. The results can be observed below.

Table 3.1 - Financial screening model

|   | 0             | 1           | 3              | 5               |       |             |       |             |       |             |
|---|---------------|-------------|----------------|-----------------|-------|-------------|-------|-------------|-------|-------------|
|   | Risk zone     | Danger zone | Stability zone | Well-being zone | 2017  | Estimate    | 2018  | Estimate    | 2019  | Estimate    |
| 1   | 2             | 3           | 4              | 5               | 6     | 7           | 8     | 9           | 10    | 11          |
| <b>1. Indicators of financial stability</b> |               |             |                |                 |       | <b>5,00</b> |       | <b>5,00</b> |       | <b>5,00</b> |
| Equity ratio                                | Less than 0,5 | 0,5-0,65    | 0,65-0,8       | higher 0,8      | 0,884 | 5           | 0,916 | 5           | 0,944 | 5           |
| Debt to equity ratio                        | higher 0,8    | 0,8-0,5     | 0,5-0,2        | Less than 0,2   | 0,115 | 5           | 0,049 | 5           | 0,043 | 5           |
| Debt ratio                                  | higher 0,7    | 0,7-0,5     | 0,5-0,2        | Less than 0,2   | 0,116 | 5           | 0,084 | 5           | 0,056 | 5           |

End of Table 3.1.

| 1  | 2              | 3        | 4        | 5           | 6      | 7            | 8      | 9            | 10     | 11          |
|--|----------------|----------|----------|-------------|--------|--------------|--------|--------------|--------|-------------|
| <b>2. Indicators of liquidity</b>                              |                |          |          |             |        | <b>5,00</b>  |        | <b>5</b>     |        | <b>5</b>    |
| Cash ratio   | Less than 0,2  | 0,2-0,3  | 0,3-0,4  | higher 0,4  | 1,571  | 5            | 1,681  | 5            | 2,576  | 5           |
| Quick ratio  | Less than 0,7  | 0,7-0,85 | 0,85-1,0 | higher 1,0  | 3,685  | 5            | 3,565  | 5            | 4,732  | 5           |
| <b>3. Indicators of business activity</b>                      |                |          |          |             |        | <b>3,00</b>  |        | <b>3,00</b>  |        | <b>1,00</b> |
| Total Asset Turnover   | Less than 0,4  | 0,4-0,6  | 0,6-0,8  | higher 0,8  | 0,759  | 3            | 0,641  | 3            | 0,552  | 1           |
| <b>4. Indicators for assessing the balance sheet structure</b> |                |          |          |             |        | <b>5</b>     |        | <b>5</b>     |        | <b>5</b>    |
| Current ratio  | Less than 2,0  | 2,0-2,2  | 2,2-2,4  | higher 2,4  | 2,661  | 5            | 3,224  | 5            | 5,027  | 5           |
| Working Capital to Current Assets Ratio                        | Less than 0,1  | 0,1-0,4  | 0,4-0,6  | higher 0,6  | 0,624  | 5            | 0,690  | 5            | 0,801  | 5           |
| The Equity to Total Debt ratio                                 | Less than 0,8  | 0,8-1,0  | 1,0-1,5  | higher 1,5  | 8,704  | 5            | 20,579 | 5            | 23,520 | 5           |
| <b>5. Indicators of profitability.</b>                         |                |          |          |             |        | <b>3,667</b> |        | <b>1,333</b> |        | <b>0</b>    |
| EBIT Margin  | Less than 0,15 | 0,15-0,2 | 0,2-0,25 | higher 0,25 | 0,417  | 5            | 0,195  | 1            | 0,029  | 0           |
| Return on Equity   | Less than 0,07 | 0,07-0,1 | 0,1-0,15 | higher 0,15 | 0,300  | 5            | 0,104  | 3            | 0,011  | 0           |
| Return on Assets   | Less than 0,2  | 0,2-0,4  | 0,4-0,8  | higher 0,8  | 0,2550 | 1            | 0,099  | 0            | 0,010  | 0           |

As there is an estimate available for each group of indicators, it is now possible to finalise the diagnostics by signals by reviewing the year-on-year dynamics. The ranking is represented in Table 3.2.

Table 3.2 - Ranking of the results based on the value of an estimate

| Status            | Value |
|-------------------|-------|
| Sustainable       | >4,5  |
| Relatively stable | >2,5  |
| Unstable          | >0,5  |
| Crisis            | <0,5  |

The indicators of financial stability remained sustainable over the last three years, particularly due to the dropping amount of liabilities including debt. A very similar tendency can be noticed with liquidity indicators and the indicators for assessing the balance sheet structure. However, a negative development can be observed with a business activity factor of total asset turnover, which experienced a slide from being relatively stable to the instability zone in 2019. The fact is, the revenues of the port slumped over the last three years, which yielded in such a pessimistic figure. An even more alarming tendency can be attested in indicators of profitability, as they collapsed from stability state in 2017 to instability in 2018 and, ultimately, to crisis position in 2019. The reason lies in minuscule profit figures again. It is possible to assert a stable financial and liquidity position of the “Stevedoring company “Olvia” underpinned by a tiny amount of liabilities and, particularly, debt. Nevertheless, the business is not running smoothly: profitability and activity indicators show the enterprise urgently needs a more effective strategy to generate profit and become more commercially viable. Such an observation is a key argument for the expediency of concession for Olvia port.

### **3.4 Evaluating the threat of bankruptcy: Altman Z-score**

The next stage of considering the investment into an enterprise is assessing the probability of bankruptcy. Firstly, pessimistic numbers can show a rather negative future outlook, which would deter the owners of the funds. Secondly, the freedom of heavy liabilities is also an important factor as it would minimise the threat of legal actions against the seller with possible implications, such as property arrest or costs of litigation, reputational losses etc [23].

A commonly used tool to conduct solvency analysis is referred to as Altman Z-score and was developed by New York University’s Stern Finance Professor in the 1960s. The formula consists of five ratios with a basis for the calculation to be taken

out from the company's annual reports. The criteria of profitability, leverage, liquidity, solvency and activity are applied to indicate if the company has a menace of bankruptcy. Remarkably, Professor Altman computed the average Z-Score for the globe's major businesses in 2007 and came out with an average value of 1.81, which practically indicated an inflated credit ranking for as much as 50 per cent of the companies. The argument perfectly justifies the functionality of the formula, as the subsequent global crisis unveiled the underlying concerns over the leveraged nature of many enterprises and lead to a massive wave of bankruptcies in 2008 and 2009. Altman's formula is considered to have a 72- per cent accuracy based on numerous studies [23].

Three different ratios can be applied depending on the type of the company, namely for public companies with funds in excess of \$1 million, for large private companies and merely non-industrial companies. Considering the state's ownership over the port of Olvia, the original formula would be the most fit for purpose of evaluating solvency of the discussed enterprise [36]. The ratios are multiplied by weighted factors made individually for each of the three aforementioned options. The Altman Z-score formula looks as follows:

$$Z - Score = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E \quad (3.13)$$

The letters correspond to the following ratios:

$$A = \frac{\text{Net working capital (Current assets - Current liabilities)}}{\text{Total assets}}; \quad (3.14)$$

$$B = \frac{\text{Retained earnings}}{\text{Total assets}}; \quad (3.15)$$

$$C = \frac{\text{Earnings before interest and tax}}{\text{Total assets}}; \quad (3.16)$$

$$D = \frac{\text{Equity}}{\text{Total liabilities}}; \quad (3.17)$$

$$E = \frac{\text{Revenue}}{\text{Total assets}}; \quad (3.18)$$

Three zones are distinguished for the fair assessment of solvency. The company is in a safe zone when its score is 3.0 or higher. The range between 1.81 and 3 identifies a moderate chance of filing for bankruptcy and constitutes a grey zone. Finally, the companies with a value lower than 1.8 are in a red zone with a substantial possibility of insolvency [36].

The data for the formula is retrieved from the annual reports contained in Appendices A, B, C, D and E. The results of Altman Z-score for the “Stevedoring Company “Olvia” in 2017-2019 are represented in Table 3.3.

Table 3.3 - Altman Z-score of the “Stevedoring company “Olvia”

| Elements of the factor model | 2017   | 2018    | 2019    |
|------------------------------|--------|---------|---------|
| A                            | 0,1923 | 0,1860  | 0,2263  |
| B                            | 0,2657 | 0,0957  | 0,0107  |
| C                            | 0,3296 | 0,1210  | 0,0173  |
| D                            | 7,6396 | 10,9559 | 16,7944 |
| E                            | 0,7910 | 0,6217  | 0,5865  |
| Altman Z-Score               | 7,0650 | 7,9519  | 11,0069 |

Once calculating the Altman Z-Score for the state-owned port of Olvia, the conclusion can be drawn as to the highest level of stability and a low threat of bankruptcy. Indeed, the enterprise is in a confident green zone and Z-score far from the grey zone’s margins. The evidence suggests the outcome can be attributed to an exceptionally good performance on the liabilities’ side with equity to total liabilities ratio in 2019 doubling compared to 2017 levels. Although profitability ratios are contracting, such a change is not likely to visibly affect the solvency. The tiny extent of leverage and amount of borrowed capital are the factors that make the enterprise’s business outlook appearing confident and stable for long-run.

### **3.5 Throughput growth projection**

Any investment would not be possible without an expectation for business growth. While considering an option to bring funding into Ukrainian ports, the bidders take the development opportunities as the most serious argument in favour of taking action. Accordingly, the next stage of evaluating a potential asset is ordering a forecast, which for the harbour facility means the projection of cargo throughput growth in short-, mid- and long-term periods along with the calculation of anticipated revenue. While the latter is included in a broader Return-on-Investment computation, the tonnage increase is a fundamental criterion for both private parties and the public sector, particularly due to the opportunities to boost profits, stiffen the market share and generate more jobs on the local labour market.

The data for the calculations is retrieved from the Reports on key performance indicators for the “Stevedoring company “Olvia” in 2018 and 2019, which can be found in Appendices F and G along with an income and loss statement in Appendix A. Additionally, the investment-relevant information on current cargo capacity along with planned expansions is available from the Strategic Development Plan of the harbour and is incorporated in Appendices H, I and J.

The fundamental of conducting the forecast is understanding the correlation between the throughput growth and the influence factors. The evidence suggests there are two core sources of influence, which can trigger the change in the port’s volume, namely capacity increase (Scenario 1) and export growth (Scenario 2). There is plenty of planning for construction works in Olvia over the next twenty years, which should lead to the maximum throughput rise from current 2.57 million tonnes to 11.57 million tonnes in 2025, 16.87 million tonnes in 2030 and, ultimately, 29.07 million tonnes in 2040 (“Stevedoring company “Olvia”, 2020) [43]. With regards to the export-driven development, the assumption is the throughput should rise in a strong correlation with the national exports of goods. A peculiarity of the port of Olvia is its focus on exports, which in 2014 accounted for 97 per cent of the total turnover. In terms of the structure

of exports, slabs, billets, fittings, as well as mineral and construction materials are the largest contributors to the volume (83.6 per cent of exports in 2014) [44]. It is then crucial to note, that the export structure of the Olvia terminal has an exceptionally similar nature with all-Ukrainian exports, as in 2018 the export of bulk cargo, metals and equipment accounted for 74.3 per cent of the nation's overseas trade (World's Top Exports, 2019) [44]. The mentioned fact allows using the growth forecast of Ukraine's exports in the next five years to predict the throughput growth in the port of Olvia. As the capacity expansion yields in strikingly larger throughput figure than any national trade rise projection, the former can be referred to as an optimistic scenario, and the latter as a pessimistic scenario [43].

### **3.5.1 Scenario 1- capacity-driven volume growth**

In order to foresee the cargo capacity-driven growth, it is salient to consider the utilisation of port facilities along with planned expansions. Table 3.4 represents a structured calculation of the average utilisation. Here it is worth referring to the nature of bulk businesses, which is highly volatile and can have both sharp rises and steep declines depending on weather conditions in the current year, other natural and sometimes political factors. As a result, the utilisation level varies considerably, hence calculation of an average of ten years would be the closest assumption to make a future projection.

Table 3.4 - Calculation of an average utilisation

|                                    | 2010    | 2011     | 2012     | 2013     | 2014    | 2015   | 2016   | 2017   | 2018   |
|------------------------------------|---------|----------|----------|----------|---------|--------|--------|--------|--------|
| <b>Processing capacity, tonnes</b> | 2570    | 2570     | 2570     | 2570     | 2570    | 2570   | 2570   | 2570   | 2570   |
| <b>Cargo throughput</b>            | 2475,15 | 2424,997 | 2153,181 | 1843,247 | 2411,31 | 2450,3 | 2213,2 | 2510,1 | 2170,9 |
| <b>Utilisation, %</b>              | 96,31%  | 94,36%   | 83,78%   | 71,72%   | 93,83%  | 95,34% | 86,12% | 97,67% | 84,47% |
| <b>Average utilisation, %</b>      | 89,29%  |          |          |          |         |        |        |        |        |

The figure of 89.29 per cent is a well-balanced average, taking occasional slumps into account. The next crucial element of a model is capacity expansion. The information from the Appendices H, I and J indicates expected throughput ability gains until 2025, 2030 and 2040 [43]. After observing the list of planned facilities, it is possible to notice the target for the construction of two grain terminals, an LNG and refill station, the railway link and quay extension. In real life, the delivery of the objects takes time and can occur either simultaneously or at completely different moments. Some facilities can be finished within the first year after the transition of the port of Olvia into concession. In the model, it is extremely complicated to foresee such a random order of opening new areas, however, the handling capacity has to reach a fixed amount in 2025, 2030 and 2040. To make a smoother distribution and avoid fallacies, the projected capacity expansion per year is calculated as the targeted throughput capacity at the end of the period (e.g. a five-year period from 2020 to 2025) divided by the number of years in the period. The relevant calculations are to be found in Appendix K. On Figure 3.1, it is possible to see a projection of the capacity-driven cargo throughput growth in the port [44].

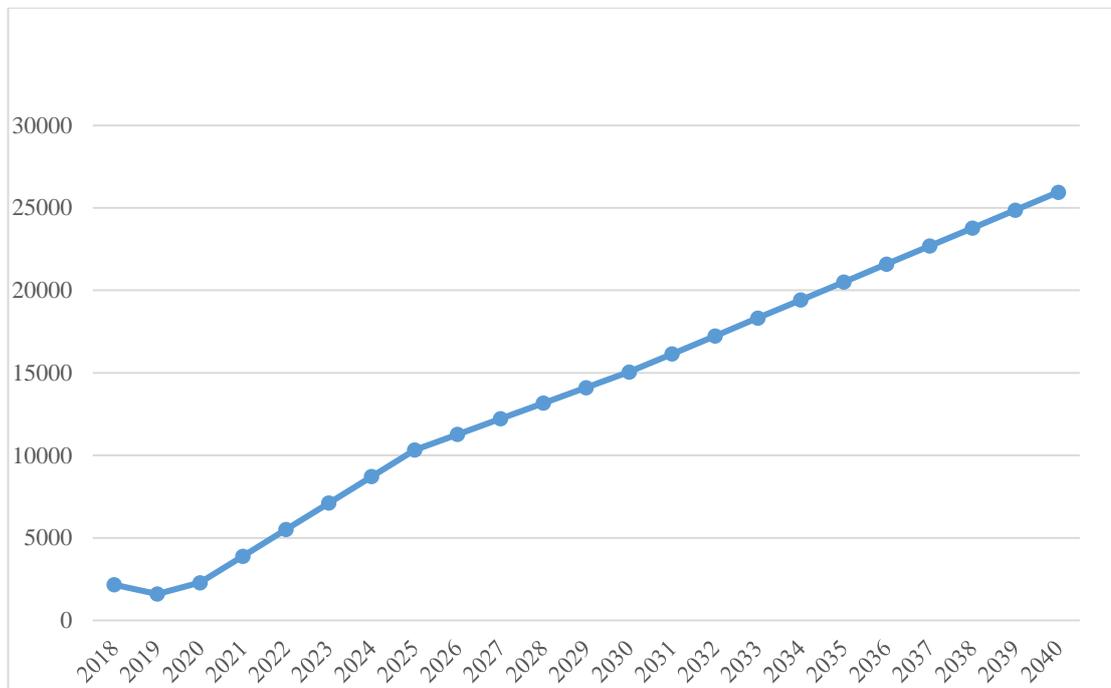


Figure 3.1 - Projected capacity-driven long-term throughput growth in Olvia port, tonnes

According to the graph, the port would quickly keep up with intensive expansion over the short-term period and quickly become a competitive regional hub for overseas trade in bulk. The spike will cease over the second part of the decade, however, Olvia would eventually end up in nearly twenty-six million tonnes per annum in 2040 with a perspective to gain the status of the top facility in the nation’s raw material trade. Such a motion is also supported by the plan to construct two grain terminals and, consequently, benefit from the growth in the nation’s most lucrative sector. The optimistic forecast can be possible if the hinterland infrastructure allows for reaching the terminal without incurring high costs or jeopardising the technical condition of the vehicles. The solution lies with further development of the rail passage into the facilities, which has already been incentivised by the Ukrainian government. Ultimately, the scenario could only be realistic, if major exporters and market players would reorganise the supply chains and switch to Olvia instead of using the terminals in Mykolaiv and Pivdenny. Such a development can reasonably occur, as many Eastern, Southern and Central Ukrainian businesses will need to pass shorter inland

distances and will be able to use innovative equipment and facilities, which was formerly unavailable in the country.

### 3.5.2 Scenario 2 – export-driven volume growth

Under a pessimistic projection, the only factor impacting the future cargo throughput is the national export of goods growth due to the reasons explained above. A corresponding projection was published by CEIC data and represented in Figure 3.2 [38].



Figure 3.2 - Exports of goods forecast by the International Monetary Fund, 2020-2024

As 2021-2024 figures are roughly similar, the anticipated export growth is calculated as an average of growth percentages for the mentioned years and is equal to 5.53 per cent. It is barely possible to build any models for the period after 2024, therefore the same rate would be applied for the forecasting of each year's results up to 2040. A 5.5-per cent export increase expectation is justifiable for Ukraine as an emerging economy [35]. Importantly, the expectation for 2020 is rectified and shows a decline of -4.8 per cent as a consequence of coronavirus pandemic and a subsequent

economic downturn [27].. As in Scenario 1, the calculation of long-term volume prediction is placed into Appendix L, while the graphic depiction of the results is given in Figure 3.3.

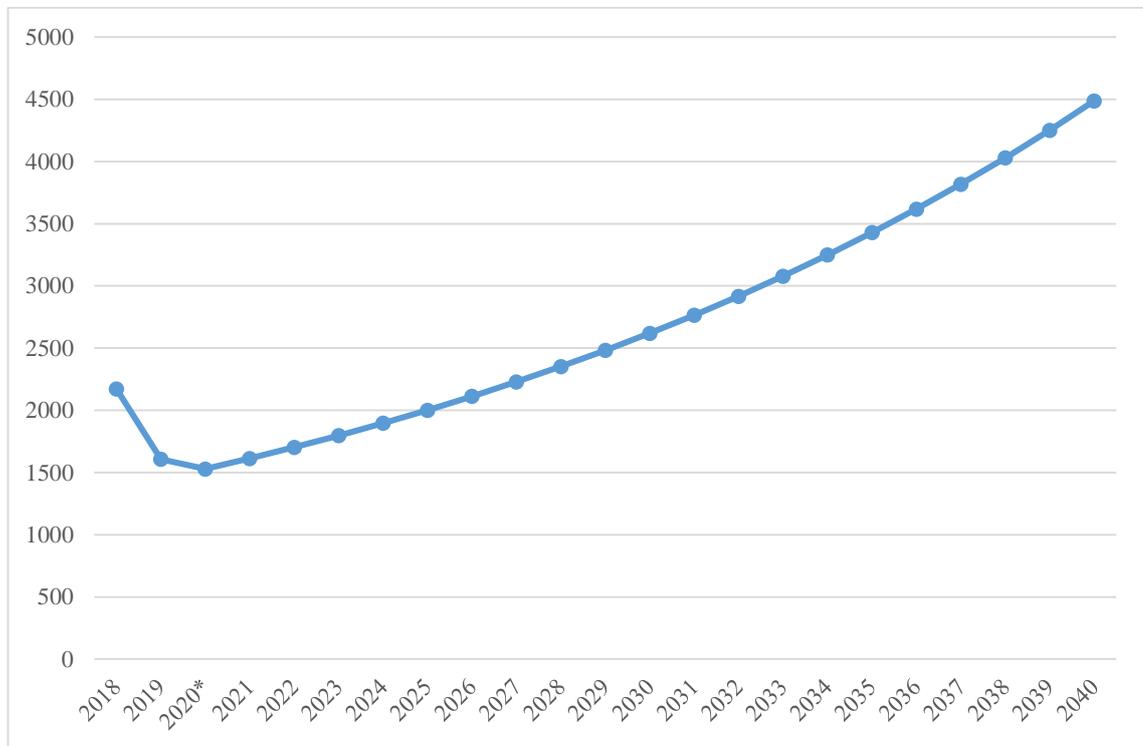


Figure 3.3 - Projected export-driven long-term throughput growth in Olvia port, tonnes

The second scenario is less likely to emerge, as the port of Olvia is set to turn into a competitive dry bulk hub and a refilling station. However, the pessimistic agenda can still undermine the joyful expectations of skyrocketing gains. Both political and economical outlooks in Ukraine and globally do not seem to be stable, with yet unknown consequences of the coronavirus pandemic along with Russian, American and Chinese trade clashes. Under such conditions, it is worth implying more modest anticipations for the future. Another important factor is the internal market competition. The main rival of Olvia in the region is the port of Mykolaiv with an annual throughput of 33.4 million tonnes in 2019 [46]. With new equipment, it is possible to gain a share of the volume, but the counterparts could potentially take a productive action to keep as much traffic as possible. Another menace comes from

another privately and publicly-owned harbour in Kherson, as in case of a sluggish annual growth all three ports of the South would strive for the same cargo. As an outcome, the success of concession in the port of Olvia can be substantially undermined by staggering internal competition along with the volatile global environment.

### **3.5.3 Accumulated projection of throughput growth**

While the projections represent either a fundamentally optimistic or a fundamentally pessimistic scenario, the reality can be multifaceted. On the current stage, there are barely any methodologies available to make a perfectly accurate prediction of the actual volumes. The only way to represent the interdependency of both factors is to develop an accumulated equation. A salient detail is the uneven weight of such factors in the final composition of the model. As in the case of Olvia, the probability of a positive trajectory is certainly higher due to the lack of innovative terminal facilities in a vicinity of the Eastern Ukrainian regions, which is expected to result in a supply chain shift towards a renovated harbour. Moreover, the area boasts an attractive railway link to major industrial centres alongside the Dnipro river. Nevertheless, a disappointing picture should not be disregarded. Whilst the opportunities appear to be promising, the threat of a staunch competition from an established harbour in Mykolaiv and a PPP port in Kherson remains imminent. On the next step, it is necessary to evaluate the probability of both events. With attention paid to all discussed points, the estimated weights of 0.6 for the capacity-driven growth scenario and 0.4 for the exports-driven growth scenario are assigned by the author using the probabilistic method. Accordingly, the equation for the discussed projection would have the following structure:

$$y_i = 0,6a_i + 0,4b_i \quad (3.19)$$

Where:

- *a* is a cargo throughput obtained under a capacity-driven growth scenario;
- *b* is a cargo throughput obtained under an exports-driven growth scenario;
- *i* is a number of the year, ranging from 2021 to 2040.

The forecast for 2020 remains under a strain of the pandemic and keeps the same value as in the pessimistic approach based on the GDP decline projection by the Ministry of Finance of Ukraine.

The results are given in Appendix M along with a graphic interpretation in Figure 3.4.

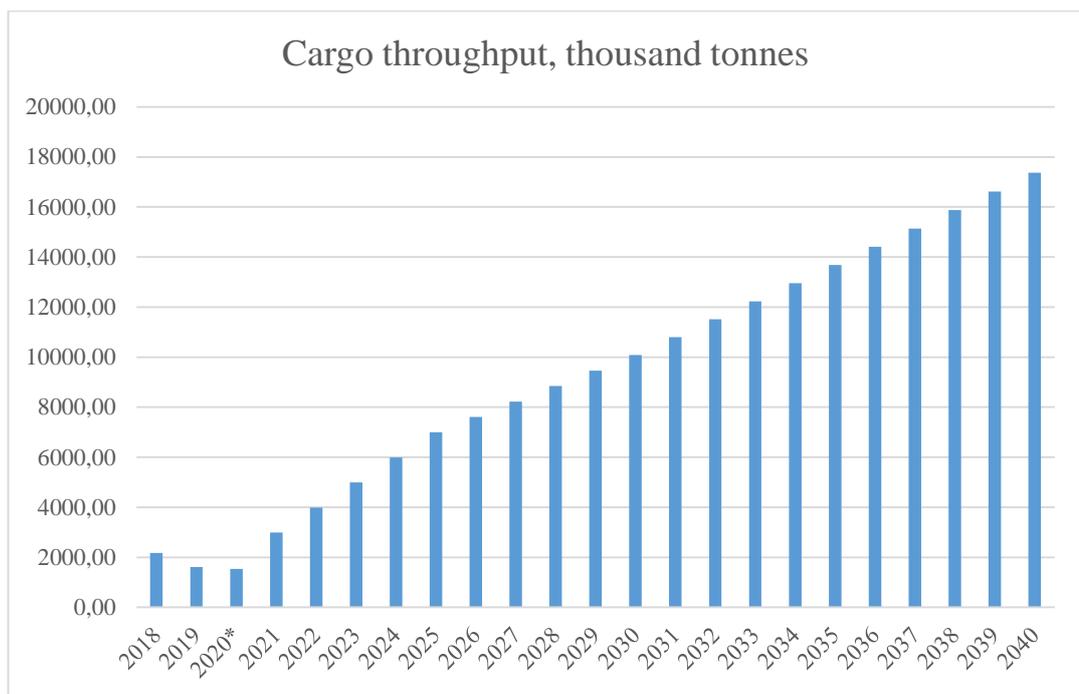


Figure 3.4 - The bar chart of accumulated projection of long-term throughput, tonnes

According to the findings above, the port of Olvia is projected to experience a confident rise in volumes over the next five years, being able to gain approximately five million tonnes of the local cargoes. The subsequent progress is foreseen to be permanent and stable, although slowing down slightly in 2025

due to intensifying competition and the wildcards of the global environment. As a result, the volume increase would be stimulated by improving throughput capacity, however, the harbour would most likely not be able to reach high levels of utilisation due to the distribution of tonnage between neighbouring terminals. Ultimately, there is an ample room for progress after an end of the twenty years depending not only on the development of the port itself but on the prosperity of the Ukrainian state and its broader engagement in the international trade.

### **3.6 Return-on-investment calculation based on the net present value (NPV) method**

Finally, after the current financial state of the company was evaluated and a comprehensive growth projection is developed, there is enough information to conduct the last and, arguably, the most important type of analysis from the commercial point of view, specifically the return-on-investment (ROI) analysis. Due to the long-term nature of the port investment, the most suitable approach for conducting a precise assessment is the net present value (NPV) method, which measures the difference between the present value of cash inflows and the present value of cash outflows[10]. An underlying logic of the NPV is the idea of money devaluation as a consequence of inflation and extracurricular investments, which means the same amount earned in the future would be worth less than today [24].

Before moving to the final ROI calculations, it is necessary to determine projected annual cash flow for the period from 2021 to 2040 by using the following formula:

$$\text{Cash flow} = \text{Profit per tonne} \times \text{Cargo throughput per annum} + (\text{Profit per tonne} \times \text{Cargo throughput per annum}) \times \text{Inflation rate.} \quad (3.20)$$

While the numbers for the trade volume can be obtained from the previous part of the paper, it is now necessary to calculate the expected earnings per tonne. For the mentioned purpose, the cash flow figures of 2017-2019 are taken from Appendix A and divided by corresponding annual volumes [49]. As the last step, the average profit per tonne is computed based on the figures for the last three years and is equal to 161.17 UAH [48]. The relevant mathematical operations can be reviewed in Appendix N.

Due to a substantial instability of Ukrainian currency, the role of inflation cannot be downgraded. Apparently, the port tariffs would most likely incur regular moderations and would certainly go up over time. The inflation rate in Ukraine has historically been volatile, varying from -0.26 per cent in 2013 to 48.68 per cent in 2015 [35]. As the clear value could hardly be deducted, the percentage should rather be taken based on the assumption. In 2019, the inflation rate in Ukraine reached 7.89 per cent, while the current anticipation for 2021 is 7.18 per cent. Accordingly, an approximate rate used for further calculations stands at 7 per cent. The resulting projections of annual cash inflows can be found in Table 6 along with the NPV determination process.

Once the earnings are obtained, it is possible to proceed to the ultimate consideration subject of the NPV. The invested amounts of cash for the short-, mid- and long-term periods can be extracted from the Appendices H, I and J respectively. The last issue to consider before finalising the calculations is the discount rate. The percentage is normally defined within each company individually and varies substantially, hence there is no uniform number to rely on. Considering the high interest rates of Ukrainian banks along with perils of doing business in the country due to political and possible economical insecurities, the discount percentage could not be lower than ten per cent. Moreover, the investors would likely expect a rather generous return from the engagement into a completely pristine market. With all facts considered, the discount rate for the subsequent net present value calculation is fixed at 14 per cent. Table 3.5 contains the calculation of NPV using 14 per cent factor multipliers copied from Appendix O [10].

Table 3.5 - Calculation of the net present value for the long-term investment in Olvia port.

| Year                               | Cash flow projection, in thousand UAH | The invested amount, in thousand UAH | The present value of cash inflows, in thousand UAH | The present value of cash outflows, in thousand UAH | 14% factor |
|------------------------------------|---------------------------------------|--------------------------------------|--|---|------------|
| 2020                               | 263717,509                            | 3707336,5                            |  | 3707336,5   |            |
| 2021                               | 515060,5142                           |                                      | 451708,071   |   | 0,877      |
| 2022                               | 687516,8581                           |                                      | 528700,4639  |   | 0,769      |
| 2023                               | 860313,6293                           |                                      | 580711,6998  |   | 0,675      |
| 2024                               | 1033469,654                           |                                      | 611814,0349  |   | 0,592      |
| 2025                               | 1207004,797                           | 2881326                              | 626435,4899  | 1495408,194   | 0,519      |
| 2026                               | 1312572,112                           |                                      | 598532,8829  |   | 0,456      |
| 2027                               | 1418561,635                           |                                      | 567424,6542  |   | 0,4        |
| 2028                               | 1524996,717                           |                                      | 535273,8477  |   | 0,351      |
| 2029                               | 1631901,996                           |                                      | 502625,8148  |   | 0,308      |
| 2030                               | 1739303,474                           | 5106227                              | 469611,9381  | 1378681,29  | 0,27       |
| 2031                               | 1862010,843                           |                                      | 441296,5699  |   | 0,237      |
| 2032                               | 1985270,809                           |                                      | 412936,3282  |   | 0,208      |
| 2033                               | 2109113,929                           |                                      | 383858,735   |   | 0,182      |
| 2034                               | 2233572,452                           |                                      | 357371,5923  |   | 0,16       |
| 2035                               | 2358680,41                            |                                      | 330215,2575  |   | 0,14       |
| 2036                               | 2484473,718                           |                                      | 305590,2673  |   | 0,123      |
| 2037                               | 2610990,273                           |                                      | 281986,9495  |   | 0,108      |
| 2038                               | 2738270,074                           |                                      | 260135,657   |   | 0,095      |
| 2039                               | 2866355,325                           |                                      | 237907,492   |   | 0,083      |
| 2040                               | 2995290,57                            |                                      | 218656,2116  |   | 0,073      |
| Net Present Value, in thousand UAH |                                       | 2121367,973                          |  |   |            |

As seen from the calculations above, the net present value for the long-term investment in the port of Olvia is 2.12 billion UAH. Provided the total amount of funding of roughly 11.7 billion UAH without discount rate adjustment, the project tends to be extremely lucrative for international investors.

### 3.7 Conclusions to Chapter 3

To summarise the content of the project implementation results, Ukraine's Seaport Authority is responsible for conducting a comprehensive and fair tender to enable concession of the "Stevedoring company "Olvia" in accordance with existing European standards. Unfortunately, the relevant laws do not completely resemble the ideas of the EU legislation in giving a window to expedited contract conclusion after the publication of tender results. Such provisions limit the opportunity of the defeated participants to appeal the decision in the court claim violation of tender conditions., the port of Olvia boasts excellent financial and solvency results, although the recent profitability indicators show some rather alarming tendencies.

The growth projection demonstrates bright prospects with an expansion driven primarily by the increase in cargo throughput capacity. The optimistic forecast can be possible if the hinterland infrastructure allows for reaching the terminal without incurring high costs or jeopardising the technical condition of the vehicles. The second scenario is less likely to emerge, as the port of Olvia is set to turn into a competitive dry bulk hub and a refilling station. The accumulated projection outlines the broadest availability of market opportunities, but moderately limits the positive outlook over fears of enhanced local competition with the ports of Kherson and Mykolaiv along with sluggish global economic performance and internal uncertainties. An overall positive image of the facility was bolstered by results of net present value calculation, which promised a long-run return of approximately 2.12 billion UAH.

## CONCLUSIONS AND RECOMMENDATIONS

The port industry is a key to Ukraine's economic and is part of the EU transport system: the total revenue generated by the market for services in Ukraine's seaports, according to the latest reports, was at least \$1.7 billion, equal to 2% of nation's gross domestic product. The main advantages of the concession for Ukraine are that the concessionaire incurs all costs for financing, management and repair of facilities under his leadership, so the financial burden is removed from the state; the budget is replenished with the help of concession payments; long-term, stable relations between the state and the concessionaire are established; it is allowed to attract foreign capital without losing control over the objects. The disadvantages are that part of the risk passes to the state and the concessionaire may demand a refund, as the state as its partner is responsible for maintaining a minimum level of profitability.

Although no ambitious claims were made for the start of concession processes in major Ukrainian ports, no further action was taken, despite the interest of global players, including Hutchison. However, the management of seaports in Ukraine is designed to gradually move to the concept of the landlord port, with the privatization of stevedoring companies in the ports of Olbia and Kherson put first. The goal is to eliminate all forms of state stevedoring services by 2030. Concessions can be successfully used as an alternative to privatization in the port industry. At the same time, in addition to the obvious benefits of leaving the asset in state ownership, the advantage of the concession over privatization is the constant budget revenue from concession payments and more tools to control assets, maintain a business profile, jobs and more.

Successful implementation of concession projects in Ukraine, subject to the adoption of a new law "On Concession", will be an incentive for large foreign investors with experience in such form of co-operation for modernization and port management. To waste such a chance would mean for Ukraine the loss of transit potential, further destruction of infrastructure and huge expenditures of the state budget to maintain it in

its current state. Thus, it can be concluded that the concession positively contributes to the inflow of private capital into infrastructure development, but an important issue remains not only the maintenance of existing facilities but also their modernization and introduction of new technologies. Ukrainian ports should not compete with each other but compete with European and world ports. Thanks to concessions, the country can restore obsolete transport infrastructure within 3-4 years, the unsatisfactory condition of which is an obstacle to the use of Ukraine's huge transit potential.

In summary, it is possible to claim that the Law contains a number of positive and progressive provisions that correspond to the world practice of regulating concession relations. In addition to the adoption of the Progressive Law, the priority of the concession scenario for port development is also evidenced by such documents as the provisions of the Seaports Development Strategy of Ukraine until 2038 and the recent announcement by the Ministry of Infrastructure of concessions for state stevedores Olvia and Kherson Seaport. port community. According to preliminary estimates, within the framework of the projects, it is planned to attract investments in the amount of 250,280 million US dollars. The successful holding of concession tenders and the successful start of pilot projects will be a litmus test for investors and will demonstrate the state's readiness for systemic changes in the port sector. In addition, the new law allows for the replacement of a concessionaire in the event of improper performance of its obligations and opens the possibility of resolving disputes in international commercial or investment arbitration. The document also regulates the features of the concession in markets that are in a state of natural monopoly. The law provides for the settlement of disputes in international commercial or investment arbitration, as well as introduces a transparent procedure for control and monitoring of the implementation of concession agreements, etc.

Ukraine's Seaport Authority is accountable for organising a comprehensive and fair tender to facilitate concession in accordance with existing European standards. Nevertheless, the recently introduced legislation does not unambiguously follow the EU stances in requiring an expedited contract conclusion after the tender results' announcement. Such provisions hamper the opportunity to appeal the decision by

claiming violation of tender conditions. The regulations on terminating an existing contract and deadlines are not clearly stated. As an outcome, the Seaports Authority is solely responsible for the selection of the winner in a lawful manner, however, possible appeal procedures are still troublesome due to rigorous time bar to conclude a concession agreement with a successful company within three days after the announcement of tender results. The provisions can be rectified in accordance with the EU legislation in 2020 or 2021 during the fourth stage of the Plan, thus being the only chance to establish adequate protection of the participants' rights.

The port of Olvia grants promising opportunities attributable to evolving dry bulk and, specifically, grain bulk trade along with a potentially large share in Eastern Ukrainian exports. However, the harbour can hardly survive intensifying competition from other regional terminals without investment in its facilities. The net income and available cash amount figures manifested a slump in the company's business performance as the port failed to become a profitable asset. It is possible to assert the failure of the state authorities to maintain a competitive and modernised state of the "Stevedoring company "Olvia". Considering the described observations, a feasible way to turn the port of Olvia into a flourishing harbour of the 21<sup>st</sup> century is to transmit the managerial authority to a private body by initiating a port concession.

It is possible to conclude a stable financial and liquidity position of the "Stevedoring company "Olvia" bolstered by a minuscule liabilities' figure along with a minimal amount of borrowed funds. The business, however, cannot be deemed healthy due to rapidly sinking profitability and activity indicators. Such fact is a crucial tenet in favour of the transition to the concession model for Olvia port. The Altman Z-Score for the state-owned port of Olvia identifies the highest level of stability and a low threat of bankruptcy. The company is in a staunch green zone on a fairly safe distance from the grey zone's margin. Olvia is forecasted to boast a spike in handled tonnage in upcoming five-years' period, gaining five million tonnes extra. The long-term development is projected to be assertive, albeit contracting gently in 2025 as a consequence of fierce competition and the uncertainties around the world. Hence, the volume growth would be fuelled by expanding port capacity, however, a maximum

utilisation would likely be unrealistic due to the activity of neighbouring terminal authorities. The net present value for the long-term investment in the port of Olvia is 2.12 billion UAH, which can be treated as a promising result for port investors.

A thorough review of existing global practices in the areas of national logistics infrastructure, FDI, globalisation of shipping and port investment brought a strong argument in defence of public-private partnership schemes in the ports. A subsequent description of the legislative materials identified a recent revolution in the state's approach towards the concession, which opened the harbours of Ukraine for foreign investments, although certain matters of the competition shall be scrutinised. The accumulation of theoretical and practical knowledge along with the outcomes of financial screening, Altman Z-score, growth projection and return-on-investment analysis lead to an ultimate conclusion about ravishing benefits of the concession model for the port of Olvia with a justified expectation for the surge in volumes and generation of new jobs.

## REFERENCES

1. Про державно-приватне партнерство : Закон України від 01 липня 2010 р. № 2404-VI // Відомості Верховної Ради України.- 2010.- № 40.- ст.524
2. Про затвердження Стратегії розвитку морських портів України на період до 2038 року : постанова Кабінету Міністрів України від 11 липня 2013 р. № 548-р // Офіційний вісник України.- 2013.- № 61, стор. 45- ст. 2194.
3. Про концесію : Закон України від 03 жовтня 2019 р. № 155-IX // Відомості Верховної Ради.- 2019.- № 48.- ст.325.
4. Про морські порти України : Закон України від 17 травня 2012 р. № 4709-VI // Відомості Верховної Ради України.- 2013.- № 7.- ст.65.
5. Про перелік об'єктів права державної власності, що не підлягають приватизації : Закон України від 07 липня 1999 р. № 847-XIV // Відомості Верховної Ради України.- 1999.- № 37.- ст.332.
6. Про Стратегію реформування системи публічних закупівель (“дорожню карту”) : розпорядження Кабінету Міністрів України від 24 лютого 2016 р. № 175-р // Офіційний вісник України.- 2016.- № 23, стор. 132- ст. 920.
7. Ahmed, Kamil Gerard, et al. The Evolving International Investment Regime : Expectations, Realities, Options / J.Alvarez, K. Sauvant, K. Ahmed, G. Vizcaino. – Oxford: Oxford University Press, 2011. – 308 с.
8. Burns M. Port Management and Operations / Maria G. Burns. – Boca Raton: CRC Press, 2015. – 406 с.
9. Lee P. Dynamic Shipping and Port Development in the Globalized Economy: Volume 1: Applying Theory to Practice in Maritime Logistics / P. Lee, K. Cullinan. – London: Palgrave Macmillan, 2015. – 245 с.
10. Noreen E. Managerial Accounting for Managers 2nd edition / E. Noreen, P. Brewer, R. Garrison. – New York: McGraw-Hill/Irwin, 2010. – 628 с.

11. Patterson N. Foreign Direct Investment: Trends, Data Availability, Concepts, and Recording Practices. / N. Patterson, International Monetary Fund. – Washington D.C.: International Monetary Fund, 2004. – 36 с.
12. Ricken B. The Competitive Advantage of Regions and Nations: Technology Transfer Through Foreign Direct Investment / B. Ricken, G. Malcottsis. – London: Routledge, 2011. – 254 с.
13. Rodrigue J. The Geography of Transport Systems / Jean-Paul Rodrigue. – New York: Routledge, 2020. – 456 с.
14. Baker J. Hutchison Ports signs operating contract for Swedish terminal [Електронний ресурс] / James Baker // Lloyd's List Maritime Intelligence. – 2017. – Режим доступу до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL025861/Hutchison-Ports-signs-operating-contract-for-Swedish-terminal> (Accessed 21 March 2020).
15. Baker J. Leading UK ports reject Brexit pessimism [Електронний ресурс] / James Baker // Lloyd's List Maritime Intelligence. – 2019. – Режим доступу до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL1126020/Leading-UK-ports-reject-Brexit-pessimism> (Accessed 21 March 2020).
16. Choursina K. Ukraine to Woo Shippers From Asia to Baltics by Fixing Ports [Електронний ресурс] / Kateryna Choursina // gCaptain. – 2016. – Режим доступу до ресурсу: <https://gcaptain.com/ukraine-to-woo-shippers-from-asia-to-baltics-by-fixing-ports/> . (Accessed 20 March 2020).
17. Comprehensive Policy Framework For Logistics: National Logistics Strategy [Електронний ресурс] // UNESCAP. – 2020. – Available at: [https://www.unescap.org/sites/default/files/Logistics\\_policy\\_ch4.pdf](https://www.unescap.org/sites/default/files/Logistics_policy_ch4.pdf) (Accessed 22 March 2020).
18. Development strategy [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2020. – Режим доступу до ресурсу: [https://sc-olvia.com/en/strategija\\_rozvitku](https://sc-olvia.com/en/strategija_rozvitku). (Accessed 25 May 2020).
19. Hutchison Ports Introduces US\$600-Million Terminal D [Електронний ресурс] // Hutchison Ports. – 2018. – Режим доступу до ресурсу:

<https://hutchisonports.com/en/media/news/hutchison-ports-introduces-us600-million-terminal-d/> (Accessed 19 March 2020).

20. Hutchison Ports Thailand Receives World's Largest Quay Cranes With Advanced Remote Control Technology At Laem Chabang Port [Электронный ресурс] // Hutchison Ports. – 2018. – Режим доступа до ресурсу: <https://hutchisonports.com/en/media/news/hutchison-ports-thailand-receives-worlds-largest-quay-cranes-with-advanced-remote-control-technology-at-laem-chabang-port/> (Accessed 19 March 2020).

21. Interview: Ukrainian Ports Aim to Become Deeper and Greener [Электронный ресурс] // Offshore Energy. – 2018. – Режим доступа до ресурсу: <https://worldmaritimeneeds.com/archives/266202/interview-ukrainian-ports-aim-to-become-deeper-and-greener/> (Accessed 21 March 2020).

22. Investment opportunities in Olvia port [Электронный ресурс] // USPA Investment Portal. – 2020. – Режим доступа до ресурсу: <http://investinports.com/en/invest-opportunities/olviya/#:~:text=The%20port%20is%20linked%20to,reaches%209.5%20million%20tons%2Fyear> (Accessed 04 May 2020).

23. Kenton W. Altman Z-Score [Электронный ресурс] / Will Kenton // Investopedia. – 2020. – Режим доступа до ресурсу: <https://www.investopedia.com/terms/a/altman.asp> (Accessed 27 April 2020).

24. Kenton W. Net Present Value (NPV) [Электронный ресурс] / Will Kenton // Investopedia. – 2020. – Режим доступа до ресурсу: <https://www.investopedia.com/terms/n/npv.asp> (Accessed 26 May 2020).

25. Kubrakov O. Ukraine's road agency head: Vast infrastructure upgrade continues despite pandemic [Электронный ресурс] / Oleksandr Kubrakov // Atlantic Council. – 2020. – Режим доступа до ресурсу: <https://www.atlanticcouncil.org/blogs/ukrainealert/ukraines-road-agency-head-vast-infrastructure-upgrade-continues-despite-pandemic/> (Accessed 26 April 2020).

26. Latest Expansion Begins At Port Of Felixstowe [Электронный ресурс] // Hutchison Ports. – 2018. – Режим доступа до ресурсу:

<https://hutchisonports.com/en/media/news/latest-expansion-begins-at-port-of-felixstowe/> (Accessed 21 March 2020).

27. Macroeconomic forecast for 2020-2022 [Электронный ресурс] // Ministry of Finance of Ukraine. – 2020. – Режим доступа до ресурсу: [https://mof.gov.ua/en/macroeconomic\\_forecast\\_for\\_2020-2022-379](https://mof.gov.ua/en/macroeconomic_forecast_for_2020-2022-379) (Accessed 11 May 2020).

28. New Rail Service Launched From Port Of Felixstowe By GB Railfreight [Электронный ресурс] // Hutchison Ports. – 2019. – Режим доступа до ресурсу: <https://hutchisonports.com/en/media/news/new-rail-service-launched-from-port-of-felixstowe-by-gb-railfreight/> (Accessed 23 March 2020).

29. Nightingale L. Hutchison Ports revenue climbs despite flat volumes [Электронный ресурс] / Linton Nightingale // Lloyd's List Maritime Intelligence. – 2019. – Режим доступа до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL1126728/Hutchison-Ports-revenue-climbs-despite-flat-volumes> (Accessed 24 March 2020).

30. Nightingale L. Hutchison to operate Basra box berth [Электронный ресурс] / Linton Nightingale // Lloyd's List Maritime Intelligence. – 2017. – Режим доступа до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL111030/Hutchison-to-operate-Basra-box-berth> (Accessed 24 March 2020).

31. Porter J. Thamesport to be redeveloped as breakbulk facility [Электронный ресурс] / Janet Porter // Lloyd's List Maritime Intelligence. – 2016. – Режим доступа до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL022082/Thamesport-to-be-redeveloped-as-breakbulk-facility> (Accessed 25 March 2020).

32. Shen C. Transshipment port investment is risky, says HPH Trust [Электронный ресурс] / Cichen Shen // Lloyd's List Maritime Intelligence. – 2017. – Режим доступа до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL110502/Transshipment-port-investment-is-risky-says-HPH-Trust> (Accessed 20 March 2020).

33. Tan H. Hutchison Ports opens terminal in Thailand [Електронний ресурс] / Hwee Hwee Tan // Lloyd's List Maritime Intelligence. – 2019. – Режим доступу до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL1126076/Hutchison-Ports-opens-terminal-in-Thailand>. (Accessed 20 March 2020).
34. Tan W. Hutchison Ports inks deal to operate Saqr Port terminal in UAE [Електронний ресурс] / Wei Zhe Tan // Lloyd's List Maritime Intelligence. – 2017. – Режим доступу до ресурсу: <https://lloydslist.maritimeintelligence.informa.com/LL112212/Hutchison-Ports-inks-deal-to-operate-Saqr-Port-terminal-in-UAE> (Accessed 28 March 2020).
35. Ukraine Forecast: Exports of Goods Growth [Електронний ресурс] // CEIC. – 2020. – Режим доступу до ресурсу: <https://www.ceicdata.com/en/indicator/ukraine/forecast-exports-of-goods-growth> (Accessed 16 May 2020).
36. What is Altman's Z-Score Model? [Електронний ресурс] // Corporate Finance Institute. – 2020. – Режим доступу до ресурсу: <https://corporatefinanceinstitute.com/resources/knowledge/credit/altmans-z-score-model/> (Accessed 27 April 2020).
37. Whiteman A. Felixstowe's New IT System Is Blamed For Significant Delays [Електронний ресурс] / Alexander Whiteman // gCaptain. – 2018. – Режим доступу до ресурсу: <https://gcaptain.com/felixstowes-new-it-system-is-blamed-for-significant-delays/> (Accessed 28 March 2020).
38. Workman D. Ukraine's Top 10 Exports [Електронний ресурс] / Daniel Workman // World's Top Exports. – 2020. – Режим доступу до ресурсу: <http://www.worldstopexports.com/ukraines-top-10-exports>. (Accessed 17 May 2020)
39. Відкриті дані [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2020. – Режим доступу до ресурсу: [https://sc-olvia.com/ua/vidkriti\\_dani](https://sc-olvia.com/ua/vidkriti_dani) (Accessed 24 March 2020).
40. Дорожня карта реалізації інвестиційних проєктів [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2020. – Режим доступу

до ресурсу: [http://sc-olvia.com/Media/files/filemanager/For%20investor/%D0%94%D0%BE%D1%80%D0%BE%D0%B6%D0%BD%D1%8F%20%D0%BA%D0%B0%D1%80%D1%82%D0%B0%20%D1%80%D0%B5%D0%B0%D0%BB%D1%96%D0%B7%D0%B0%D1%86%D1%96%D1%97%20%D1%96%D0%BD%D0%B2%D0%B5%D1%81%D1%82%D0%B8%D1%86%D1%96%D0%B9%D0%BD%D0%B8%D1%85%20%D0%BF%D1%80%D0%BE%D0%B5%D0%BA%D1%82%D1%96%D0%B2\\_2020.pdf](http://sc-olvia.com/Media/files/filemanager/For%20investor/%D0%94%D0%BE%D1%80%D0%BE%D0%B6%D0%BD%D1%8F%20%D0%BA%D0%B0%D1%80%D1%82%D0%B0%20%D1%80%D0%B5%D0%B0%D0%BB%D1%96%D0%B7%D0%B0%D1%86%D1%96%D1%97%20%D1%96%D0%BD%D0%B2%D0%B5%D1%81%D1%82%D0%B8%D1%86%D1%96%D0%B9%D0%BD%D0%B8%D1%85%20%D0%BF%D1%80%D0%BE%D0%B5%D0%BA%D1%82%D1%96%D0%B2_2020.pdf)  
(Accessed 25 May 2020).

41. Кучук М. Український порт отдадут инвестору из Катара. Он вложит 3,4 млрд [Електронний ресурс] / Марина Кучук // ЛІГА. Бізнес. – 2020. – Режим доступу до ресурсу: <https://biz.liga.net/ekonomika/transport/novosti/34-mlrd-investitsiy-portom-olviya-zaumetsya-kompaniya-iz-katara> (Accessed 14 May 2020).

42. Неділько С. Доля українських портів: концесія чи приватизація? [Електронний ресурс] / Сергій Неділько // Юридична газета online. – 2019. – Режим доступу до ресурсу: <https://yur-gazeta.com/publications/practice/transportne-pravo/dolya-ukrayinskih-portiv-koncesiya-chi-privatizaciya.html> (Accessed 16 March 2020).

43. Фінансово-економічні показники за 2018 рік [Електронний ресурс] // ДП "СТІВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2019. – Режим доступу до ресурсу: [http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/2018\\_%D0%B4%D0%BE%D0%B2%D1%96%D0%B4%D0%BA%D0%B0%202018%20%D1%80%D1%96%D0%BA.pdf](http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/2018_%D0%B4%D0%BE%D0%B2%D1%96%D0%B4%D0%BA%D0%B0%202018%20%D1%80%D1%96%D0%BA.pdf) (Accessed 18 May 2020).

44. Фінансово-економічні показники за 2019 рік [Електронний ресурс] // ДП "СТІВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2020. – Режим доступу до ресурсу: <http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/2019/%D0%9F%D>

0%BE%D0%BA%D0%B0%D0%B7%D0%BD%D0%B8%D0%BA%D0%B8%202019%D1%80.pdf (Accessed 18 May 2020).

45. Форма №1 Баланс за 2019 рік [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2019. – Режим доступу до ресурсу: <http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/2019/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%961%20%D0%91%D0%B0%D0%BB%D0%B0%D0%BD%D1%81%20%D0%B7%D0%B0%202019%20%D1%80%D1%96%D0%BA.pdf>. (Accessed 18 May 2020).

46. Форма №2 за 2017 рік [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2017. – Режим доступу до ресурсу: <http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D0%B0%20%D0%B7%D0%B2%D1%96%D1%82%D0%BD%D1%96%D1%81%D1%82%D1%8C/2017/2017/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%962%20%D0%B7%D0%B0%202017%20%D1%80%D1%96%D0%BA.pdf> (Accessed 18 May 2020).

47. Форма №1 за 2017 рік [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2017. – Режим доступу до ресурсу: [http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D0%B0%20%D0%B7%D0%B2%D1%96%D1%82%D0%BD%D1%96%D1%81%D1%82%D1%8C/2017/2017/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%961%20%D0%B7%D0%B0%202017%20%D1%80%D1%96%D0%BA\\_2.pdf](http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D0%B0%20%D0%B7%D0%B2%D1%96%D1%82%D0%BD%D1%96%D1%81%D1%82%D1%8C/2017/2017/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%961%20%D0%B7%D0%B0%202017%20%D1%80%D1%96%D0%BA_2.pdf) (Accessed 18 May 2020).

48. Форма №3 за 2017 рік [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2017. – Режим доступу до ресурсу: [http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D0%B0%20%D0%B7%D0%B2%D1%96%D1%82%D0%BD%D1%96%D1%81%D1%82%D1%8C/2017/2017/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%961%20%D0%B7%D0%B0%202017%20%D1%80%D1%96%D0%BA\\_3.pdf](http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D0%B0%20%D0%B7%D0%B2%D1%96%D1%82%D0%BD%D1%96%D1%81%D1%82%D1%8C/2017/2017/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%961%20%D0%B7%D0%B0%202017%20%D1%80%D1%96%D0%BA_3.pdf)

olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D0%B0%20%D0%B7%D0%B2%D1%96%D1%82%D0%BD%D1%96%D1%81%D1%82%D1%8C/2017/2017/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%963%20%D0%B7%D0%B0%202017%20%D1%80%D1%96%D0%BA.pdf (Accessed 19 May 2020).

49. Форма №3 Звіт про рух грошових коштів за 2019 рік [Електронний ресурс] // ДП "СТИВДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2019. – Режим доступу до ресурсу: <http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/2019/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%963%20%D0%97%D0%B2%D1%96%D1%82%20%D0%BF%D1%80%D0%BE%20%D1%80%D1%83%D1%85%20%D0%B3%D1%80%D0%BE%D1%88%D0%BE%D0%B2%D0%B8%D1%85%20%D0%BA%D0%BE%D1%88%D1%82%D1%96%D0%B2%20%D0%B7%D0%B0%202019%20%D1%80%D1%96%D0%BA.pdf> (Accessed 19 May 2020).

50. Форма №2 Звіт про фінансові результати за 2019 рік [Електронний ресурс] // ДП "СТИВДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2019. – Режим доступу до ресурсу: <http://sc-olvia.com/Media/files/filemanager/%D0%B2%D1%96%D0%B4%D0%BA%D1%80%D0%B8%D1%82%D1%96%20%D0%B4%D0%B0%D0%BD/2019/%D1%84%D0%BE%D1%80%D0%BC%D0%B0%20E2%84%962%20%D0%97%D0%B2%D1%96%D1%82%20%D0%BF%D1%80%D0%BE%20%D1%84%D1%96%D0%BD%D0%B0%D0%BD%D1%81%D0%BE%D0%B2%D1%96%20%D1%80%D0%B5%D0%B7%D1%83%D0%BB%D1%8C%D1%82%D0%B0%D1%82%D0%B8%20%D0%B7%D0%B0%202019%20%D1%80%D1%96%D0%BA.pdf> (Accessed 18 May 2020).

51. Характеристика порту [Електронний ресурс] // ДП "СТИВІДОРНА КОМПАНІЯ "ОЛЬВІЯ". – 2020. – Режим доступу до ресурсу: [https://sc-olvia.com/ua/harakteristiki\\_portu](https://sc-olvia.com/ua/harakteristiki_portu) (Accessed 03 May 2020).

52. Чернецова Е. Для Развития Концессий Необходимо Имплементировать Европейские Правила Защиты Инвестора [Електронний ресурс] / Евгения Чернецова // Pravo.ua. – 2020. – Режим доступу до ресурсу: <https://pravo.ua/articles/dlja-razvitija-koncessij-neobhodimo-implementirovat-evropejskie-pravila-zashhity-investora/> (Accessed 15 May 2020).

## Appendix A

### Income and loss statement of the “Stevedoring company “Olvia” in 2017-2019, in thousand UAH

| Name of indicator  | 2017      | 2018      | 2019      |
|--|-----------|-----------|-----------|
| Net income from sales of products (goods, works, services) | 396 082   | 331 666   | 277 800   |
| Cost of goods sold (goods, works, services)                | (215 525) | (242 772) | (230 176) |
| Gross profit / loss  | 180 557   | 88 894    | 47 624    |
| Administrative expenses                                    | (16 593)  | (20 067)  | (21 371)  |
| Selling expenses   | (590)     | (807)     | (666)     |
| Other operating income                                     | 18 332    | 12 594    | 5 840     |
| Other operating expenses                                   | (17 205)  | (22 247)  | (25 497)  |
| The financial result from operating activities             | 164 501   | 58 367    | 5 930     |
| EBITDA   | 185 887   | 99 844    | 57 773    |
| EBITDA margin, per cent                                    | 46,9      | 30,1      | 20,8      |
| Income from equity participation                           | -         | -         | -         |
| Losses from equity participation                           | -         | -         | -         |
| Other financial income                                     | -         | -         | -         |
| Financial expenses   | -         | -         | (1 429)   |
| Other income   | 523       | 7 172     | 3 694     |
| Other expenses   | (10)      | (966)     | -         |
| Earnings before taxes                                      | 165 014   | 64 573    | 8 195     |
| Income tax expenses  | (31 991)  | (13 526)  | (3 104)   |
| Income tax income  | -         | -         | -         |
| Profit from discontinued operations after tax              | -         | -         | -         |
| Loss from discontinued operations after tax                | -         | -         | -         |
| Net financial result                                       | 133 023   | 51 047    | 5 091     |

## Appendix B

### The balance sheet of the “Stevedoring company “Olvia” in 2017, in thousand UAH

Додаток І  
до Національного положення (стандарту)  
бухгалтерського обліку І “Загальні вимоги до фінансової звітності”

|   |                           |                |
|---|---------------------------|----------------|
|   | Дата (рік, місяць, число) | КОДИ           |
| Підприємство <u>ДЕРЖАВНЕ ПІДПРИЄМСТВО “СТІВДОРНА КОМПАНІЯ “ОЛЬВІЯ”</u>  | за ЄДРПОУ                 | 2018   01   01 |
| Територія <u>МИКОЛАЇВСЬКА</u>   | за КОАТУУ                 | 19290012       |
| Організаційно-правова форма господарювання <u>Державне підприємство</u>   | за КОПФГ                  | 4810100000     |
| Вид економічної діяльності <u>Допоміжне обслуговування водного транспорту</u>   | за КВЕД                   | 140            |
| Середня кількість працівників <u>672</u>  |                           | 52.22          |
| Адреса, телефон <u>А/С 170, м. МИКОЛАЇВ, МИКОЛАЇВСЬКИЙ РАЙОН, МИКОЛАЇВСЬКА обл., 54052</u>  | 75435                     |                |
| Одиниця виміру: тис. грн. без десяткового знаку (окрім розділу IV Звіту про фінансові результати (Звіту про сукупний дохід) (форма №2), грошові показники якого наводяться в гривнях з копійками) |                           |                |
| Складено (зробити позначку “У” у відповідній клітинці):   |                           |                |
| за положеннями (стандартами) бухгалтерського обліку   |                           | V              |
| за міжнародними стандартами фінансової звітності  |                           |                |

**Баланс (Звіт про фінансовий стан)**  
на **31 грудня 2017** р.

Форма №1 Код за ДКУД | 1801001

| А К Т И В   | Код<br>рядка | На початок<br>звітного періоду | На кінець<br>звітного періоду |
|---|--------------|--------------------------------|-------------------------------|
| І   | 2            | 3                              | 4                             |
| <b>І. Необоротні активи</b>   |              |                                |                               |
| Нематеріальні активи  | 1000         | 3 325                          | 6 319                         |
| первісна вартість   | 1001         | 5 415                          | 9 910                         |
| накопичена амортизація  | 1002         | 2 090                          | 3 591                         |
| Незавершені капітальні інвестиції   | 1005         | 2 384                          | 6 972                         |
| Основні засоби  | 1010         | 273 083                        | 314 984                       |
| первісна вартість   | 1011         | 780 004                        | 839 254                       |
| знос  | 1012         | 506 921                        | 524 270                       |
| Інвестиційна нерухомість  | 1015         | 2 845                          | -                             |
| Первісна вартість інвестиційної нерухомості   | 1016         | 4 033                          | -                             |
| Знос інвестиційної нерухомості  | 1017         | 1 188                          | -                             |
| Довгострокові біологічні активи   | 1020         | -                              | -                             |
| Первісна вартість довгострокових біологічних активів  | 1021         | -                              | -                             |
| Накопичена амортизація довгострокових біологічних активів   | 1022         | -                              | -                             |
| Довгострокові фінансові інвестиції:<br>які обліковуються за методом участі в капіталі інших підприємств | 1030         | -                              | -                             |
| інші фінансові інвестиції   | 1035         | -                              | -                             |
| Довгострокова дебіторська заборгованість  | 1040         | 2 754                          | 2 254                         |
| Відстрочені податкові активи  | 1045         | 1 884                          | 15 946                        |
| Гудвіл  | 1050         | -                              | -                             |
| Відстрочені аквізиційні витрати   | 1060         | -                              | -                             |
| Залишок коштів у централізованих страхових резервних фондах   | 1065         | -                              | -                             |
| Інші необоротні активи  | 1090         | 77 142                         | -                             |
| <b>Усього за розділом І</b>   | <b>1095</b>  | <b>363 417</b>                 | <b>346 475</b>                |
| <b>ІІ. Оборотні активи</b>  |              |                                |                               |
| Запаси  | 1100         | 21 007                         | 24 469                        |
| Виробничі запаси  | 1101         | 21 007                         | 24 469                        |
| Незавершене виробництво   | 1102         | -                              | -                             |
| Готова продукція  | 1103         | -                              | -                             |
| Товари  | 1104         | -                              | -                             |
| Поточні біологічні активи   | 1110         | -                              | -                             |
| Депозити перестраховування  | 1115         | -                              | -                             |
| Векселі одержані  | 1120         | -                              | -                             |
| Дебіторська заборгованість за продукцію, товари, роботи, послуги  | 1125         | 33 831                         | 17 591                        |
| Дебіторська заборгованість за розрахунками:<br>за виданими авансами                                     | 1130         | 17 072                         | 8 180                         |
| з бюджетом  | 1135         | 18 126                         | 9 687                         |
| у тому числі з податку на прибуток  | 1136         | 18 126                         | 9 687                         |
| Дебіторська заборгованість за розрахунками з нерасовнених доходів                                       | 1140         | 536                            | 181                           |
| Дебіторська заборгованість за розрахунками із внутрішніх розрахунків                                    | 1145         | -                              | -                             |
| Інша поточна дебіторська заборгованість   | 1155         | 448                            | 1 355                         |
| Поточні фінансові інвестиції  | 1160         | -                              | -                             |
| Гроші та їх еквіваленти   | 1165         | 87 146                         | 91 035                        |
| Готівка   | 1166         | 3                              | 2                             |
| Рахунки в банках  | 1167         | 87 143                         | 91 033                        |
| Витрати майбутніх періодів  | 1170         | 681                            | 878                           |
| Частина перостраховки у страхових резервах<br>у тому числі в:<br>резервах довгострокових зобов'язань    | 1180         | -                              | -                             |
| резервах збитків або резервах належних виплат   | 1182         | -                              | -                             |
| резервах незароблених премій  | 1183         | -                              | -                             |

## The end of App. B

|   |             |                |                |
|---|-------------|----------------|----------------|
| інших страхових резервах  | 1184        | -              | -              |
| Інші оборотні активи  | 1190        | 161            | 857            |
| <b>Усього за розділом II</b>  | <b>1195</b> | <b>179 008</b> | <b>154 233</b> |
| <b>III. Необоротні активи, утримувані для продажу, та групи вибуття</b> | <b>1200</b> | <b>-</b>       | <b>-</b>       |
| <b>Баланс</b>   | <b>1300</b> | <b>542 425</b> | <b>500 708</b> |

| Пасив  | Код<br>рядка | На початок<br>звітної періоду | На кінець<br>звітної періоду |
|--|--------------|-------------------------------|------------------------------|
| 1  | 2            | 3                             | 4                            |
| <b>I. Власний капітал</b>  |              |                               |                              |
| Зареєстрований (лейсовий) капітал  | 1400         | 33 094                        | 33 094                       |
| Внески до незареєстрованого статутного капіталу  | 1401         | -                             | -                            |
| Капітал у дооцінках  | 1405         | 149 008                       | 137 909                      |
| Додатковий капітал   | 1410         | 231 559                       | 269 668                      |
| Емісійний дохід  | 1411         | -                             | -                            |
| Накопичені курсові різниці   | 1412         | -                             | -                            |
| Резервний капітал  | 1415         | -                             | -                            |
| Нерозподілений прибуток (непокритий збиток)  | 1420         | 76 418                        | 2 082                        |
| Неоплачений капітал  | 1425         | ( - )                         | ( - )                        |
| Видучений капітал  | 1430         | ( - )                         | ( - )                        |
| Інші резерви   | 1435         | -                             | -                            |
| <b>Усього за розділом I</b>  | <b>1495</b>  | <b>490 079</b>                | <b>442 753</b>               |
| <b>II. Довгострокові зобов'язання і забезпечення</b>   |              |                               |                              |
| Відстрочені податкові зобов'язання   | 1500         | -                             | -                            |
| Пенсійні зобов'язання  | 1505         | -                             | -                            |
| Довгострокові кредити банків   | 1510         | -                             | -                            |
| Інші довгострокові зобов'язання  | 1515         | -                             | -                            |
| Довгострокові забезпечення   | 1520         | -                             | -                            |
| Довгострокові забезпечення витрат персоналу  | 1521         | -                             | -                            |
| Цільове фінансування   | 1525         | -                             | -                            |
| Благодійна допомога  | 1526         | -                             | -                            |
| Страхові резерви   | 1530         | -                             | -                            |
| у тому числі:  |              |                               |                              |
| резерв довгострокових зобов'язань  | 1531         | -                             | -                            |
| резерв збитків або резерв належних виплат  | 1532         | -                             | -                            |
| резерв незароблених премій   | 1533         | -                             | -                            |
| інші страхові резерви  | 1534         | -                             | -                            |
| Інвестиційні контракти   | 1535         | -                             | -                            |
| Призовий фонд  | 1540         | -                             | -                            |
| Резерв на виплату джек-пота  | 1545         | -                             | -                            |
| <b>Усього за розділом II</b>   | <b>1595</b>  | <b>-</b>                      | <b>-</b>                     |
| <b>III. Поточні зобов'язання і забезпечення</b>  |              |                               |                              |
| Короткострокові кредити банків   | 1600         | -                             | -                            |
| Векселі видані   | 1605         | -                             | -                            |
| Поточна кредиторська зборгованість за:   |              |                               |                              |
| довгостроковими зобов'язаннями   | 1610         | -                             | -                            |
| товари, роботи, послуги  | 1615         | 6 347                         | 4 205                        |
| розрахунками з бюджетом  | 1620         | 28 530                        | 24 648                       |
| у тому числі з податку на прибуток   | 1621         | -                             | -                            |
| розрахунками зі страхування  | 1625         | 1 655                         | 2 625                        |
| розрахунками з оплати праці  | 1630         | 6 553                         | 11 180                       |
| Поточна кредиторська зборгованість за одержаними авансами  | 1635         | 787                           | 8 211                        |
| Поточна кредиторська зборгованість за розрахунками з учасниками  | 1640         | -                             | -                            |
| Поточна кредиторська зборгованість із внутрішніх розрахунків   | 1645         | -                             | -                            |
| Поточна кредиторська зборгованість за страховою діяльністю   | 1650         | -                             | -                            |
| Поточні забезпечення   | 1660         | 4 595                         | 4 553                        |
| Доходи майбутніх періодів  | 1665         | 881                           | 807                          |
| Відстрочені комісійні доходи від перестраховиків   | 1670         | -                             | -                            |
| Інші поточні зобов'язання  | 1690         | 2 998                         | 1 726                        |
| <b>Усього за розділом III</b>  | <b>1695</b>  | <b>52 346</b>                 | <b>57 955</b>                |
| <b>IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття</b> | <b>1700</b>  | <b>-</b>                      | <b>-</b>                     |
| <b>V. Чиста вартість активів недержавного пенсійного фонду</b>   | <b>1800</b>  | <b>-</b>                      | <b>-</b>                     |
| <b>Баланс</b>  | <b>1900</b>  | <b>542 425</b>                | <b>500 708</b>               |

Керівник

Олейник Руслан Миколайович

Головний бухгалтер

Коновалов В.П.

<sup>1</sup> Визначається в порядку, встановленому центральним органом виконавчої влади, що реалізує державну політику у сфері статистики.

## Appendix C

### The balance sheet of the “Stevedoring company “Olvia” in 2019, in thousand UAH

Додаток 1  
до Національного положення (стандарту)  
бухгалтерського обліку 1 “Загальні вимоги до фінансової звітності”

|  |                           |            |
|--|---------------------------|------------|
|  | Дата (рік, місяць, число) | КОДИ       |
| Підприємство <b>ДЕРЖАВНЕ ПІДПРИЄМСТВО “СТИВДОРНА КОМПАШІЯ “ОЛЬВІЯ”</b>                     | 2020                      | 01   01    |
| Територія <b>МИКОЛАЇВСЬКА</b>  | за СДРГОУ                 | 19290012   |
| Організаційно-правова форма господарювання <b>Державне підприємство</b>                    | за КОАТУУ                 | 4810136600 |
| Вид економічної діяльності <b>Допоміжне обслуговування водного транспорту</b>              | за КОПФГ                  | 140        |
| Середня кількість працівників <b>1 600</b>   | за КВЕД                   | 52.22      |
| Адреса, телефон <b>А/С 170, м. МИКОЛАЇВ, МИКОЛАЇВСЬКИЙ РАЙОН, МИКОЛАЇВСЬКА обл., 54052</b> | 776105                    |            |

Одиниця виміру: тис. грн. без десятичного знака (окрім розділу IV Звіту про фінансові результати (Звіту про суцільний дохід) (форми №2), грошові показники якого наводяться в гривнях з копійками)

Складено (зробити позначку “v” у відповідній клітинці):  
за положеннями (стандартами) бухгалтерського обліку v  
за міжнародними стандартами фінансової звітності

**Баланс (Звіт про фінансовий стан)**  
на **31 грудня 2019** р.

Форма №1 Код за ДКУД **1801001**

| А К Т И В  | Код<br>рядка | На початок<br>звітного періоду | На кінець<br>звітного періоду |
|--|--------------|--------------------------------|-------------------------------|
| 1  | 2            | 3                              | 4                             |
| <b>I. Необоротні активи</b>  |              |                                |                               |
| Нематеріальні активи   | 1000         | 4 443                          | 3 626                         |
| первісна вартість  | 1001         | 10 074                         | 9 685                         |
| накопичена амортизація   | 1002         | 5 631                          | 6 059                         |
| Незавершені капітальні інвестиції  | 1005         | 12 663                         | 5 871                         |
| Основи засоби  | 1010         | 367 488                        | 327 286                       |
| первісна вартість  | 1011         | 1 029 142                      | 839 720                       |
| знос   | 1012         | 661 654                        | 512 434                       |
| Інвестиційна нерухомість   | 1015         | -                              | -                             |
| Первісна вартість інвестиційної нерухомості  | 1016         | -                              | -                             |
| Знос інвестиційної нерухомості   | 1017         | -                              | -                             |
| Довгострокові біологічні активи  | 1020         | -                              | -                             |
| Первісна вартість довгострокових біологічних активів   | 1021         | -                              | -                             |
| Накопичена амортизація довгострокових біологічних активів  | 1022         | -                              | -                             |
| Довгострокові фінансові інвестиції:<br>які обліковуються за методом участі в капіталі<br>інших підприємств | 1030         | -                              | -                             |
| інші фінансові інвестиції  | 1035         | -                              | -                             |
| Довгострокова дебіторська заборгованість   | 1040         | 2 754                          | 825                           |
| Відстрочені податкові активи   | 1045         | 2 269                          | 2 240                         |
| Гудвіл   | 1050         | -                              | -                             |
| Відстрочені аквізиційні витрати  | 1060         | -                              | -                             |
| Залишок коштів у централізованих страхових резервних фондах  | 1065         | -                              | -                             |
| Інші необоротні активи   | 1090         | -                              | -                             |
| <b>Усього за розділом I</b>  | <b>1095</b>  | <b>389 617</b>                 | <b>339 848</b>                |
| <b>II. Оборотні активи</b>   |              |                                |                               |
| Запаси   | 1100         | 31 458                         | 28 878                        |
| Виробничі запаси   | 1101         | 31 458                         | 28 878                        |
| Незавершене виробництво  | 1102         | -                              | -                             |
| Готова продукція   | 1103         | -                              | -                             |
| Товари   | 1104         | -                              | -                             |
| Поточні біологічні активи  | 1110         | -                              | -                             |
| Депозити перестрахування   | 1115         | -                              | -                             |
| Векселі одержані   | 1120         | -                              | -                             |
| Дебіторська заборгованість за продукцію, товари, роботи, послуги   | 1125         | 15 229                         | 21 360                        |
| Дебіторська заборгованість за розрахунками:<br>за виданими авансами  | 1130         | 9 669                          | 4 459                         |
| з бюджетом   | 1135         | 7 316                          | 6 175                         |
| у тому числі з податку на прибуток   | 1136         | 7 316                          | 6 175                         |
| Дебіторська заборгованість за розрахунками з нарахованих доходів   | 1140         | 165                            | 70                            |
| Дебіторська заборгованість за розрахунками із внутрішніх розрахунків                                       | 1145         | -                              | -                             |
| Інші поточна дебіторська заборгованість  | 1155         | 3 132                          | 3 177                         |
| Поточні фінансові інвестиції   | 1160         | -                              | -                             |
| Гроші та їх еквіваленти  | 1165         | 75 027                         | 68 559                        |
| Готівка  | 1166         | 4                              | 7                             |
| Рахунки в банках   | 1167         | 75 023                         | 68 552                        |
| Витрати майбутніх періодів   | 1170         | 429                            | 303                           |
| Частка перестраховика у страхових резервах<br>у тому числі в:<br>резервах довгострокових зобов'язань       | 1180         | -                              | -                             |
| резервах збитків або резервах належних виплат  | 1181         | -                              | -                             |
| резервах незароблених премій   | 1182         | -                              | -                             |
|  | 1183         | -                              | -                             |

## The end of App. C

|   |             |                |                |
|---|-------------|----------------|----------------|
| інших страхових резервах  | 1184        | -              | -              |
| Інші оборотні активи  | 1190        | 1 443          | 840            |
| <b>Усього за розділом II</b>  | <b>1195</b> | <b>143 868</b> | <b>133 821</b> |
| <b>III. Необоротні активи, утримувані для продажу, та групи вибуття</b> | <b>1200</b> | <b>-</b>       | <b>-</b>       |
| <b>Баланс</b>   | <b>1300</b> | <b>533 485</b> | <b>473 669</b> |

| Пасив  | Код<br>рядка | На початок<br>звітного періоду | На кінець<br>звітного періоду |
|--|--------------|--------------------------------|-------------------------------|
| 1  | 2            | 3                              | 4                             |
| <b>I. Власний капітал</b>  |              |                                |                               |
| Зареєстрований (пайовий) капітал   | 1400         | 33 094                         | 33 094                        |
| Внески до незареєстрованого статутного капіталу  | 1401         | -                              | -                             |
| Капітал у дооцінках  | 1405         | 119 775                        | 90 633                        |
| Додатковий капітал   | 1410         | 317 243                        | 303 893                       |
| Емісійний дохід  | 1411         | -                              | -                             |
| Накопичені курсові різниці   | 1412         | -                              | -                             |
| Резервний капітал  | 1415         | -                              | -                             |
| Нерозподілений прибуток (непокритий збиток)  | 1420         | 18 752                         | 19 430                        |
| Неоплачений капітал  | 1425         | ( - )                          | ( - )                         |
| Видучений капітал  | 1430         | ( - )                          | ( - )                         |
| Інші резерви   | 1435         | -                              | -                             |
| <b>Усього за розділом I</b>  | <b>1495</b>  | <b>488 864</b>                 | <b>447 050</b>                |
| <b>II. Довгострокові зобов'язання і забезпечення</b>   |              |                                |                               |
| Відстрочені податкові зобов'язання   | 1500         | -                              | -                             |
| Пенсійні зобов'язання  | 1505         | -                              | -                             |
| Довгострокові кредити банків   | 1510         | -                              | -                             |
| Інші довгострокові зобов'язання  | 1515         | -                              | -                             |
| Довгострокові забезпечення   | 1520         | -                              | -                             |
| Довгострокові забезпечення витрат персоналу  | 1521         | -                              | -                             |
| Цільове фінансування   | 1525         | -                              | -                             |
| Благодійна допомога  | 1526         | -                              | -                             |
| Страхові резерви   | 1530         | -                              | -                             |
| у тому числі:  | 1531         | -                              | -                             |
| резерв довгострокових зобов'язань  |              |                                |                               |
| резерв збитків або резерв належних виплат  | 1532         | -                              | -                             |
| резерв незароблених премій   | 1533         | -                              | -                             |
| інші страхові резерви  | 1534         | -                              | -                             |
| Інвестиційні контракти   | 1535         | -                              | -                             |
| Призовий фонд  | 1540         | -                              | -                             |
| Резерв на виплату двоек-поту   | 1545         | -                              | -                             |
| <b>Усього за розділом II</b>   | <b>1595</b>  | <b>-</b>                       | <b>-</b>                      |
| <b>III. Поточні зобов'язання і забезпечення</b>  |              |                                |                               |
| Короткострокові кредити банків   | 1600         | -                              | -                             |
| Векселі видані   | 1605         | -                              | -                             |
| Поточна кредиторська зборгованість за:   |              |                                |                               |
| довгостроковими зобов'язаннями:  | 1610         | -                              | -                             |
| товари, роботи, послуги  | 1615         | 1 905                          | 3 731                         |
| розрахунками з бюджетом  | 1620         | 7 859                          | 6 073                         |
| у тому числі з податку на прибуток   | 1621         | -                              | -                             |
| розрахунками зі страхування  | 1625         | 944                            | 784                           |
| розрахунками з оплати праці  | 1630         | 5 387                          | 4 415                         |
| Поточна кредиторська зборгованість за одержаними авансами  | 1635         | 7 661                          | 4 004                         |
| Поточна кредиторська зборгованість за розрахунками з учасниками  | 1640         | -                              | -                             |
| Поточна кредиторська зборгованість із внутрішніх розрахунків   | 1645         | -                              | -                             |
| Поточна кредиторська зборгованість за страховою діяльністю   | 1650         | -                              | -                             |
| Поточні забезпечення   | 1660         | 18 051                         | 5 749                         |
| Доходи майбутніх періодів  | 1665         | 734                            | 660                           |
| Відстрочені комісійні доходи від перестраховиків   | 1670         | -                              | -                             |
| Інші поточні зобов'язання  | 1690         | 2 080                          | 1 203                         |
| <b>Усього за розділом III</b>  | <b>1695</b>  | <b>44 621</b>                  | <b>26 619</b>                 |
| <b>IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття</b> | <b>1700</b>  | <b>-</b>                       | <b>-</b>                      |
| <b>V. Чиста партія активів недержавного пенсійного фонду</b>   | <b>1800</b>  | <b>-</b>                       | <b>-</b>                      |
| <b>Баланс</b>  | <b>1900</b>  | <b>533 485</b>                 | <b>473 669</b>                |

Керівник

Олейник Руслан Миколайович

Головний бухгалтер

Коновалов В П

<sup>1</sup> Визначається в порядку, встановленому центральним органом виконавчої влади, що реалізує державну політику у сфері статистики.

## Appendix D

### Cash flow statement of the “Stevedoring company “Olvia” in 2017, in thousand UAH

|   |  |                                    |
|---|--|------------------------------------|
| Підприємство <u>ДЕРЖАВНЕ ПІДПРИЄМСТВО "СТІВІДОРНА КОМПАНІЯ "ОЛЬВІЯ"</u><br>(найменування) | Дата (рік, місяць, число)<br>за СДРГОУ | КОДИ<br>2018   01   01<br>19290012 |
|---|--|------------------------------------|

**Звіт про рух грошових коштів (за прямим методом)**  
за Рік 2017 р.

Форма N3 Код за ДКУД 1801004

| Стаття   | Код         | За звітний період | За аналогічний період попереднього року |
|--|-------------|-------------------|---|
| 1  | 2           | 3                 | 4                                       |
| <b>I. Рух коштів у результаті операційної діяльності</b>                       |             |                   |   |
| Надходження від:   |             |                   |   |
| Реалізації продукції (товарів, робіт, послуг)                                  | 3000        | 394 903           | 371 161                                 |
| Повернення податків і зборів   | 3005        | -                 | -                                       |
| у тому числі податку на додану вартість  | 3006        | -                 | -                                       |
| Цільового фінансування   | 3010        | 2 605             | 3 328                                   |
| Надходження від отримання субсидій, дотацій                                    | 3011        | -                 | -                                       |
| Надходження авансів від покупців і замовників                                  | 3015        | 85 918            | 81 543                                  |
| Надходження від повернення авансів   | 3020        | 294               | 139                                     |
| Надходження від відсотків за залишками коштів на поточних рахунках             | 3025        | 3 249             | 6 159                                   |
| Надходження від боржників неустойки (штрафів, пені)                            | 3035        | 4 699             | 230                                     |
| Надходження від операційної оренди   | 3040        | 40                | 72                                      |
| Надходження від отримання роялті, авторських винагород                         | 3045        | -                 | -                                       |
| Надходження від страхових премій   | 3050        | -                 | -                                       |
| Надходження фінансових установ від повернення позик                            | 3055        | -                 | -                                       |
| Інші надходження   | 3095        | 186               | 364                                     |
| Витрачання на оплату:  |             |                   |   |
| Товарів (робіт, послуг)  | 3100        | ( 96 522 )        | ( 89 427 )                              |
| Праці  | 3105        | ( 87 971 )        | ( 86 731 )                              |
| Відрахувань на соціальні заходи  | 3110        | ( 23 766 )        | ( 24 517 )                              |
| Зобов'язань з податків і зборів  | 3115        | ( 183 133 )       | ( 242 484 )                             |
| Витрачання на оплату зобов'язань з податку на прибуток                         | 3116        | ( 16 525 )        | ( 67 865 )                              |
| Витрачання на оплату зобов'язань з податку на додану вартість                  | 3117        | ( 46 395 )        | ( 63 178 )                              |
| Витрачання на оплату зобов'язань з інших податків і зборів                     | 3118        | ( 120 213 )       | ( 111 441 )                             |
| Витрачання на оплату авансів   | 3135        | -                 | -                                       |
| Витрачання на оплату повернення авансів  | 3140        | ( 783 )           | ( 67 )                                  |
| Витрачання на оплату цільових внесків  | 3145        | ( 146 )           | ( 167 )                                 |
| Витрачання на оплату зобов'язань за страховими контрактами                     | 3150        | -                 | -                                       |
| Витрачання фінансових установ на надання позик                                 | 3155        | -                 | -                                       |
| Інші витрачання  | 3190        | ( 12 393 )        | ( 34 743 )                              |
| <b>Чистий рух коштів від операційної діяльності</b>                            | <b>3195</b> | <b>87 180</b>     | <b>-15 140</b>                          |
| <b>II. Рух коштів у результаті інвестиційної діяльності</b>                    |             |                   |   |
| Надходження від реалізації:  |             |                   |   |
| фінансових інвестицій  | 3200        | -                 | -                                       |
| необоротних активів  | 3205        | -                 | -                                       |
| Надходження від отриманих:   |             |                   |   |
| відсотків  | 3215        | -                 | -                                       |
| дивідендів   | 3220        | -                 | -                                       |
| Надходження від деривативів  | 3225        | -                 | -                                       |
| Надходження від погашення позик  | 3230        | -                 | -                                       |
| Надходження від вибуття дочірнього підприємства та іншої господарської одиниці | 3235        | -                 | -                                       |
| Інші надходження   | 3250        | -                 | -                                       |

## The end of App. D

|   |             |                |                |
|---|-------------|----------------|----------------|
| Витрачання на придбання:<br>фінансових інвестицій                                 | 3255        | ( - )          | ( - )          |
| необоротних активів   | 3260        | ( 85 530 )     | ( 33 098 )     |
| Виплати за деривативами   | 3270        | ( - )          | ( - )          |
| Витрачання на надання позик   | 3275        | ( - )          | ( - )          |
| Витрачання на придбання дочірнього підприємства та<br>іншої господарської одиниці | 3280        | ( - )          | ( - )          |
| Інші платежі  | 3290        | ( - )          | ( - )          |
| <b>Чистий рух коштів від інвестиційної діяльності</b>                             | <b>3295</b> | <b>-85 530</b> | <b>-33 098</b> |
| <b>III. Рух коштів у результаті фінансової діяльності</b>                         |             |                |                |
| Надходження від:  |             |                |                |
| Власного капіталу   | 3300        | -              | -              |
| Отримання позик   | 3305        | -              | -              |
| Надходження від продажу частки в дочірньому<br>підприємстві                       | 3310        | -              | -              |
| Інші надходження  | 3340        | -              | -              |
| Витрачання на:  |             |                |                |
| Викуп власних акцій   | 3345        | ( - )          | ( - )          |
| Погашення позик   | 3350        | -              | -              |
| Сплату дивідендів   | 3355        | ( - )          | ( - )          |
| Витрачання на сплату відсотків  | 3360        | ( - )          | ( - )          |
| Витрачання на сплату заборгованості з фінансової<br>оренди                        | 3365        | ( - )          | ( - )          |
| Витрачання на придбання частки в дочірньому<br>підприємстві                       | 3370        | ( - )          | ( - )          |
| Витрачання на виплати неконтрольованим часткам у<br>дочірніх підприємствах        | 3375        | ( - )          | ( - )          |
| Інші платежі  | 3390        | ( - )          | ( - )          |
| <b>Чистий рух коштів від фінансової діяльності</b>                                | <b>3395</b> | <b>-</b>       | <b>-</b>       |
| <b>Чистий рух грошових коштів за звітний період</b>                               | <b>3400</b> | <b>1 650</b>   | <b>-48 238</b> |
| Залишок коштів на початок року  | 3405        | 87 146         | 129 671        |
| Вплив зміни валютних курсів на залишок коштів                                     | 3410        | 2 239          | 5 713          |
| Залишок коштів на кінець року   | 3415        | 91 035         | 87 146         |

Керівник

Головний бухгалтер

Олейник Руслан Миколайович

Коновалов В.П.

## Appendix E

### Cash flow statement of the “Stevedoring company “Olvia” in 2019, in thousand UAH

| Підприємство <u>ДЕРЖАВНЕ ПІДПРИЄМСТВО "СТИВДОРНА КОМПАНІЯ "ОЛЬВІЯ"</u>         | Дата (рік, місяць, число) | 2020              | 01   01  |
|--|---------------------------|-------------------|--|
| (найменування)   | за СДРІГОУ                | 19290012          |  |
| <b>Звіт про рух грошових коштів (за прямим методом)</b>                        |                           |                   |  |
| за <b>Рік 2019</b> р.  |                           |                   |  |
|  |                           |                   | Форма N3 Код за ДКУД <span style="border: 1px solid black; padding: 2px;">1801004</span> |
| Стаття   | Код                       | За звітний період | За аналогічний період попереднього року  |
| 1  | 2                         | 3                 | 4  |
| <b>I. Рух коштів у результаті операційної діяльності</b>                       |                           |                   |  |
| Надходження від:   |                           |                   |  |
| Реалізації продукції (товарів, робіт, послуг)                                  | 3000                      | 274 905           | 347 535  |
| Повернення податків і зборів   | 3005                      | -                 | -  |
| у тому числі податку на додану вартість  | 3006                      | -                 | -  |
| Цільового фінансування   | 3010                      | 3 769             | 2 304  |
| Надходження від отримання субсидій, дотацій                                    | 3011                      | -                 | -  |
| Надходження авансів від покупців і замовників                                  | 3015                      | 51 230            | 52 632   |
| Надходження від повернення авансів   | 3020                      | 42                | 137  |
| Надходження від відсотків за залишками коштів на поточних рахунках             | 3025                      | 2 200             | 2 771  |
| Надходження від боржників неустойки (штрафів, пені)                            | 3035                      | 223               | 947  |
| Надходження від операційної оренди   | 3040                      | 93                | 80   |
| Надходження від отримання роялті, авторських винагород                         | 3045                      | -                 | -  |
| Надходження від страхових премій   | 3050                      | -                 | -  |
| Надходження фінансових установ від повернення позик                            | 3055                      | -                 | -  |
| Інші надходження   | 3095                      | 490               | 1 005  |
| Витрачання на оплату:  |                           |                   |  |
| Товарів (робіт, послуг)  | 3100                      | ( 77 666 )        | ( 90 239 )   |
| Праці  | 3105                      | ( 106 340 )       | ( 97 120 )   |
| Відрахувань на соціальні заходи  | 3110                      | ( 27 208 )        | ( 26 257 )   |
| Зобов'язань з податків і зборів  | 3115                      | ( 86 992 )        | ( 147 468 )  |
| Витрачання на оплату зобов'язань з податку на прибуток                         | 3116                      | ( 1 934 )         | ( 11 373 )   |
| Витрачання на оплату зобов'язань з податку на додану вартість                  | 3117                      | ( 42 019 )        | ( 42 062 )   |
| Витрачання на оплату зобов'язань з інших податків і зборів                     | 3118                      | ( 43 039 )        | ( 94 033 )   |
| Витрачання на оплату авансів   | 3135                      | -                 | -  |
| Витрачання на оплату повернення авансів  | 3140                      | ( 175 )           | ( 54 )   |
| Витрачання на оплату цільових внесків  | 3145                      | ( 88 )            | ( 111 )  |
| Витрачання на оплату зобов'язань за страховими контрактами                     | 3150                      | -                 | -  |
| Витрачання фінансових установ на надання позик                                 | 3155                      | -                 | -  |
| Інші витрачання  | 3190                      | ( 7 884 )         | ( 11 844 )   |
| <b>Чистий рух коштів від операційної діяльності</b>                            | <b>3195</b>               | <b>26 599</b>     | <b>34 318</b>  |
| <b>II. Рух коштів у результаті інвестиційної діяльності</b>                    |                           |                   |  |
| Надходження від реалізації:  |                           |                   |  |
| фінансових інвестицій  | 3200                      | -                 | -  |
| необоротних активів  | 3205                      | -                 | -  |
| Надходження від отриманих:   |                           |                   |  |
| відсотків  | 3215                      | -                 | -  |
| дивідендів   | 3220                      | -                 | -  |
| Надходження від деривативів  | 3225                      | -                 | -  |
| Надходження від погашення позик  | 3230                      | -                 | -  |
| Надходження від вибуття дочірнього підприємства та іншої господарської одиниці | 3235                      | -                 | -  |
| Інші надходження   | 3250                      | -                 | -  |

## The end of App. E

|   |             |                |                |
|---|-------------|----------------|----------------|
| Витрачання на придбання:<br>фінансових інвестицій                                 | 3255        | ( - )          | ( - )          |
| необоротних активів   | 3260        | ( 22 165 )     | ( 48 526 )     |
| Виплати за деривативами   | 3270        | ( - )          | ( - )          |
| Витрачання на надання позик   | 3275        | ( - )          | ( - )          |
| Витрачання на придбання дочірнього підприємства та<br>іншої господарської одиниці | 3280        | ( - )          | ( - )          |
| Інші платежі  | 3290        | ( - )          | ( - )          |
| <b>Чистий рух коштів від інвестиційної діяльності</b>                             | <b>3295</b> | <b>-22 165</b> | <b>-48 526</b> |
| <b>III. Рух коштів у результаті фінансової діяльності</b>                         |             |                |                |
| Надходження від:<br>Власного капіталу   | 3300        | -              | -              |
| Отримання позик   | 3305        | -              | -              |
| Надходження від продажу частки в дочірньому<br>підприємстві                       | 3310        | -              | -              |
| Інші надходження  | 3340        | -              | -              |
| Витрачання на:<br>Викуп власних акцій   | 3345        | ( - )          | ( - )          |
| Погашення позик   | 3350        | -              | -              |
| Сплату дивідендів   | 3355        | ( - )          | ( - )          |
| Витрачання на сплату відсотків  | 3360        | ( - )          | ( - )          |
| Витрачання на сплату заборгованості з фінансової<br>оренди                        | 3365        | ( - )          | ( - )          |
| Витрачання на придбання частки в дочірньому<br>підприємстві                       | 3370        | ( - )          | ( - )          |
| Витрачання на виплати неконтрольованим часткам у<br>дочірніх підприємствах        | 3375        | ( - )          | ( - )          |
| Інші платежі  | 3390        | ( - )          | ( - )          |
| <b>Чистий рух коштів від фінансової діяльності</b>                                | <b>3395</b> | <b>-</b>       | <b>-</b>       |
| <b>Чистий рух грошових коштів за звітний період</b>                               | <b>3400</b> | <b>4 434</b>   | <b>-14 208</b> |
| Залишок коштів на початок року  | 3405        | 75 027         | 91 035         |
| Вплив зміни валютних курсів на залишок коштів                                     | 3410        | (10 902)       | (1 800)        |
| Залишок коштів на кінець року   | 3415        | 68 559         | 75 027         |

Керівник

\_\_\_\_\_

Олейник Руслан Миколайович

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Головний бухгалтер

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Коновалов В П

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## Appendix F

### Report on key performance indicators of the “Stevedoring company “Olvia” in 2018

| № з/р | Показники  | Одиниця виміру | Звіт 2017 р. | План на 2018 р. | Звіт 2018 р. | % викон. Плану 2018 р. | 2018 р. у % до 2017 р. |
|-------|--|----------------|--------------|-----------------|--------------|------------------------|------------------------|
| 1.    | Вантажопереробка                                     | тис. т         | 2510,1       | 2365            | 2170,9       | 91,8                   | 86,5                   |
| 2.    | Доходи, всього                                       | тис. грн       | 394762       | 405622          | 351432       | 86,6                   | 89,0                   |
| 3.    | Чистий дохід (виручка) від реалізації продукції      | тис. грн       | 380322       | 399351          | 331666       | 83,1                   | 87,2                   |
| 4.    | Витрати  | тис. грн       | 293245       | 309209          | 300385       | 97,1                   | 102,4                  |
| 5.    | Прибуток до оподаткування                            | тис. грн       | 126293       | 120208          | 64573        | 53,7                   | 51,1                   |
| 6.    | Чистий прибуток                                      | тис. грн       | 101517       | 96413           | 51047        | 52,9                   | 50,3                   |
| 7.    | Платежі до Держбюджету (сплачені)                    | тис. грн       | 154865       | 151714          | 116767       | 77,0                   | 75,4                   |
| 8.    | Інші обов'язкові платежі (сплачені)                  | тис. грн       | 28268        | 31146           | 30701        | 98,6                   | 108,6                  |
| 9.    | Внески до державних цільових фондів (сплачені)       | тис. грн       | 23766        | 26816           | 26257        | 97,9                   | 110,5                  |
| 10.   | Середньомісячні витрати на оплату праці 1 працівника | грн            | 14161        | 15246           | 15827        | 103,8                  | 111,8                  |
| 11.   | Середня кількість усіх працівників                   | осіб           | 675          | 692             | 647          | 93,5                   | 95,9                   |
| 12.   | Капітальні інвестиції                                | тис. грн       | 78910        | 48095           | 37309        | 77,6                   | 47,3                   |

## Appendix G

### Report on key performance indicators of the “Stevedoring company “Olvia” in 2019

| № з/р | Показники  | Одиниця виміру | Звіт 2018 р. | План на 2019 р. | Факт 2019 р. | % викон. Плану 2019 р. | 2019 р. у %% до 2018 р. |
|-------|--|----------------|--------------|-----------------|--------------|------------------------|-------------------------|
| 1.    | Вантажопереробка                                     | тис. тн.       | 2170,9       | 2520            | 1606,3       | 63,7                   | 74,0                    |
| 2.    | Доходи, всього                                       | тис. грн.      | 351432       | 407680          | 287334       | 70,5                   | 81,8                    |
| 3.    | Чистий дохід (виручка) від реалізації продукції      | тис. грн.      | 331666       | 400750          | 277800       | 69,3                   | 83,8                    |
| 4.    | Витрати  | тис. грн.      | 300385       | 347510          | 282243       | 81,2                   | 94,0                    |
| 5.    | Прибуток до оподаткування                            | тис. грн.      | 64573        | 75570           | 8195         | 10,8                   | 12,7                    |
| 6.    | Чистий прибуток                                      | тис. грн.      | 51047        | 60170           | 5091         | 8,5                    | 10,0                    |
| 7.    | Платежі до Держбюджету (сплачені)                    | тис. грн.      | 116767       | 124364          | 54858        | 44,1                   | 47,0                    |
| 8.    | Інші обов'язкові платежі (сплачені)                  | тис. грн.      | 30701        | 34982           | 32134        | 91,9                   | 104,7                   |
| 9.    | Внески до державних цільових фондів (сплачені)       | тис. грн.      | 26257        | 32084           | 27208        | 84,8                   | 103,6                   |
| 10.   | Середньомісячні витрати на оплату праці 1 працівника | грн.           | 15826,8      | 16992,2         | 16416,3      | 96,6                   | 103,7                   |
| 11.   | Середня кількість усіх працівників                   | осіб           | 647          | 719             | 606          | 84,3                   | 93,7                    |
| 12.   | Капітальні інвестиції                                | тис. грн.      | 37309        | 31000           | 25517,0      | 82,3                   | 68,4                    |

## Appendix H

### Projects with short-term cost estimation (for five years)

| № п.п.                   | Назва  | Вихід на причал   | Потужність, млн. тонн на рік | Загальна вартість проекту |                                     | у тому числі:              |                            | Термін окупності, роки |
|--------------------------|--|-------------------|------------------------------|---------------------------|-------------------------------------|----------------------------|----------------------------|------------------------|
|                          |  |                   |                              | тис. дол. США             | у гривневому еквіваленті, тис. грн. | Кошти ДП «АМПУ», тис. грн. | Кошти інвестора, тис. грн. |                        |
| 1.                       | Будівництво зернового комплексу із подовженням причальної лінії  | Причал №0         | 3,2                          | 92580                     | 2008986                             | 833280                     | 1175706                    | 8,5                    |
| 2.                       | Будівництво зернового комплексу  | Допоміжний причал | 2,2                          | 49450                     | 1073065                             | 4340                       | 1068725                    | 4,0                    |
| 3.                       | Будівництво зернового комплексу з береговими об'єктами за територією Портового оператора                             | Допоміжний причал | 2,2                          | 49450                     | 1073065                             | 4340                       | 1068725                    | 4,0                    |
| 4.                       | Будівництво залізничної колії до допоміжного причалу   | Допоміжний причал | -                            | 240                       | 5208                                | -                          | 5208                       | 1,5                    |
| 5.                       | Будівництво «Комплексу з перевалки зріджених вуглеводневих газів, дизельного палива та інших вантажів» (перша черга) | Причал №6         | 0,9                          | 22940                     | 497798                              | 130200                     | 367598                     | 10,4                   |
| 6.                       | Будівництво комплексу для допоміжного причалу з обробки суден Ro-Ro  | Допоміжний причал | 0,5                          | 985                       | 21374,5                             | -                          | 21374,5                    | 2,5                    |
| <b>ВСЬОГО за період:</b> |  |                   | <b>9,0</b>                   | <b>215645</b>             | <b>4679496,5</b>                    | <b>972160</b>              | <b>3707336,5</b>           |                        |

## Appendix I

### Projects with mid-term cost estimation (for ten years)

| № п.п.                   | Назва   | Вихід на причал | Потужність, млн. тонн на рік | Загальна вартість проекту |                                     | у тому числі:              |                            | Термін окупності, роки |
|--------------------------|---|-----------------|------------------------------|---------------------------|-------------------------------------|----------------------------|----------------------------|------------------------|
|                          |   |                 |                              | тис. дол. США             | у гривневому еквіваленті, тис. грн. | Кошти ДП «АМПУ», тис. грн. | Кошти інвестора, тис. грн. |                        |
| 1.                       | Реконструкція великого пірсу та будівництво універсальних перевантажувальних комплексів в тилу великого пірсу (перша черга) | Причал №7       | 1,9                          | 77250                     | 1676325                             | 687890                     | 988435                     | 8,2                    |
|                          |   | Причал №9       | 2,4                          | 80350                     | 1743595                             | 687890                     | 1055705                    | 9,1                    |
| 2.                       | Будівництво «Комплексу з перевалки зріджених вуглеводневих газів, дизельного палива та інших вантажів» (друга черга)        | Причал №15      | 1,0                          | 54380                     | 1180046                             | 342860                     | 837186                     | 7,8                    |
| <b>ВСЬОГО за період:</b> |   |                 | <b>5,3</b>                   | <b>211980</b>             | <b>4599966</b>                      | <b>1718640</b>             | <b>2881326</b>             |                        |

## Appendix J

### Projects with long-term cost estimation (for twenty years)

| № п.п.                   | Назва   | Вихід на причал | Потужність, млн. тонн на рік | Загальна вартість проекту |                                     | у тому числі:              |                            | Термін окупності, роки |
|--------------------------|---|-----------------|------------------------------|---------------------------|-------------------------------------|----------------------------|----------------------------|------------------------|
|                          |   |                 |                              | тис. дол. США             | у гривневому еквіваленті, тис. грн. | Кошти ДП «АМПУ», тис. грн. | Кошти інвестора, тис. грн. |                        |
| 1.                       | Реконструкція великого пірсу та будівництво універсальних перевантажувальних комплексів в тилу великого пірсу (третя черга) | Причал №8       | 3,2                          | 125700                    | 2727690                             | 1069810                    | 1657880                    | 6,9                    |
|                          |   | Причал №10      |                              |                           |                                     |                            |                            |                        |
| 2.                       | Будівництво наваловальних перевантажувальних комплексів   | Причал №12      | 7,2                          | 215400                    | 4674180                             | 1853180                    | 2821000                    | 9,0                    |
|                          |   | Причал №13      |                              |                           |                                     |                            |                            |                        |
|                          |   | Причал №14      |                              |                           |                                     |                            |                            |                        |
| 3.                       | Будівництво наливних перевантажувальних комплексів  | Причал №16      | 1,3                          | 34490                     | 748433                              | 488250                     | 260183                     | 4,5                    |
| 4.                       | Будівництво комплексу з обробки суден Ро-Ро   | Причал №11      | 0,5                          | 46920                     | 1018164                             | 651000                     | 367164                     | 8,7                    |
| <b>ВСЬОГО за період:</b> |   |                 | <b>12,2</b>                  | <b>422510</b>             | <b>9168467</b>                      | <b>4062240</b>             | <b>5106227</b>             |                        |

## Appendix K

### Projected capacity-driven long-term throughput growth in Olvia port, tonnes

| Year | Cargo throughput, thousand tonnes | Port capacity, thousand tonnes | Planned capacity expansion per period |
|------|-----------------------------------|--------------------------------|---------------------------------------|
| 2018 | 2170,9                            | 2570                           |                                       |
| 2019 | 1606,3                            | 2570                           |                                       |
| 2020 | 2294,71                           | 2570                           | 9000                                  |
| 2021 | 3901,90                           | 4370                           |                                       |
| 2022 | 5509,09                           | 6170                           |                                       |
| 2023 | 7116,28                           | 7970                           |                                       |
| 2024 | 8723,47                           | 9770                           |                                       |
| 2025 | 10330,66                          | 11570                          | 5300                                  |
| 2026 | 11277,12                          | 12630                          |                                       |
| 2027 | 12223,57                          | 13690                          |                                       |
| 2028 | 13170,03                          | 14750                          |                                       |
| 2029 | 14116,48                          | 15810                          |                                       |
| 2030 | 15062,94                          | 16870                          | 12200                                 |
| 2031 | 16152,26                          | 18090                          |                                       |
| 2032 | 17241,58                          | 19310                          |                                       |
| 2033 | 18330,89                          | 20530                          |                                       |
| 2034 | 19420,21                          | 21750                          |                                       |
| 2035 | 20509,53                          | 22970                          |                                       |
| 2036 | 21598,85                          | 24190                          |                                       |
| 2037 | 22688,16                          | 25410                          |                                       |
| 2038 | 23777,48                          | 26630                          |                                       |
| 2039 | 24866,80                          | 27850                          |                                       |
| 2040 | 25956,12                          | 29070                          |                                       |

## Appendix L

### Projected export-driven long-term throughput growth in Olvia port, tonnes

|       | Cargo throughput | Export growth, % |
|-------|------------------|------------------|
| 2018  | 2170,9           |                  |
| 2019  | 1606,3           |                  |
| 2020* | 1529,20          | -4,80%           |
| 2021  | 1613,76          | 5,53%            |
| 2022  | 1703,00          | 5,53%            |
| 2023  | 1797,18          | 5,53%            |
| 2024  | 1896,56          | 5,53%            |
| 2025  | 2001,44          | 5,53%            |
| 2026  | 2112,12          | 5,53%            |
| 2027  | 2228,92          | 5,53%            |
| 2028  | 2352,18          | 5,53%            |
| 2029  | 2482,26          | 5,53%            |
| 2030  | 2619,53          | 5,53%            |
| 2031  | 2764,39          | 5,53%            |
| 2032  | 2917,26          | 5,53%            |
| 2033  | 3078,58          | 5,53%            |
| 2034  | 3248,83          | 5,53%            |
| 2035  | 3428,49          | 5,53%            |
| 2036  | 3618,08          | 5,53%            |
| 2037  | 3818,16          | 5,53%            |
| 2038  | 4029,31          | 5,53%            |
| 2039  | 4252,13          | 5,53%            |
| 2040  | 4487,27          | 5,53%            |

## Appendix M

### An accumulated projection of long-term throughput growth in Olvia port, tonnes

| Year  | Cargo throughput, thousand tonnes |
|-------|-----------------------------------|
| 2018  | 2170,90                           |
| 2019  | 1606,30                           |
| 2020* | 1529,20                           |
| 2021  | 2986,64                           |
| 2022  | 3986,66                           |
| 2023  | 4988,64                           |
| 2024  | 5992,71                           |
| 2025  | 6998,97                           |
| 2026  | 7611,12                           |
| 2027  | 8225,71                           |
| 2028  | 8842,89                           |
| 2029  | 9462,79                           |
| 2030  | 10085,58                          |
| 2031  | 10797,11                          |
| 2032  | 11511,85                          |
| 2033  | 12229,97                          |
| 2034  | 12951,66                          |
| 2035  | 13677,11                          |
| 2036  | 14406,54                          |
| 2037  | 15140,16                          |
| 2038  | 15878,21                          |
| 2039  | 16620,93                          |
| 2040  | 17368,58                          |

## Appendix N

### Calculation of the average revenue per tonne

|                                | 2017       | 2018       | 2019       |
|--------------------------------|------------|------------|------------|
| Annual throughput,<br>tonnes   | 2510,1     | 2170,9     | 1606,3     |
| Total revenue,<br>thousand UAH | 396 082,00 | 331 666,00 | 277 800,00 |
| Revenue per tonne              | 157,80     | 152,78     | 172,94     |
| Average revenue<br>per tonne   | 161,17     |            |            |

## Appendix O

The present value of \$1;  $\frac{1}{(1+r)^n}$

| Periods | 4%    | 5%    | 6%    | 7%    | 8%    | 9%    | 10%   | 11%   | 12%   | 13%   | 14%   | 15%   | 16%   | 17%   | 18%   | 19%   | 20%   | 21%   | 22%   | 23%   | 24%   | 25%   |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1       | 0.962 | 0.952 | 0.943 | 0.935 | 0.926 | 0.917 | 0.909 | 0.901 | 0.893 | 0.885 | 0.877 | 0.870 | 0.862 | 0.855 | 0.847 | 0.840 | 0.833 | 0.826 | 0.820 | 0.813 | 0.806 | 0.800 |
| 2       | 0.925 | 0.907 | 0.890 | 0.873 | 0.857 | 0.842 | 0.826 | 0.812 | 0.797 | 0.783 | 0.769 | 0.756 | 0.743 | 0.731 | 0.718 | 0.706 | 0.694 | 0.683 | 0.672 | 0.661 | 0.650 | 0.640 |
| 3       | 0.889 | 0.864 | 0.840 | 0.816 | 0.794 | 0.772 | 0.751 | 0.731 | 0.712 | 0.693 | 0.675 | 0.658 | 0.641 | 0.624 | 0.609 | 0.593 | 0.579 | 0.564 | 0.551 | 0.537 | 0.524 | 0.512 |
| 4       | 0.855 | 0.823 | 0.792 | 0.763 | 0.735 | 0.708 | 0.683 | 0.659 | 0.636 | 0.613 | 0.592 | 0.572 | 0.552 | 0.534 | 0.516 | 0.499 | 0.482 | 0.467 | 0.451 | 0.437 | 0.423 | 0.410 |
| 5       | 0.822 | 0.784 | 0.747 | 0.713 | 0.681 | 0.650 | 0.621 | 0.593 | 0.567 | 0.543 | 0.519 | 0.497 | 0.476 | 0.456 | 0.437 | 0.419 | 0.402 | 0.386 | 0.370 | 0.355 | 0.341 | 0.328 |
| 6       | 0.790 | 0.746 | 0.705 | 0.666 | 0.630 | 0.596 | 0.564 | 0.535 | 0.507 | 0.480 | 0.456 | 0.432 | 0.410 | 0.390 | 0.370 | 0.352 | 0.335 | 0.319 | 0.303 | 0.289 | 0.275 | 0.262 |
| 7       | 0.760 | 0.711 | 0.665 | 0.623 | 0.583 | 0.547 | 0.513 | 0.482 | 0.452 | 0.425 | 0.400 | 0.376 | 0.354 | 0.333 | 0.314 | 0.296 | 0.279 | 0.263 | 0.249 | 0.235 | 0.222 | 0.210 |
| 8       | 0.731 | 0.677 | 0.627 | 0.582 | 0.540 | 0.502 | 0.467 | 0.434 | 0.404 | 0.376 | 0.351 | 0.327 | 0.305 | 0.285 | 0.266 | 0.249 | 0.233 | 0.218 | 0.204 | 0.191 | 0.179 | 0.168 |
| 9       | 0.703 | 0.645 | 0.592 | 0.544 | 0.500 | 0.460 | 0.424 | 0.391 | 0.361 | 0.333 | 0.308 | 0.284 | 0.263 | 0.243 | 0.225 | 0.209 | 0.194 | 0.180 | 0.167 | 0.155 | 0.144 | 0.134 |
| 10      | 0.676 | 0.614 | 0.558 | 0.508 | 0.463 | 0.422 | 0.386 | 0.352 | 0.322 | 0.295 | 0.270 | 0.247 | 0.227 | 0.208 | 0.191 | 0.176 | 0.162 | 0.149 | 0.137 | 0.126 | 0.116 | 0.107 |
| 11      | 0.650 | 0.585 | 0.527 | 0.475 | 0.429 | 0.388 | 0.350 | 0.317 | 0.287 | 0.261 | 0.237 | 0.215 | 0.195 | 0.178 | 0.162 | 0.148 | 0.135 | 0.123 | 0.112 | 0.103 | 0.094 | 0.086 |
| 12      | 0.625 | 0.557 | 0.497 | 0.444 | 0.397 | 0.356 | 0.319 | 0.286 | 0.257 | 0.231 | 0.208 | 0.187 | 0.168 | 0.152 | 0.137 | 0.124 | 0.112 | 0.102 | 0.092 | 0.083 | 0.076 | 0.069 |
| 13      | 0.601 | 0.530 | 0.469 | 0.415 | 0.368 | 0.326 | 0.290 | 0.258 | 0.229 | 0.204 | 0.182 | 0.163 | 0.145 | 0.130 | 0.116 | 0.104 | 0.093 | 0.084 | 0.075 | 0.068 | 0.061 | 0.055 |
| 14      | 0.577 | 0.505 | 0.442 | 0.388 | 0.340 | 0.299 | 0.263 | 0.232 | 0.205 | 0.181 | 0.160 | 0.141 | 0.125 | 0.111 | 0.099 | 0.088 | 0.078 | 0.069 | 0.062 | 0.055 | 0.049 | 0.044 |
| 15      | 0.555 | 0.481 | 0.417 | 0.362 | 0.315 | 0.275 | 0.239 | 0.209 | 0.183 | 0.160 | 0.140 | 0.123 | 0.108 | 0.095 | 0.084 | 0.074 | 0.065 | 0.057 | 0.051 | 0.045 | 0.040 | 0.035 |
| 16      | 0.534 | 0.458 | 0.394 | 0.339 | 0.292 | 0.252 | 0.218 | 0.188 | 0.163 | 0.141 | 0.123 | 0.107 | 0.093 | 0.081 | 0.071 | 0.062 | 0.054 | 0.047 | 0.042 | 0.036 | 0.032 | 0.028 |
| 17      | 0.513 | 0.436 | 0.371 | 0.317 | 0.270 | 0.231 | 0.198 | 0.170 | 0.146 | 0.125 | 0.108 | 0.093 | 0.080 | 0.069 | 0.060 | 0.052 | 0.045 | 0.039 | 0.034 | 0.030 | 0.026 | 0.023 |
| 18      | 0.494 | 0.416 | 0.350 | 0.296 | 0.250 | 0.212 | 0.180 | 0.153 | 0.130 | 0.111 | 0.095 | 0.081 | 0.069 | 0.059 | 0.051 | 0.044 | 0.038 | 0.032 | 0.028 | 0.024 | 0.021 | 0.018 |
| 19      | 0.475 | 0.396 | 0.331 | 0.277 | 0.232 | 0.194 | 0.164 | 0.138 | 0.116 | 0.098 | 0.083 | 0.070 | 0.060 | 0.051 | 0.043 | 0.037 | 0.031 | 0.027 | 0.023 | 0.020 | 0.017 | 0.014 |
| 20      | 0.456 | 0.377 | 0.312 | 0.258 | 0.215 | 0.178 | 0.149 | 0.124 | 0.104 | 0.087 | 0.073 | 0.061 | 0.051 | 0.043 | 0.037 | 0.031 | 0.026 | 0.022 | 0.019 | 0.016 | 0.014 | 0.012 |
| 21      | 0.439 | 0.359 | 0.294 | 0.242 | 0.199 | 0.164 | 0.135 | 0.112 | 0.093 | 0.077 | 0.064 | 0.053 | 0.044 | 0.037 | 0.031 | 0.026 | 0.022 | 0.018 | 0.015 | 0.013 | 0.011 | 0.009 |
| 22      | 0.422 | 0.342 | 0.278 | 0.226 | 0.184 | 0.150 | 0.123 | 0.101 | 0.083 | 0.068 | 0.056 | 0.046 | 0.038 | 0.032 | 0.026 | 0.022 | 0.018 | 0.015 | 0.013 | 0.011 | 0.009 | 0.007 |
| 23      | 0.406 | 0.326 | 0.262 | 0.211 | 0.170 | 0.138 | 0.112 | 0.091 | 0.074 | 0.060 | 0.049 | 0.040 | 0.033 | 0.027 | 0.022 | 0.018 | 0.015 | 0.012 | 0.010 | 0.009 | 0.007 | 0.006 |
| 24      | 0.390 | 0.310 | 0.247 | 0.197 | 0.158 | 0.126 | 0.102 | 0.082 | 0.066 | 0.053 | 0.043 | 0.035 | 0.028 | 0.023 | 0.019 | 0.015 | 0.013 | 0.010 | 0.008 | 0.007 | 0.006 | 0.005 |
| 25      | 0.375 | 0.295 | 0.233 | 0.184 | 0.146 | 0.116 | 0.092 | 0.074 | 0.059 | 0.047 | 0.038 | 0.030 | 0.024 | 0.020 | 0.016 | 0.013 | 0.010 | 0.009 | 0.007 | 0.006 | 0.005 | 0.004 |
| 26      | 0.361 | 0.281 | 0.220 | 0.172 | 0.135 | 0.106 | 0.084 | 0.066 | 0.053 | 0.042 | 0.033 | 0.026 | 0.021 | 0.017 | 0.014 | 0.011 | 0.009 | 0.007 | 0.006 | 0.005 | 0.004 | 0.003 |
| 27      | 0.347 | 0.268 | 0.207 | 0.161 | 0.125 | 0.098 | 0.076 | 0.060 | 0.047 | 0.037 | 0.029 | 0.023 | 0.018 | 0.014 | 0.011 | 0.009 | 0.007 | 0.006 | 0.005 | 0.004 | 0.003 | 0.002 |
| 28      | 0.333 | 0.255 | 0.196 | 0.150 | 0.116 | 0.090 | 0.069 | 0.054 | 0.042 | 0.033 | 0.026 | 0.020 | 0.016 | 0.012 | 0.010 | 0.008 | 0.006 | 0.005 | 0.004 | 0.003 | 0.002 | 0.002 |
| 29      | 0.321 | 0.243 | 0.185 | 0.141 | 0.107 | 0.082 | 0.063 | 0.048 | 0.037 | 0.029 | 0.022 | 0.017 | 0.014 | 0.011 | 0.008 | 0.006 | 0.005 | 0.004 | 0.003 | 0.002 | 0.002 | 0.002 |
| 30      | 0.308 | 0.231 | 0.174 | 0.131 | 0.099 | 0.075 | 0.057 | 0.044 | 0.033 | 0.026 | 0.020 | 0.015 | 0.012 | 0.009 | 0.007 | 0.005 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.001 |
| 40      | 0.208 | 0.142 | 0.097 | 0.067 | 0.046 | 0.032 | 0.022 | 0.015 | 0.011 | 0.008 | 0.005 | 0.004 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |