IMPROVEMENT FINANCIAL MANAGEMENT OF ENTERPRISE TAKING INTO ACCOUNT TECHNOLOGIES FOR ATTRACTING ADDITIONAL FINANCIAL RESOURCES

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Economy in Ukraine is experiencing a crisis today. The consequences of the crisis affect the economic activity of an enterprise. One of the possible tools to improve the financial management of an enterprise is to optimize the business process of financial support. Since one of the key indicators of efficiency of economic activity of an airport is passenger traffic, its forecasting is one of the main sources of relevant information for effective financial management of an enterprise. This is proposed to be achieved through the quality management of the subsidiary process of selecting the optimal proposal for attracting additional financial resources. The subject of research in the article is theoretical and methodological approaches to attracting additional financial resources to finance the economic activities of an enterprise. The goal is to generalize the theoretical foundations and provide applied recommendations for improving the financial management of an enterprise on the basis of attracting technologies of additional financial resources. A set of methods of scientific cognition was used, which ensured the conceptual unity of the study, as well as the fundamental provisions of the theory of finance and probability theory and mathematical statistics and the method of functional modeling SADT (IDEF0). The following results were obtained: Two main disadvantages of the subsidiary process have been identified: a high risk of choosing a suboptimal option and a long time spent on choosing the optimal option for attracting additional financial resources. Based on the Holt-Winters multiplicative model, the shortcomings of the process of selecting the optimal proposal for attracting additional financial resources were corrected. This made it possible to identify the optimal sources of attracting additional financial resources necessary for the effective financial management of the enterprise. Conclusions: Crisis situations are an integral part of the functioning of an enterprise in modern conditions. The crisis situation reflects contradictions in the functioning and development of the enterprise and causes the onset of the crisis. In order to prevent it, the enterprise management system faces an important task of implementing anti-crisis mechanisms which would take into account the specifics of economic activity, as well as industry, environmental conditions, market conditions, and form of ownership. The organization of crisis management is a necessary procedure in the management system, as it allows grouping and improving the processes of independent elements of complex economic systems and business processes.

Keywords: *crisis condition, business processes, financial risk, time costs, optimal proportion.*

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Problem formulation. Ukraine's economy is currently experiencing a crisis. The consequences of the crisis affect the economic activity of enterprises. The main causes of the current crisis are of internal origin. These endogenous factors include the degradation of traditional industrial enterprises, the destruction of the monetary system, the bankruptcy of the banking sector, destructive regulatory actions of the government, primarily in the areas of taxation, freezing of wages and pensions, the introduction of additional customs duties on imported goods, and protectionist currency support for gas imports.

The internal factors of the economic crisis are compounded by external ones. These include a rapid outflow of foreign capital from Ukraine, a deficit in international currency turnover, and the loss of markets for products (goods, works, and services).

One of the ways out of the crisis for Ukrainian companies is to introduce effective financial management into their business practices.

Analysis of recent research. The issue of financial management of an enterprise is considered in foreign scientific publications: Abedalsttar Alsayah [10], Agbonrha-Oghoye Imas Iyoha [11], Derevyanko O. [15], Dica Lady Silvera [16], Dwi Fitrizal Salim [18], Eka Hariyani [19], Enni Savitri [20], Hui-Wen Hsu [22], Kunofiwa Tsaurai [23], Purwatiningsih Lisdiono [24], Bitila Shosha [26].

Ukrainian professional journals publish thorough studies of enterprise financial management: G. Aleksin [1], O. Brovkova [2], Z. Varnalii [3], M. Haidukov [4], I. Kozynets [5], O. Kopyliuk [6], V. Makhovka [7], V. Romanishyn [8], I. Khymych [9].

An analysis of the scientific research of these scholars has revealed that there are still no modern technologies for attracting additional financial resources of an enterprise to improve financial management.

The aim of the article is to generalize the theoretical foundations and provide applied recommendations for improving the financial management of an enterprise on the basis of attracting technologies of additional financial resources.

Presentation of main results. One of the key indicators of the success of any airport is passenger traffic [28]. Its value directly affects the airport's revenue, which is the key indicator of economic activity.

Kharkiv Airport was founded on March 26, 1923, to organize regular flights by establishing the Joint Stock Company "Ukrpovitroshliakh". At that time, the runway was unpaved and located in Sokilnyky, on the site of the present-day Aviation Plant. In May 1924, regular passenger flights were launched on the Kharkiv-Poltava-Kyiv and Kharkiv-Kirovohrad-Odesa routes. In 1928, the first international flights were launched from Kharkiv to Tehran.

In 1926, Joint Stock Company "Ukrpovitroshliakh" aircraft workshops were transformed into the Aviation Plant named after the USSR Council of People's Commissars and, due to the development of production, the civilian airport was moved to the south of the city behind the village of Osnova. The new airport with a two-story building and ground services was opened on December 6, 1932.

In the early 70s, about 600 thousand passengers used the airport annually. By the 80s, their number had increased to 900 thousand people. At that time, the city's neighborhoods came close to the airport, and it was decided to build a new airport in the Dergachi district.

In the early 90s, there was a sharp decline in air traffic. Kharkiv airport had been operating only domestic flights, and it became necessary to equip a border terminal and introduce customs control. To this end, in 1995, the airport building was overhauled, a border and customs control point was equipped, and the runway was reconstructed.

In 2001, the airport became the Aviation Utility Company Kharkiv International Airport and was transferred from the Ministry of Transport to the city.

In 2008, the entire complex of Kharkiv Airport was leased to LLC "New System", a limited liability company whose main business is air transport support services, for 49 years. The runway, as a strategic facility, is owned by the state. The companies Airport Consulting Vienna (Austria) and Airport Reseach Center (Germany) developed a large-scale reconstruction project for Kharkiv Airport, which was launched in the second half of 2008.

At the first stage, a modern two-storey terminal was built, the runway, apron and taxiways were reconstructed, and a car parking lot was equipped. Investments in the reconstruction of Kharkiv International Airport are made both by the state budget and by a private investor, DCH Group. The share of DCH is UAH 508.8 million (construction of a new passenger terminal, reconstruction of the existing terminal, reconstruction of the station area and construction of parking lots, construction of a temporary reverse terminal, complete modernization of the airport infrastructure, purchase of special vehicles). The state's share is UAH 727 million (construction of a new runway, apron and parking areas, a new emergency rescue

station and air traffic control tower, replacement of the light and landing system).

The technological scheme of passenger service was developed by the German company Airport Research Center. Upon completion of the reconstruction, the modern international airport will be able to accommodate various aircraft up to Airbus A-320 and Boeing B-737. The main characteristics of the international airport "Kharkiv" in 2012: the total area of the new terminal is 19,750 m²; the capacity of the new terminal is 650 passengers per hour, the runway length is 2470 m, the total area of the apron is 136 thousand m², the number of aircraft parking places is 28; the capacity is 25.5 thousand passengers per day (800 thousand passengers per year).

Responsibility for financial management functions at LLC "New System" lies with the Chief Financial Officer (Figure 1). His or her responsibilities include:

managing the company's finances, organizing supply and procurement, accounting and information support of the company.

To ensure efficient financial management, the CFO is directly subordinated to the following departments: financial and analytical service, accounting department, and financial security service. The CFO works closely with other top managers and deputy CEOs and reports directly to the CEO and owners of the company.

Analyzing the market environment of the enterprise, it should be noted that the main competitors of Kharkiv International Airport in the market are:

Boryspil International Airport (passenger traffic amounted to 7.93 million people, market leader);

Kyiv (Zhulyany) International Airport (passenger traffic – 1.84 million people);

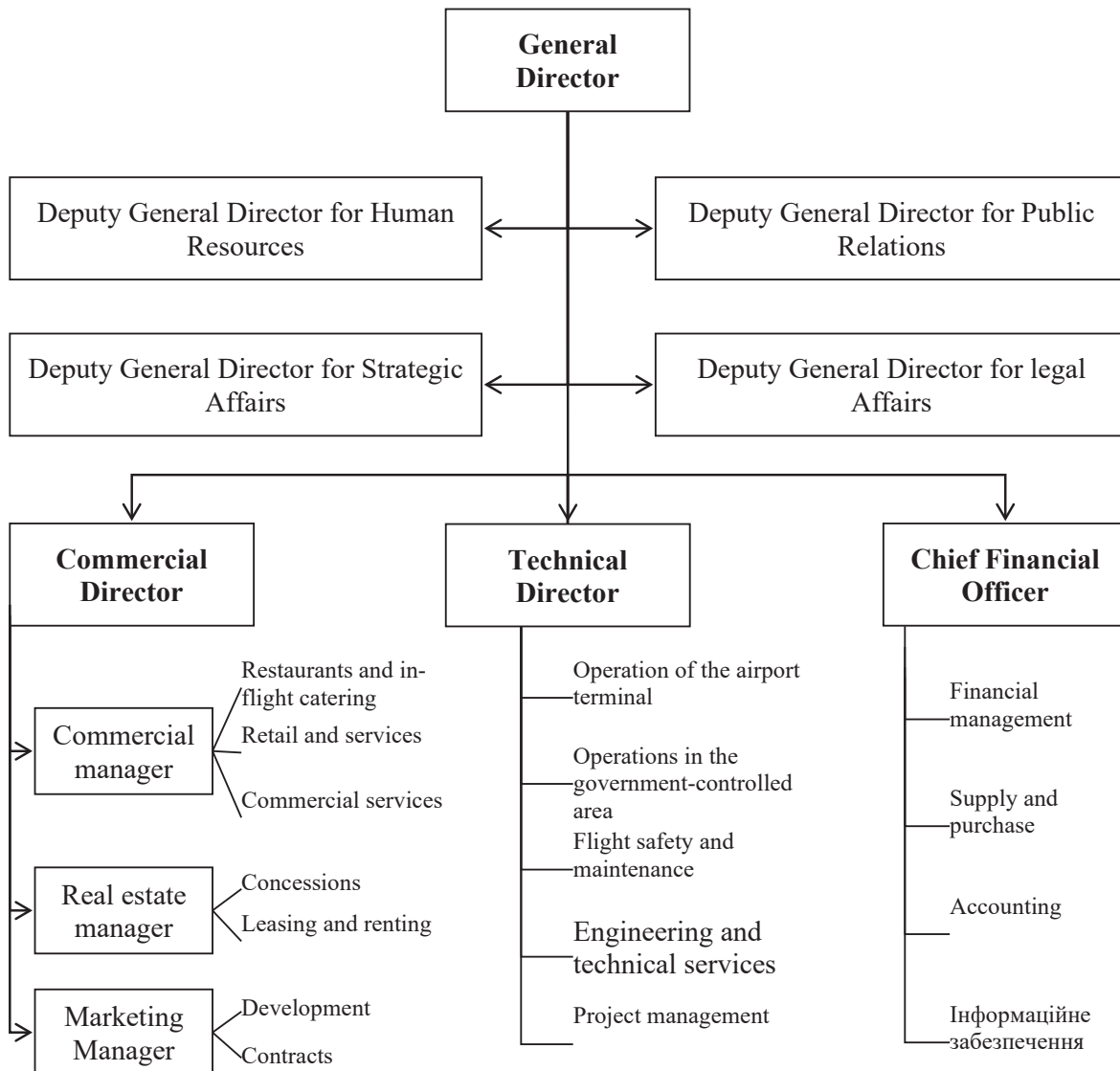Simferopol International Airport (passenger traffic – 1.20 million people);

Figure 1. Organizational structure of LLC "New System"
Source: compiled by the authors based on source [28]

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Donetsk International Airport (passenger traffic – 1.11 million people),

Odesa International Airport (passenger traffic – 1.07 million people);

Lviv International Airport (passenger traffic – 700.8 thousand people);

Dnipropetrovs'k International Airport (passenger traffic – 455 thousand people);

Kharkiv Airport (passenger traffic – 605.1 thousand people).

Analyzing the value of the passenger flow indicator of LLC "New System" for 2017-2022 (Table 1), we note the trend-seasonality of the time series of quarterly values of this indicator. Therefore, we consider it expedient to use the Holt-Winters model to predict the value of this indicator for the next quarters.

The Holt-Winters multiplicative model with linear growth has the form [27]:

$$Y_p(t+k) = \left[a(t) + k \times b(t)\right] \times F(t+k-L) \quad (1)$$

where

k – is the bias period;

$Y_p(t)$ – is the estimated value of the economic indicator for the period;

$a(t)$ – is an exponentially smoothed series;

$b(t)$ – model trend;

$F(t)$ - is the seasonality coefficient of the model;

L - seasonality period (for quarterly data $L = 4$, for monthly data $L = 12$).

Table 1

Passenger traffic of Kharkiv International Airport (LLC "New System") for quarters 2017-2022, persons

Year	Block number	Passenger traffic, persons
2017	1	26 397
	2	56 209
	3	73 123
	4	40 739
2018	1	32 979
	2	72 597
	3	78 547
	4	59 105
2019	1	55 802
	2	83 207
	3	103 854
	4	65 818
2020	1	73 130
	2	150 214
	3	160 165
	4	117 963
2021	1	106 567
	2	149 557
	3	204 068
	4	144 861
2022	1	124 951
	2	114 150
	3	122 273

Source: compiled by the authors based on the source [28]

The value of $F(t + k - L)$ is the value of the seasonality coefficient of the period for which the economic indicator is calculated. For small values of t, the argument of the F function may be negative.

The model coefficients are refined using the following formulas:

$$a(t) = \alpha_1 \times Y(t) / F(t-L) + (1-\alpha_1) \times \left[a(t-1) + b(t-1)\right] \quad .(2)$$

$$b(t) = \alpha_3 \times \left[a(t) - a(t-1)\right] + (1-\alpha_3) \times b(t-1) \quad .(3)$$

$$F(t) = \alpha_2 \times Y(t) / a(t) + (1+\alpha_2) \times F(t-L) \quad .(4)$$

The smoothing parameters α_1, α_2, α_3 are selected by searching in such a way that the calculated data best matches the actual data.

The linear model has the form:

$$Y_0(t) = a(0) + b(0) \times t \quad .(5)$$

The coefficients of equation (5) are determined by the least squares method:

$$b(0) = \frac{\sum_{t=1}^{N}\left(Y(t) - Y_{cp}\right) \times \left(t - t_{cp}\right)}{\sum_{t=1}^{N}\left(t - t_{cp}\right)^2} \quad ; \quad a(0) = Y_{cp} - b(0) \times t_{cp} \quad .(6)$$

Thus, using equation (6), we determined the linear trend coefficients of model (5). The result of the calculations was the construction of a linear model for the given values of passenger traffic:

$$Y_0(t) = 32508,82 + 5320,92 \times t \quad .(7)$$

The graphical values of the passenger flow of LLC "New System" along with the trend are shown in Figure 1.
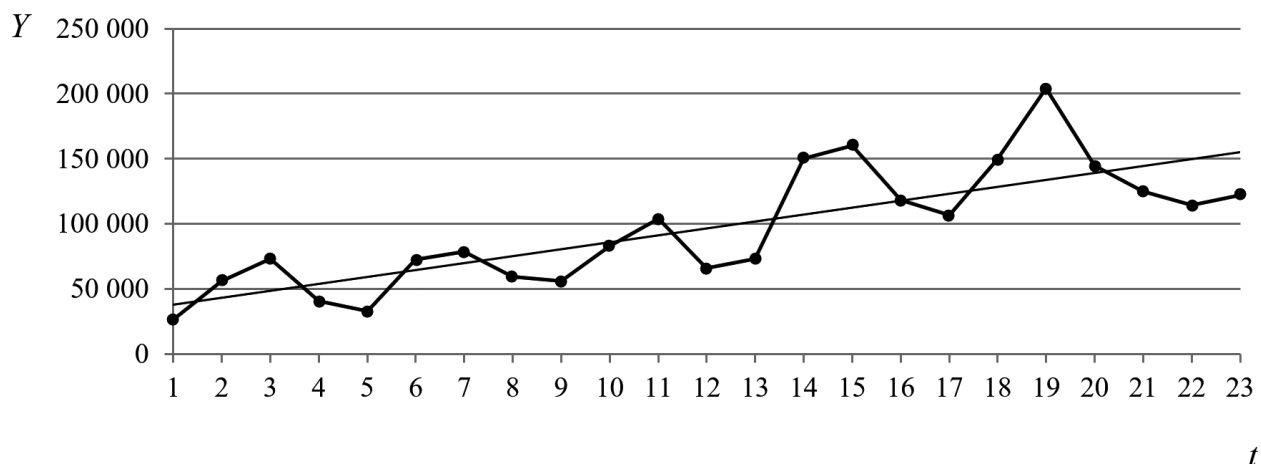

Figure 1. The value of passenger traffic of LLC "New System" together with the trend, persons
Source: compiled by the authors based on the source [28]

The results of the passenger flow forecasting calculations based on the Holt-Winters model are presented in Table 2.

To assess the adequacy of the model, the average absolute percentage error was calculated using the formula:

$$m.a.p.e. = \frac{1}{n} \sum_{t=1}^{n} \frac{|e_t|}{y_t} \cdot 100\% \qquad (8)$$

where $m.a.p.e$ is the average absolute percentage error;

e_t - is the forecast error for the period;
y_t - actual value of passenger traffic in the period ;
n - number of observation periods.

The average absolute percentage error was calculated to be 12.65%. Since this value is less than 20 %, the model can be considered adequate. At the same time, the obtained value of $m.a.p.e$ is more than 10%, which indicates that the model provides only satisfactory forecast accuracy.

Thus, the forecasted passenger traffic of LLC "New System" in the fourth quarter of 2022 will amount to 89,989 people, in the first quarter of 2023 - 73,260 people, in the second - 125,014 people, and in the third - 151,948 people. The obtained forecast values allow to improve the financial management of the company, as they set a vector, guided by which the company will be able to effectively plan its economic activities.

Among the possible ways to improve the financial management of LLC "New System", special attention should be paid to optimizing the business process of financial support for the economic activities of the enterprise. This plays a leading role in improving the financial management of the enterprise, taking into account the results of the Holt-Winters forecast model.

To do this, we performed a structural analysis of the optimization of the business process of financial support for the economic activity of the enterprise according to the IDEF0 standard of the SADT methodology [21; 25]. The primary result was the construction of a contextual diagram A-0, which contains a general description of the business process (Figure 2).

Thus, the main inputs of the business process of financial support for the further development of the enterprise are: information about the enterprise under study (I1); plan of financial support for the development of the enterprise (I2); information about available sources of financial resources (I3); information about the conditions for raising funds from each of the possible sources (I4); information about the conditions for raising funds acceptable to the enterprise (I5). The main outputs based on the results of the process are: contracts for attracting additional financial resources (O1); schedule of payment for the use and return of attracted funds (O2); schedule of use of attracted funds (O3); orders on the use of attracted financial resources (O4); business plan of the enterprise (O5).

The business process is managed through the company's development strategy (C1), financial strategy (C2) and financial development plan (C3). The process operates through the following mechanisms: financial and analytical service of the enterprise (M1); personal computers of employees of the financial and analytical service of the enterprise (M2); necessary software (M3); databases (M4); methods of calculating planned financial indicators (M5).

For a deeper analysis of the business process, we built a diagram of the first level of decomposition A0, which gives a general idea of the functioning of the business process (Figure 3).

Forecast values of passenger tract of LLC "New System" according to the Holta-Uinters model

Year	Block number	Actual values of passenger traffic [Y(t)], people	a(t)	b(t)	F(t)	Forecast values of passenger traffic [Yp (t)], persons
			32508,82	5320,92	0,89	
2017	1	26397	37929,41	5321,91	0,70	26327
	2	56209	49388,84	5383,29	1,14	49162
	3	73123	55196,63	5387,53	1,32	72555
	4	40739	56607,18	5347,76	0,72	43632
2018	1	32979	51749,56	5245,71	0,64	39562
	2	72597	57373,11	5249,49	1,27	72114
	3	78547	61568,46	5238,95	1,28	79906
	4	59105	66047,41	5231,35	0,89	59792
2019	1	55802	80094,04	5319,50	0,70	49605
	2	83207	73323,99	5198,60	1,14	97088
	3	103854	78401,07	5197,39	1,32	104017
	4	65818	91312,49	5274,53	0,72	60206
2020	1	73130	114347,47	5452,13	0,64	61675
	2	150214	118732,10	5441,46	1,27	151578
	3	160165	125509,12	5454,81	1,28	158444
	4	117963	131795,23	5463,13	0,89	117211
2021	1	106567	152968,00	5620,22	0,70	95524
	2	149557	131846,02	5352,80	1,14	180261
	3	204068	153883,33	5519,65	1,32	181743
	4	144861	200725,04	5932,87	0,72	114801
2022	1	124951	195789,02	5824,18	0,64	131961
	2	114150	91332,24	4721,37	1,27	255094
	3	122273	95828,51	4719,12	1,28	122563
	4	Forecast.				89989
2023	1	Forecast.				73260
	2	Forecast.				125014
	3	Forecast.				151948

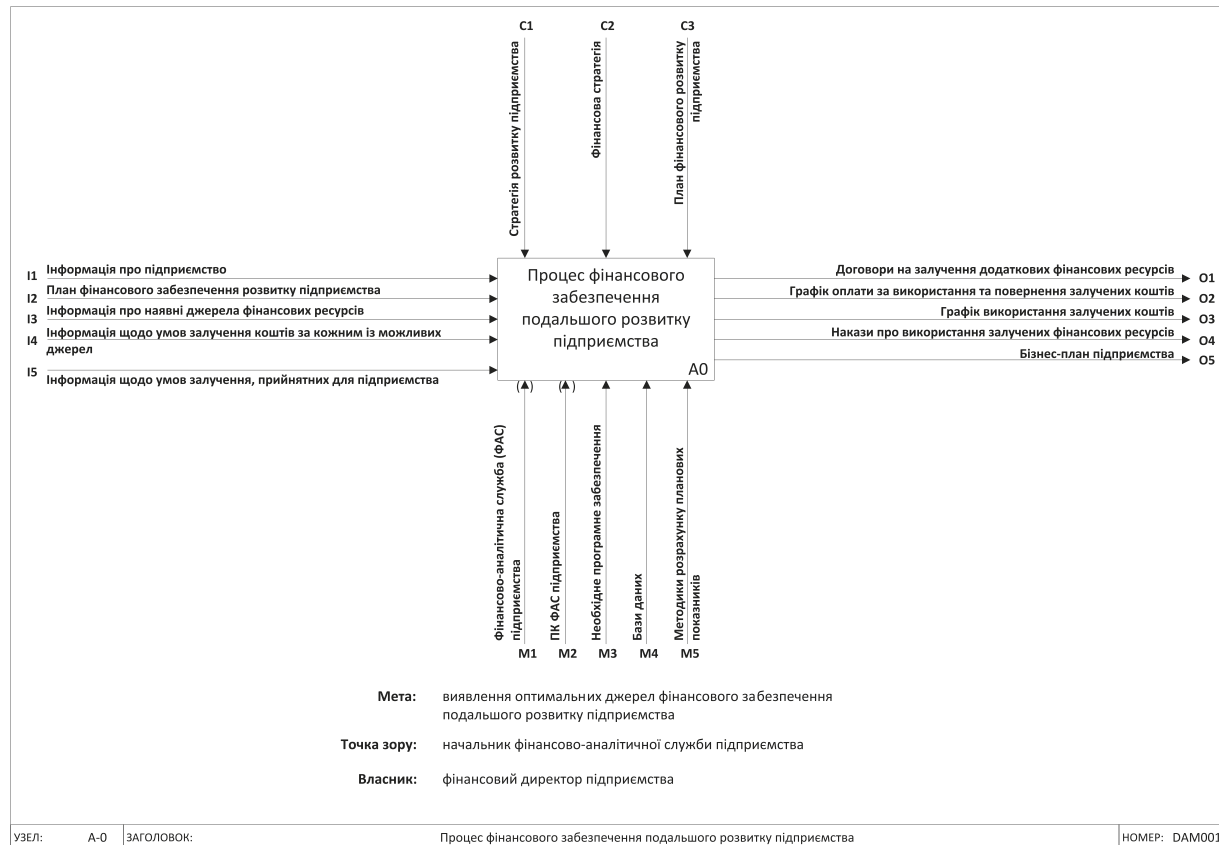*Source: compiled by the authors based on the source [28]*

Figure 2. Contextual diagram A-0 of enterprise development financial support process

Source: compiled by the authors based on the source [28]

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Вісник Харківського національного університету імені В. Н. Каразіна
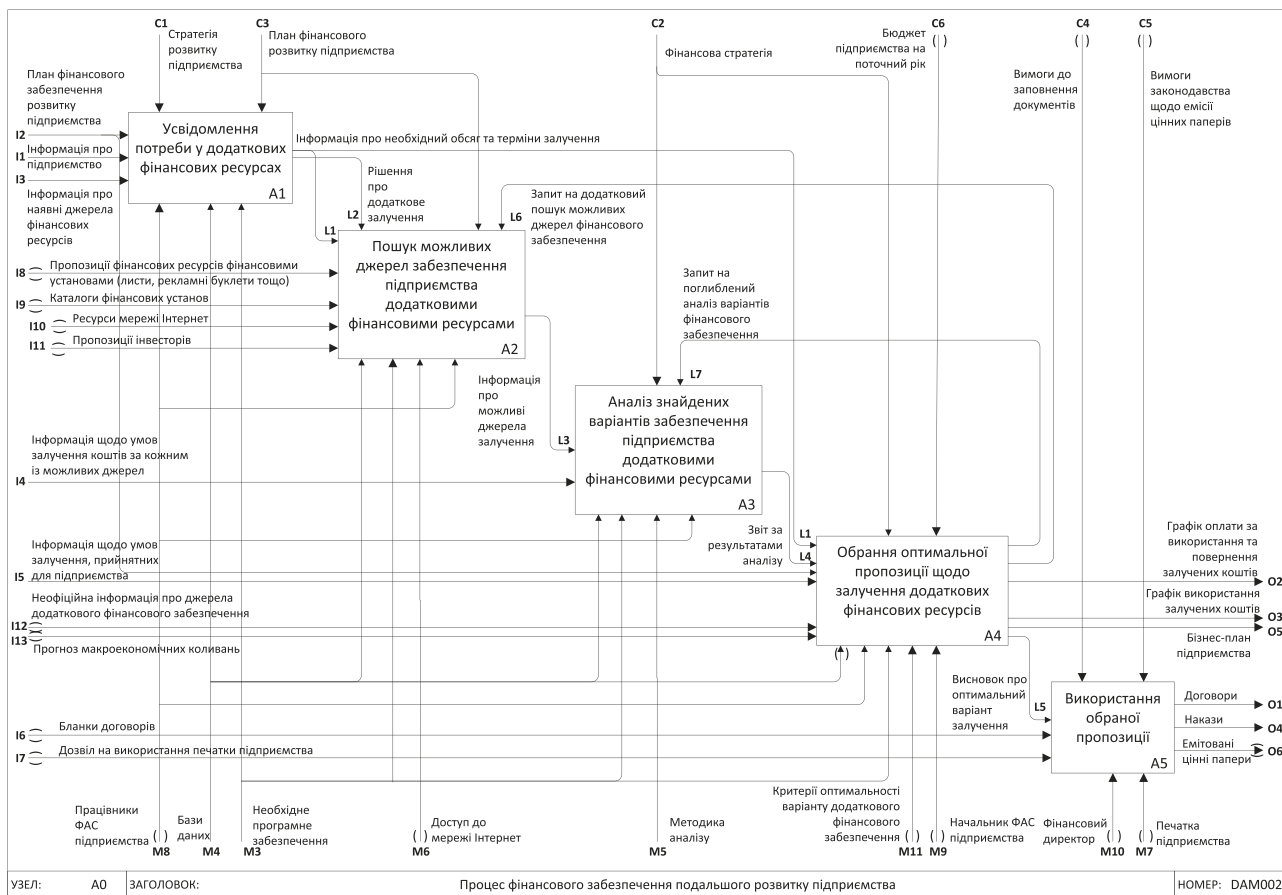The Journal of V. N. Karazin Kharkiv National University

Figure 3. The first level of decomposition A0 of enterprise development financial support process
Source: compiled by the authors based on the source [28]

Thus, the process of financial support for the further development of the enterprise consists of five activities: awareness of the need for additional financial resources (A1); search for possible sources of providing the enterprise with additional financial resources (A2); analysis of the found options for providing the enterprise with additional financial resources (A3); selection of the optimal offer to attract additional financial resources (A4); use of the selected offer (A5).

Since activity A4 is the most important in the functioning of this business process, since its effectiveness directly depends on it, it is advisable to further detail this activity as a process (Figure 4).

The second level of detail allowed us to identify four main activities of the process of selecting the optimal proposal for attracting additional financial resources: confirmation of the completion of the analysis of the identified options for financial support of the enterprise (A41); general assessment of the analyzed options for financial support (A42); identification of the optimal option for additional financial support (A43); approval of the optimal option for additional financial support (A44).

The analysis of the second level diagram of the business process decomposition revealed two significant drawbacks: a high risk of choosing a suboptimal option and a long time spent on choosing the optimal option for attracting additional financial resources. In order to correct the identified shortcomings, it is necessary, first of all, to investigate the possible causes of their occurrence. For this purpose, we will use Ishikawa diagrams [12; 13; 14; 17]. Among the possible reasons for the high risk of choosing a suboptimal option for attracting additional financial resources identified by the Ishikawa diagram (Figure 5), the main ones are: poorly defined optimality criteria; information about the resource provider may be false/incomplete; and improperly configured analytical software tools.

Among the possible reasons for the long time spent on choosing the best option for attracting additional financial resources identified by the Ishikawa diagram (Figure 6), the main ones are: lack of employee motivation, outdated hardware and software, and inefficient organization of the work process.

The next step in correcting the identified deficiencies was to determine the possible consequences of their occurrence for consumers of process outputs, as well as measures to improve the quality of the business process. In addition, for each identified deficiency, the values of expert assessments were determined according to the scales given in Tables 3-5: the severity of the consequences of the deficiency (S), the frequency of the deficiency (O), the inability to detect the deficiency (D), and the risk parameter was calculated $(RPZ=S \times O \times D)$.
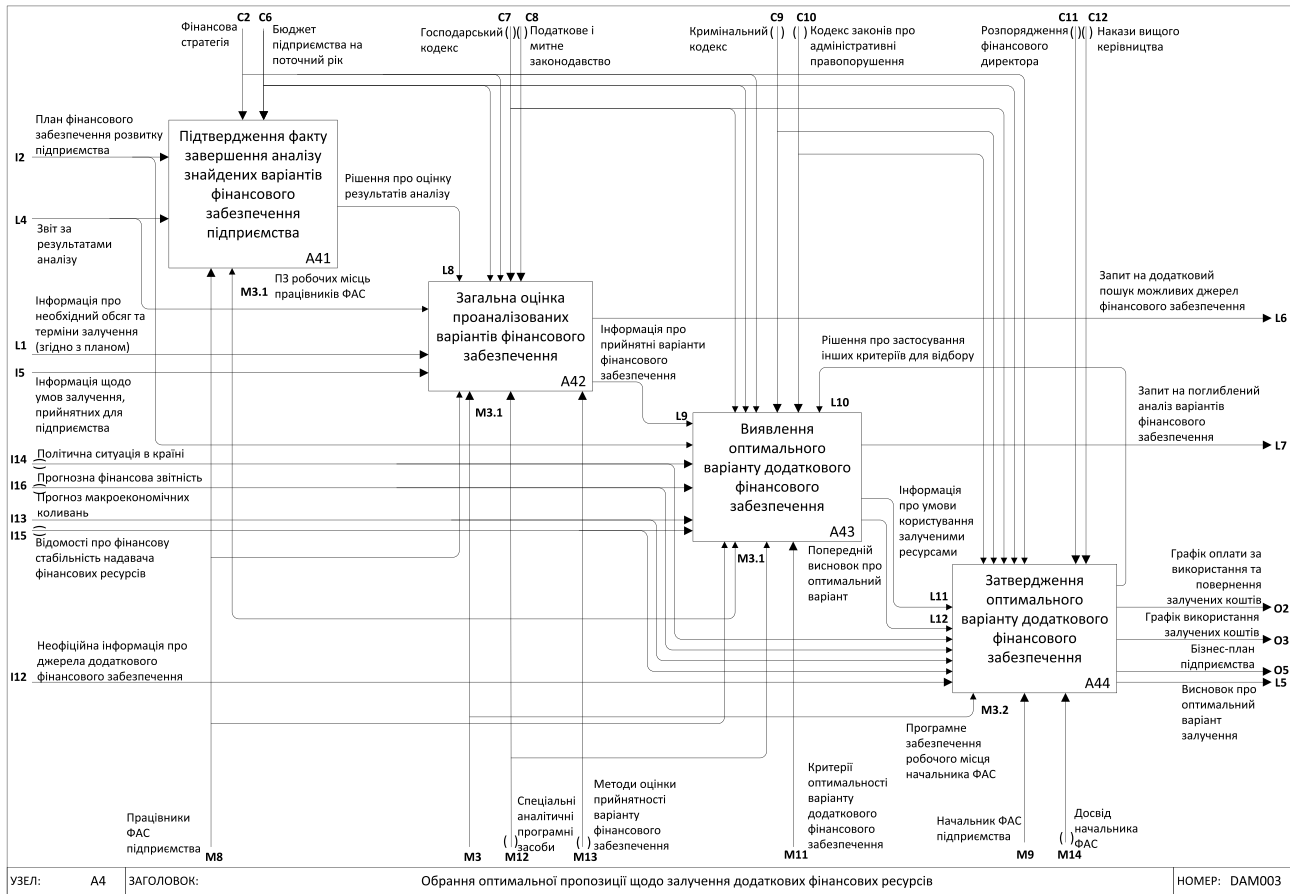
Figure 4. The second level of the decomposition A4 of the enterprise development financial support process

Source: compiled by the authors based on the source [28]

Figure 5. Isikawa diagram for deficiency, which has a high risk of selecting a non-payment option taking into account attracting additional financial resources

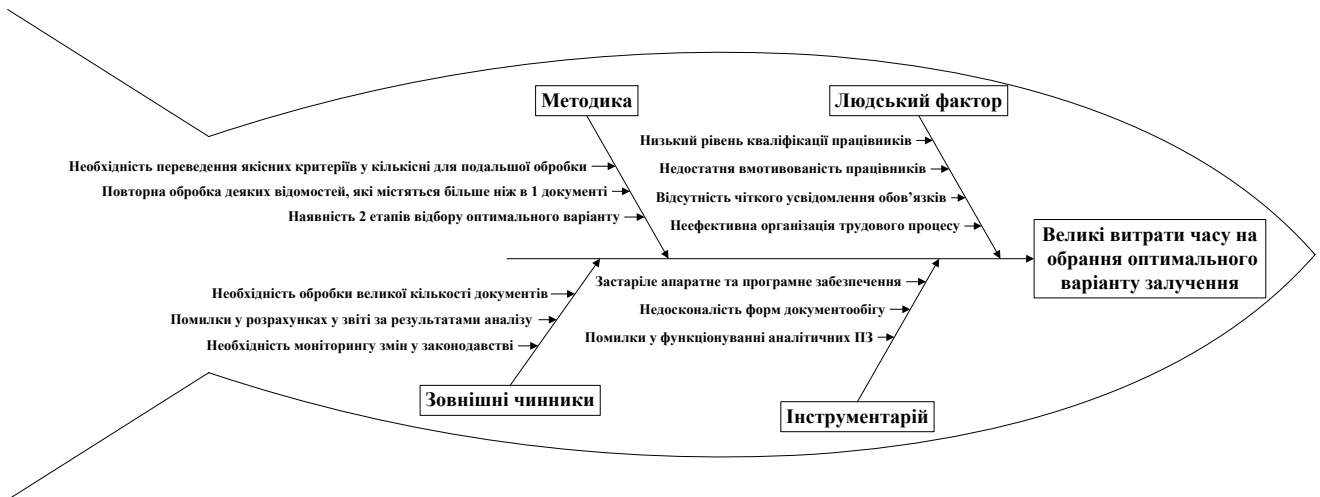*Source: compiled by the authors based on source [28]*

Figure 6. Isikawa diagram for deficiency, which has a lot of time to choose the best option taking into account attracting additional financial resources

Source: compiled by the authors based on the source [28]

Table 3

Recommended Scale S of severity effects defects

The severity of the consequences	Significance criteria	Points S
Catastrophic	Leads to non-fulfillment of the process	10
Dangerous	Worsens the economic efficiency of the process and potentially leads to its non-fulfill-ment	9
Very heavy	Significantly reduces several process efficiency indicators, making it impossible to obtain its results	8
Heavy	Reduces one or more process efficiency indicators, which makes it much more difficult to obtain its results	7
Moderate	The efficiency of the process is reduced at the expense of economic indicators without the threat of not receiving its results	6
Weak	The process is being performed but its effectiveness is significantly reduced (results are insufficient or of poor quality)	5
Very weak	The process is performed with a moderate decrease in its effectiveness (results are insufficient or of poor quality)	4
Minor	The process is performed with a slight decrease in its effectiveness (results are insufficient or of poor quality)	3
Very minor	May lead to fluctuations in some process performance indicators	2
Absent	No consequences	1

Source: compiled by the authors based on the source [28]

Table 4

Recommended scale O of probability defects

Probability of occurrence	Significance criteria	Points O
Very high	The defect always occurs	10
	The defect occurs almost always	9
High	The defect occurs very often	8
	The frequency of the defect significantly exceeds the established standard value	7
Moderate	The frequency of the defect significantly exceeds the established standard value	6
	The frequency of the defect significantly exceeds the established standard value	5
	The frequency of the defect slightly exceeds the established standard value	4
Low	The frequency of defect occurrence does not exceed the established standard value	3
	Single cases of defect occurrence	2
Mala	The defect does not occur	1

Source: compiled by the authors based on the source [28]

Table 5

Recommended scale D of inability effect defect

Inability to detect	Significance criteria	Points D
Absolute	0% of defects are detected	10
Strong	Up to 5% of defects are detected	9
Above average	5-15% of defects are detected	8
Medium	15-30% of defects are detected	7
Low	30-50% of defects are detected	6
Very low	50-70% of defects are detected	5
Mala	70-85% of defects are detected	4
Noticeable	85-95% of defects are detected	3
Insignificant	More than 95% of defects are detected	2
None	100% of defects are detected	1

Source: compiled by the authors based on the source [28]

The results are presented in the form of an FMEA-map of the process of selecting the optimal proposal for attracting additional financial resources (Table 6).

Since the obtained value of the RPZ indicator for the first drawback, which is a high risk of choosing a suboptimal option for attracting additional financial resources, significantly exceeds the corresponding value for the second drawback, it can be concluded that it has a higher priority in solving it.

Based on the results of the analysis of possible causes and consequences of business process deficiencies, their criticality, and measures to reduce it (FMEA), the quality of the process of selecting the optimal proposal for attracting additional financial resources should be managed.

Let us present one way to apply the measures identified during the analysis to improve the quality of the business process by supplementing the A4 diagram (Figure 4) with IDEF descriptions of these measures in Figure 7.

Therefore, to remedy the drawback of a high risk of choosing a suboptimal option for attracting additional financial resources, it is proposed to introduce two additional activities - A45 and A46 - in the process of selecting the optimal proposal for attracting additional financial resources. In other words, the revision of the selection optimality criteria (A45) with the involvement of specialists in formulating specific requirements (criteria) in accordance with the tasks set and the adjustment of analytical software tools (A46) by information technology specialists will reduce the risk of selecting a suboptimal option for attracting additional financial resources.

As for the need to reduce the time spent on choosing the best option for attracting additional financial resources, it is proposed to train managers of the financial department (A47), review the employee motivation system (A48), and update the hardware and software of workstations (A49).

Table 6

FMEA card of optimal proposal choosing process taking into account attracting additional financial resources

Disadvantages	Possible consequences	The main reasons	Possible measures to improve the quality of the business process	S	O	D	RPZ
High risk of choosing a suboptimal option	Lost profits from using the best offer to raise funds; failure to fulfill the company's financial plans to optimize the cost of raising funds	Poorly defined optimization criteria	Involving experts in the development of criteria	9	6	9	486
		Information about the resource provider may be false/incomplete	Additional verification or low priority in the development of criteria (depending on the value of the information)				
		Improperly configured analytical software tools	Hire a specialist to customize these software tools				
A lot of time spent on choosing the best option for engagement	The risk of untimely implementation of the company's plans; overwork of employees, which reduces their productivity	Insufficient motivation of employees	Review the employee motivation system	3	8	6	144
		Outdated hardware and software	Upgrade hardware and software				
		Inefficient organization of the labor process	Conduct appropriate training for managers				

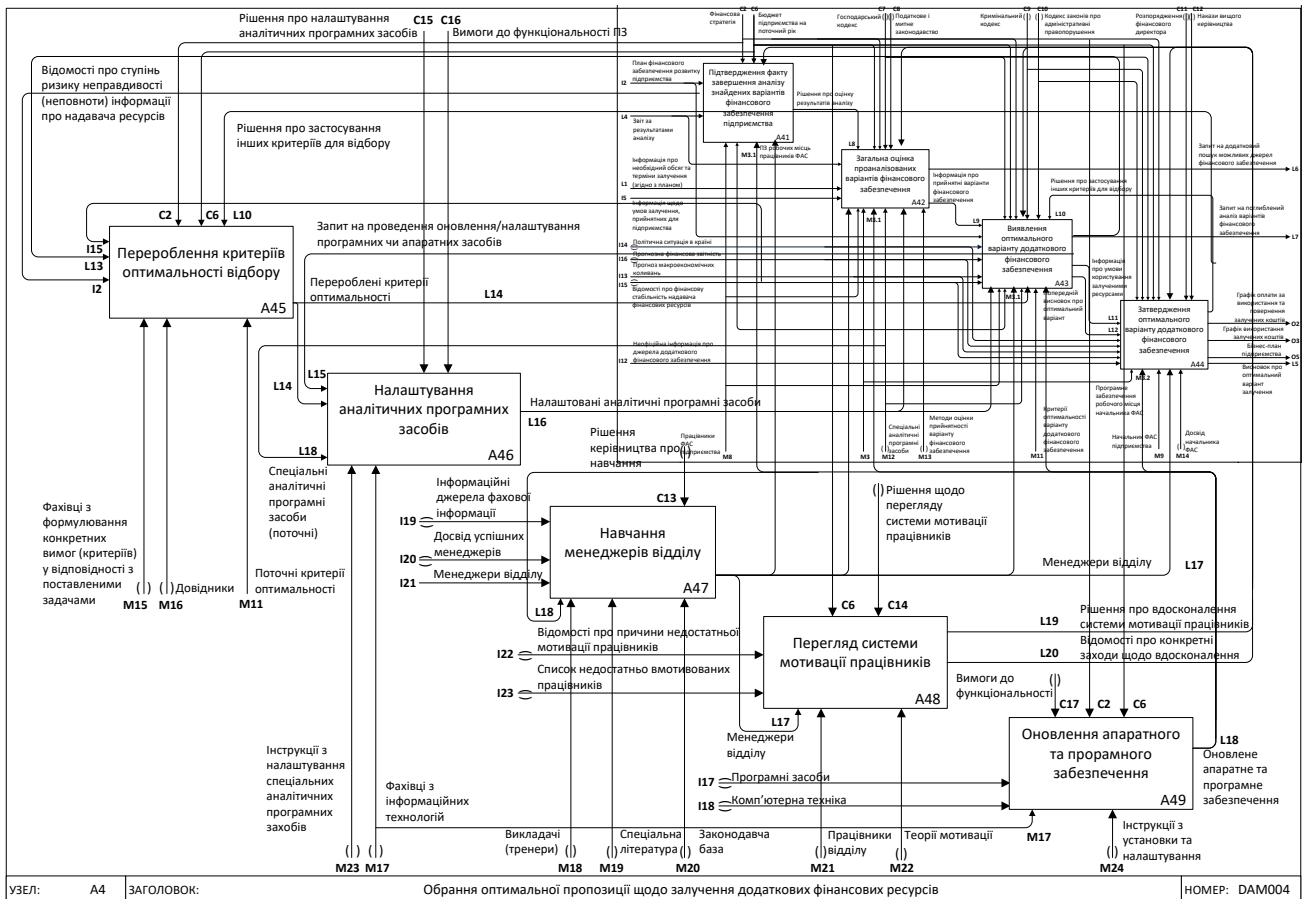*Source: compiled by the authors based on the source [28]*

*Figure 7. Supplementary diagram of the second level of decomposition A4
of enterprise development financial support process*

Source: compiled by the authors based on the source [28]

Conclusions. The implementation of the proposed measures to correct the shortcomings of the process of selecting the optimal proposal for attracting additional financial resources will improve the process of identifying the optimal sources of attracting additional financial resources necessary for the effective financial management of LLC "New System".

Crisis situations are an integral part of the functioning of an enterprise in modern conditions. The crisis state reflects contradictions in the functioning and development of the enterprise and causes the onset of the crisis. To prevent it, the enterprise management system faces an important task of implementing anti-crisis mechanisms that would take into account the specifics of economic activity, as well as industry, environmental conditions, market conditions, and form of ownership. The organization of crisis management is a necessary procedure in the management system, as it allows grouping and improving the processes of independent elements of complex economic systems and business processes.

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УДОСКОНАЛЕННЯ ФІНАНСОВОГО УПРАВЛІННЯ ПІДПРИЄМСТВОМ З УРАХУВАННЯМ ТЕХНОЛОГІЙ ЗАЛУЧЕННЯ ДОДАТКОВИХ ФІНАНСОВИХ РЕСУРСІВ

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На сьогодні економіка України зазнає кризових явищ. Наслідки кризи впливають на економічну діяльність підприємства. Одним із можливих інструментаріїв удосконалення фінансового менеджменту підприємства є оптимізація бізнес-процесу фінансового забезпечення. Оскільки одним із ключових показників ефективності економічної діяльності аеропорту є пасажиропоток, то його прогнозування є одним із основних джерел релевантної інформації ефективного фінансового менеджменту підприємства. Цього пропонується досягти через управління якістю дочірнього процесу обрання оптимальної пропозиції щодо залучення додаткових фінансових ресурсів. Предметом дослідження у статті є теоретико-методичні підходи до залучення додаткових фінансових ресурсів для фінансування економічної діяльності підприємства. Мета полягає у узагальненні теоретичних засад і наданні прикладних рекомендацій до удосконалення фінансового менеджменту підприємства на засадах залучення технологій додаткових фінансових ресурсів. Використано сукупність методів наукового пізнання, які забезпечили концептуальну єдність дослідження, а також фундаментальні положення теорії фінансів та теорії ймовірності та математичної статистики та метод функціонального моделювання SADT (IDEF0). Отримано такі результати: Виявлено два основних недоліки дочірнього процесу: високий ризик обрання неоптимального варіанту та великі витрати часу на обрання оптимального варіанту залучення додаткових фінансових ресурсів. На основі мультиплікативної моделі Хольта-Уінтерса виправлено недоліки процесу обрання оптимальної пропозиції щодо залучення додаткових фінансових ресурсів. Це дозволило виявити оптимальні джерела залучення додаткових фінансових ресурсів, необхідні для ефективного фінансового менеджменту підприємства. Висновки: Кризові ситуації є невід'ємною частиною функціонування підприємства у сучасних умовах. Кризовий стан відображає суперечності у функціонуванні та розвитку підприємства та обумовлює початок кризи. Для його попередження перед системою управління підприємством стоїть важливе завдання щодо впровадження антикризових механізмів, які враховували би специфіку економічної діяльності, а також приналежність до галузі, стан довкілля, кон'юнктуру ринку, форму власності. Організація антикризового управління є необхідною процедурою в системі управління, оскільки дозволяє групувати та вдосконалювати процеси незалежних елементів складних економічних систем та бізнес-процесів.

Ключові слова: *кризовий стан, бізнес-процеси, фінансовий ризик, витрати часу, оптимальна пропорція.*

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