NON-FORMALIZED METHODOLOGICAL APPROACHES IN SMALL BUSINESS FINANCIAL MANAGEMENT

Filobokova L., Pesotsky Yu., Grigoreva O.V. [*]

Abstract: This paper covers on non-formalized methodological approaches to the assessment of economic and financial potential of small business developed and tested by authors, identification of its financial situation and type of financial stability, benchmarking instruments based on the use of systems approach methodology and rating assessment of working capital management condition, flow and efficiency as one of the fundamental factors of small business development. Based on the research of cyclic fluctuations and cycle-forming factors, a methodology was developed enabling to identify three types of economic situations of small business – sustainable growth, sustainable development, economic crisis.

Key words: non-formalized methodological approaches, financial management tools, small business

Introduction

The aim of this paper is to propose a methodology of evaluation of financial and economic potential of small businesses. Significance of non-formalized methodological approaches to small business management. Financial management is an independent scientific area having applicable use for managing socioeconomic systems accounting for their specifics and development nature. In a wider sense, financial management method as a science is a system of theoretical and cognitive categories, basic concepts, scientific tools (apparatus) and regulatory principles of financial management (Kovalyov, 2014). Non-formalized methods are based on description of analytical procedures without applying analytical dependencies while their use is somewhat biased, as analyst's intuition, experience and potential are gaining greater significance.

As opined in 1912 by Alexander Wall, a recognized scholar of statistical financial analysis doctrine, everything needs a system of various analytical coefficients and empirical data are required for local criteria development (Pchelenok, 2006). In essence, the point is on the use of non-formalized approaches to financial management via financial analysis.

Non-formalized approach to analytical research methodology seems a prospective area of economic analysis development considered as a function and an instrument for small business management under imperatively and legally imposed functional

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role in connection with competitive environment creation in the national economy by gradual enhancement of competitiveness of basic parties/elements of the system. We opining that for financial management purposes in small business, non-formalized methodological approaches are the most preferable in:

− assessment of stability (financial and economic),
− assessment of financial and economic potential,
− assessment of efficient financial management,
− other.

As opined by a recognized financial management scholar J.C. Van Horne, a small firm is too much engaged in working capital management and the basic task is skilled planning of cash flow (Van Horne, 2008). The efficiency of monetary assets use is one of the basic indicators of financial management in small business.

Non-formalized Methodological Instruments for Assessment of Economic Situation of Small Business Enterprise

Based on the conclusions made by scholars studying cyclic fluctuations and cycle-forming factors (first of all, by Kondratiev, 2002), the authors suggest to use in the economic analysis the methodology providing for identification of business entity's situation based on the assessment of the combination of values of parameters and factors (Table 1) (Kondratiev, 2002).

Table 1. Basic factors and their ratios reflecting equilibrium and waves of a small business – economic situation of a small business

Factors	Parameters	Financial stability situation	Financial balance situation	Economic crisis situation
Production factors	Output (O) Costs (C)	O>C	O=C	O<C
Demand and supply (level of meeting the needs of external environment)	Demand (needs of external environment) (X) Supply of small business to external environment (Y)	X>Y	X=Y	X<Y
Financial resources	External financial sources (EI) Costs on maintenance of external financial sources (CI)	EI>CI	EI=CI	EI<CI
Long-term investments and their sources	Investments (I) Sources (equity capital + long-term financial sources) (S)	S>I	I=S	S<I

For capital-intensive business systems of small organizational forms (construction, transport, fishing and fish/seafood processing, etc.) the domination of the share of fixed assets in the value of total assets is typical. Such business entities are offered modified methodology based on calculation and assessment of combinations of extra factors – the share of fixed production assets in the value of total assets and the level of their physical deterioration (Table 2).

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Table 2. Combining economic situation of a capital-intensive small business entity by the level of fixed production assets and their physical deterioration

Factors	Parameters	Financial stability situation	Financial balance situation	Economic crisis situation
Fixed production assets available	FPA's share in the value of total assets, %	50 – 65	35 – 49	Under 34
Physical deterioration of fixed production assets	FPA's deterioration, %	Under 25	26 – 50	Over 51

Combining factors enables under express analysis to identify the financial situation of a small business entity and does not seem labor-intensive which is crucial for both small business and sole proprietors.

Non-formalized Methodological Instruments for Assessment of Financial Situation of Small Business Enterprise

Assessment of financial situation of a small business enterprise is suggested to be done based on combining the values of factors like own working capital and net working capital. Meantime, for assessment purposes capital shall mean financial coverage of available commercial assets (tangible and intangible) disposed of by small business enterprise (owned/hired/managed). Depending on the source of assets coverage, capital is feasible to be divided into own, borrowed and raised. Own capital includes share (joint-stock, equity capital/fund, pie fund), additional, reserve capital and accumulated profit. Borrowed capital includes long-term and short-term credits and loans. Raised capital (spontaneous financing source) includes accounts payable of a business entity.

Own working capital (OWC) is part of own capital spent or potentially spent on financing the assets classified as working assets/funds. Mathematically, OWC is suggested to be calculated as the difference between the value of own capital and the value of fixed assets and other non-working assets (Lyubushin et al., 2004). We offer our methodology of evaluation of financial and economic potential of small businesses. If we account that regardless from the scale of operation, for commercial organizations the ratio 50/50 of own and borrowed capital is deemed optimal, while the stake of working assets of small business makes up 75 – 90% of the total assets, own capital spent on financing working assets should be 37.5% – 45%. The optimal level of current assets coverage ratio in small business should be 0.50, while it is the limit optimality.

Net working capital (NWC) is suggested to be considered as the financial coverage of working assets using all available costs coverage sources, meantime the financing sources are: own working capital; long-term credits and loans on financing working capital; short-term credits and loans.

Mathematically, NWC value is found as follows (Kovalyov, 2009):

$$NWC = OWC + OLL + SCL - B \qquad (1)$$

where:

NCW – net working capital;

OWC – own working capital;

SCL – short-term credits and loans;

OLL – other long-term liabilities;

B – average balance of working capitals.

Positive value of NWC means the availability of financial sources which may potentially be invested in working assets. Negative NWC means use of accounts payable as a source for financing working assets. Negative NWC values should be considered as indicators of problems with liquidity and financial stability. Regarding NWC, it is not possible to set the optimal level but it is assumed that in each moment NWC should be 0 (meaning full use of capital in working assets). In the assessment of the financial situation of a small business enterprise it is offered to use non-formalized approach to identification of one of the three possible situations (during deep analysis, it is feasible to identify out of 5 or 6 types of situations).

Table 3. Identifying financial situation of small business enterprise based on OWC and NWC combination *(author`s)*

Factors	Parameters	Financial stability situation	Financial balance situation	Financial instability situation
Own capital invested in working capital	Own working capital coverage	$0.50 \succ OWCC \succ 0.31$	$0.31 \succ OWCC \succ 0.11$	$OWCC < 0.11$
Coverage of working assets with *normal* financial sources	NWC	$NWC \succ 0$	$NWC = 0$	$NWC < 0$

For deep assessment of the financial situation of a small business enterprise and identification of the type of its financial stability, non-formalized approach is offered based on the combination of values of own working capital and net working capital (Table 4).

Identification of the type of financial stability based on non-formalized methodological approaches enables to work out the most adequate decisions which is deemed urgent in the conditions of limited financial resources for small business enterprises at any stage of life cycle.

Non-formalized methodological instruments for assessment of financial and economic situation of small business enterprise. The methodology for managing competitiveness of small business system and comprising elements flows from the hypothesis that competitiveness is dividable, measurable and comparable with the economic system's potential.

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Table 4. Classification of financial stability types in small business *(author`s)*

Type of financial stability	OWC and NWC	Instability zone
Absolute stability	$NWC \succ 0$ $OWCC \geq 0.31$	Stability growth zone
High stability	$NWC = 0$ $0.31 \succ OWCC \succ 0.21$	Stability zone 1 type
Normal stability	$NWC = 0$ $0.21 \succ OWCC \succ 0.11$	Stability zone 2 type
Unstable state	$NWC < 0$ $0.11 \succ OWCC \succ 0.05$	Instability zone 1 type
Pre-crisis state	$NWC < 0$ $0.05 \succ OWCC \succ 0.01$	Instability zone 2 type
Crisis state	$NWC < 0$ $OWCC < 0$	Instability zone 3 type

Competitiveness of small business is considered as the economic effect from the synergy of production, organizational, innovative, information, resource saving, ecological, financial and economic and other opportunities of a business entity.

Assessment of competitiveness level is suggested to be done using a comprehensive indicator comprising the aggregate of integral, reflecting some or other aspect, potential opportunities of a material socioeconomic system and, first of all, its financial and economic potential. Small business's financial and economic potential is formed by the three main system elements (Table 5).

Table 5. System of local indicators offered for the assessment of financial and economic potential of small business *(author`s)*

Parameters	Calculation algorithm
Financial and economic potential	
Property potential	
1. K1-share of net assets value in total assets	Net assets value: total assets value
2.K2-share of fixed assets in total assets	Fixed assets value: total assets value
3.K3-share of active fixed assets	Active fixed assets value: fixed assets value
4.K4-workability of fixed assets	Balance value of fixed assets: initial value of fixed assets
Financial potential	
1.K5-absolute liquidity	Absolutely liquid assets: hot and short-term liabilities
2.K6-current liquidity	Current assets less accounts receivable due after 12 months: hot and short-term liabilities
3.K7-coverage with own working capital	Own working capital: working capital
4.K8-autonomy	Own capital: total capital
Intellectual potential	
1.K9-compliance of professional education level	Actual professional education level: normative professional education level
2.K10-share of costs on education and in-service training of staff	Costs on education and in-service training of staff: costs on common operations
3.K11-key staff turnover	1/Average staff number of key specialists which left voluntarily: average staff number of key

	specialists
4.K12-renewal of key staff	Average staff number of hired key specialists with field-specific education: average staff number of employees

To measure property potential, it is suggested to use property potential index of a small business enterprise (IPP) calculating under the following algorithm:

$$IPP = \sqrt{\sum_{i=1}^{n}(x_i^2)} \qquad (2)$$

where: x_i – components creating property potential (K1-4)

Similarly, financial potential index of a small business enterprise (IFP) is calculated:

$$IFP = \sqrt{\sum_{i=1}^{n}(x_i^2)} \qquad (3)$$

where: x_i – components creating financial potential (K5-8)

Intellectual potential index of a small business enterprise (IInP) is found as follows:

$$IInP = \sqrt{\sum_{i=1}^{n}(x_i^2)} \qquad (4)$$

where: x_i – components creating intellectual potential (K9-12)

Financial and economic potential (EFP) is the result for aggregation of the comprising components.

$$EFP = \sqrt[n]{IPP * IFP * IInP} \qquad (5)$$

The information mass regarding capacity and quality characteristics of the elements forming financial and economic potential enables to develop the governing input measures and sources in connection with assets management in small business.

Benchmarking in managing competitiveness of small business is based on system approach methodology and comprehensive rating assessment of working capital as one of the core factors of operation and development of small business system (Brigham and Gapenski, 2009). Rating calculation and further differentiation of small business enterprises allows calculating and measuring the level of competitiveness and segmentation of the sector's market.

The most informative indicators for the assessment of condition/structure/flow for the purposes of small business working capital management comprise the following system of relative parameters/coefficients:

-K1 – current liquidity; -K2 – own working capital coverage; -K3- absolute liquidity; -K4 – working capital mobility; -K5 – share of real net working capital in current assets; -K6 – working capital profitability; -K7 – working capital turnover;

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-K8 – production stock turnover; -K9 – accounts receivable turnover; -K10 – net cash flow profitability.

It is suggested that the conclusions on operation and competitiveness of small business will be more unbiased if the rating assessment methodology provides for aggregation of local indicators diagnosing the result of comprehensive interaction of mutually dependent and mutually related factors with weights attributed to each local indicator (Table 6).

Table 6. Weights of local indicators of condition, flow and management of working capital in small business enterprises

Indicator	Name of parameter	Weight as assessed by experts (points)
K_1	current liquidity	8
K_2	own working capital coverage	8
K_3	absolute liquidity	7
K_4	working capital mobility	7
K_5	share of real net working capital in current assets	6
K_6	working capital profitability	3
K_7	working capital turnover	5
K_8	production stock turnover	1-3
K_9	accounts receivable turnover	1-3
K_{10}	net cash flow profitability	9

Method of Evaluation Weight Points

The maximal weight equaling 9 was attributed to net cash flow profitability as one of the specific features of small business operation is hard access to financial and money markets due to low borrowing capacity and weak collateral security. That imperatively fixes the condition of small business survival – efficient management of working capital and its elements ensuring maximal economic effect on each monetary unit of funds advanced in business. The ability of small business to generate cash flow is the manifestation of the efficiency of working capital management and business entity management in general reflecting its competitiveness. The indicator of net cash flow profitability of small business is suggested for calculating by modeling the parameters from Table 7.

Table 7 Indicator offered for calculation and assessment of net cash flow profitability of a small business enterprise *(author`s)*

Parameters	Algorithm	Comment
1.Turnover of total net cash flow (K1)	Total income of analyzed period : total net cash flow	Number of turnovers of net cash flow within the analyzed period
2.Turnover of net cash flow from current operations (K2)	Revenue from sales : net cash flow from current operations	Turnover of net cash flow from current (core) operations
3.Turnover of cash inflow from current operations (K3)	Revenue from sales : cash inflow from current	Revenue from sales received from each monetary unit of

	operations	cash inflow from current operations
4.Share of cash inflow from current operations in total cash inflow (K4)	Cash inflow from current operations : total cash inflow	Share of cash inflow from current operations in total cash inflow
5.Total cash inflow per monetary unit of outflow in investment and financial activity (K5)	Total cash inflow : cash outflow in investment and financial activity	Total cash inflow per monetary unit of outflow in investment and financial activity
6.Cash outflow in investment and financial activity per monetary unit of inflow in investment and financial activity (K6)	Cash outflow in investment and financial activity : cash inflow from investment and financial activity	Cash outflow in investment and financial activity per monetary unit of inflow in investment and financial activity
7.Cash inflow from investment and financial activity per monetary unit of cash outflow from current operations (K7)	Cash inflow from investment and financial activity : cash outflow from current operations	Cash inflow from investment and financial activity per monetary unit of cash outflow from current operations
8.Cash outflow from current operations per monetary unit of total net cash flow (K8)	Cash outflow from current operations : total net cash flow	Cash outflow from current operations per monetary unit of total net cash flow

Profitability of net cash flow is calculated as follows:

R NCF = NP: NCF or RNCF= R prod*K3*K4*K5*K6*K7*K8   (6)

NCF - net cash flow

NP- net profit

R – profitability

For aggregation of local indicators of condition, flow and management of working capital the following algorithm is offered:

$$R_j^{xxx} = \sqrt{K_1(1-x_{1j})^2 + K_2(1-x_{2j})^2 + ... + K_n(1-x_{nj})^2} \qquad (7)$$

where: K – weights determined by expert assessment;

x_{ij} – ratio of individual parameter to its maximal value in total aggregate of small business enterprises studied ($x_{ij}=a_{ij}/\max a_{ij}$).

On the basis of the rating assessment obtained, enterprises are ordered/ ranked in the order of decreasing R.

As per the methodology offered, a benchmark small business enterprise shall be the one having the minimal rating of points and further ranking is done as the collected points grow.

Conclusion

In the contemporary conditions, small business financial management predetermines the compromise of formalized and non-formalized methodological approaches to working out, reasoning and making managerial decisions, first of all,

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using such a methodological approach like economic analysis. Such an understanding of economic analysis logic seems the most compliant with the respective management paradigms and small business entity's operation in the conditions of high dependency and uncertainty of the market environment (Murzina et al., 2015). Non-formalized approaches seem the most prospective area of economic analysis development, acting as a function and an instrument for small business management under imperatively and legally imposed functional role in connection with competitive environment creation in the national economy. Successful managerial decisions in finance are ensured by objectivity and reliability of assessment of potential, stability and efficiency of material systems financial management, accounting for their specifics. Accounting for system's specifics in the course of development of governing input is ensured by non-formalized methodological approaches based on experience and intuition of the developer (Larionova et al., 2014).

On the basis of net working capital and working capital financed by equity to total assets ratio a non-formalized methodology was offered for identification of small business enterprise's type of financial situation. Based on local indicators system calculation and further aggregation a methodology was offered for assessment of financial and economic potential of small business. Benchmarking instruments are based on modified methodological approach to rating assessment of indicators of condition and use of working capital for financial management and competitiveness purposes of small business.

Achievement of such targets imperatively causes the improvement of methodological tools of financial management based on innovative practices and use of non-formalized methodologies.

The non-formalized methodological approaches to small business finance management in the conditions of its specific operation and target development goals enable to approach to reasoning of managerial decisions in a differentiated way which is rather crucial:

− being the most unbiased,
− not requiring any comprehensive instruments/ methodology,
− being not labor-intensive in finance.

Surely, that area requires further development and reference to sectoral and regional specifics of doing business in small organizational and legal forms. Also, the subject area and, first of all, the approaches to the assessment of competitiveness and market stability of separate entities and small business system in general need to be expanded.

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NIESFORMALIZOWANE METODOLOGICZNE PODEJŚCIA W ZARZĄDZANIU FINANSOWYM MAŁYCH PRZEDSIĘBIORSTW

Streszczenie: Niniejsze opracowanie dotyczy niesformalizowanych rozwiązań metodologicznych do oceny potencjału gospodarczego i finansowego małych przedsiębiorstw opracowanych i przetestowanych przez autorów, identyfikacji ich sytuacji finansowej i rodzaju stabilności finansowej, instrumentów benchmarkingu bazujących na wykorzystaniu metodologii podejścia systemowego i oceny ratingowej dotyczącej stanu zarządzania kapitałem obrotowym, przepływem i efektywnością jako jednym z podstawowych czynników rozwoju małych przedsiębiorstw. Na podstawie badań cyklicznych wahań i czynników tworzących cykl, opracowana została metodologia umożliwiająca zidentyfikowanie trzech rodzajów sytuacji gospodarczych małych firm – zrównoważonego wzrostu, zrównoważonego rozwoju, kryzysu gospodarczego.

Słowa kluczowe: niesformalizowane podejścia metodologiczne, narzędzia zarządzania finansowego, małe przedsiębiorstwa

非形式化的方式方法在小型企業財務管理

摘要：本文對非形式化的方式方法，以開發和作者測試小企業的經濟和財政潛力的評估涵蓋的基礎上，運用系統方法方法鑑別的財務狀況和金融穩定的類型，基準儀器和營運資本管理狀況，流動性和效益為小企業發展的根本因素之一的等級評估。基於循環波動和週期形成因素的基礎上，一種方法被開發使識別三種類型的小企業的經濟狀況 - 可持續增長，可持續發展，經濟危機。

關鍵詞：非形式化的方式方法，財務管理工具，小型企業。