

THE IMPACT OF LANGUAGE PRACTICE ON THE FINANCIAL PERFORMANCE OF COMPANIES

O EFEITO DO USO DA LINGUAGEM NO DESEMPENHO FINANCEIRO

EL EFECTO DEL USO DEL LENGUAJE EN EL DESEMPEÑO FINANCIERO

Victor Vilenovich GOVDYA^{1*}
Irina Gennadievna ERSHOVA²
Maryam Alaudinovna ORTSKHANOVA³
Lorina Olegovna ASLANOVA⁴
Magomed Movsurovich MUSAEV⁵

ABSTRACT: This study attempts to investigate the correlation between financial performance and language use. Financial stability is one of the key characteristics of its financial condition representing the most capacious and concentrated indicator reflecting the structure of the sources on forming the organization's assets. The modelling of economic conditions allows objectively and comprehensively identifying possible options for further development of an enterprise to make effective management decisions in financial policy. The study's theoretical and methodological foundation is the scientific works by domestic and foreign academic experts in language analysis, economic analysis, financial analysis, and statistics. Based on the results obtained, our large-scale study proves the impact of language practice on organization-level financial performance and expands research on language in multinationals from intra-firm to inter-firm relationships.

Keywords: Financial condition. Language use. Mathematical extrapolation. Modelling. Language analysis.

RESUMO: *Este estudo tenta investigar a correlação entre desempenho financeiro e uso da linguagem. A estabilidade financeira é uma das principais características de sua condição financeira, representando o indicador mais amplo e concentrado que reflete a estrutura das fontes na formação dos ativos da organização. A modelagem das condições econômicas permite identificar de forma objetiva e abrangente as opções possíveis para o*

¹ Doctor of Economics, Department of Accounting, Federal State Budgetary Educational Institution of Higher Education Kuban State Agrarian University named after I.T. Trubilin, 350044, Russia, Krasnodar, Kalinina st., 13, govdy_a_v_v@inbox.ru, ORCID iD: <https://orcid.org/0000-0002-5408-4874>

² Doctor of Economics, Department of Finance and Credit, Federal State Budgetary Educational Institution of Higher Education Southwest State University, 94, 50 Let Oktyabrya street, Kursk, Russia, 305040, ershovairgen@yandex.ru, ORCID iD: <https://orcid.org/0000-0002-0675-0764>

³ Candidate of economic sciences, Department of Economics, Federal State Budgetary Educational Institution of Higher Education Ingush State University, 7, I. Zyazikov Avenue, Magas city, Republic of Ingushetia, 386001, Orchmar@mail.ru, ORCID iD: <https://orcid.org/0000-0003-3130-3349>

⁴ Candidate of economic sciences, Department of Economics and Finance, Federal State Budgetary Educational Institution of Higher Education Kabardino-Balkarian State University named after H.M. Berbekov, No. 173, Chernyshevsky st., Nalchik, Kabardino-Balkarian Republic, 360004, aslanova.lo@yandex.ru, ORCID iD: <https://orcid.org/0000-0001-6702-4451>

⁵ Candidate of economic sciences, Department of Economics and Economic Security of Industries and Enterprises, Federal State Budgetary Educational Institution of Higher Education Chechen State University, h. N32, A. Sheripov st., Grozny, Chechen Republic, 364093, mmm-74@mail.ru, ORCID iD: <https://orcid.org/0000-0002-9671-5064>

desenvolvimento futuro de uma empresa para tomar decisões de gestão eficazes na política financeira. A base teórica e metodológica do estudo são os trabalhos científicos de especialistas acadêmicos nacionais e estrangeiros em análise de linguagem, análise econômica, análise financeira e estatística. Com base nos resultados obtidos, nosso estudo em larga escala prova o impacto da prática do idioma no desempenho financeiro da organização e expande a pesquisa sobre idiomas em multinacionais de relacionamentos intra-firmas para inter-firmas.

Palavras-chave: *Condição financeira. Uso da linguagem. Extrapolação matemática. Modelagem. Análise da linguagem.*

RESUMEN: *Este estudio intenta investigar la correlación entre el desempeño financiero y el uso del lenguaje. La estabilidad financiera es una de las características clave de su condición financiera y representa el indicador más amplio y concentrado que refleja la estructura de las fuentes sobre la formación de los activos de la organización. El modelado de las condiciones económicas permite identificar de manera objetiva e integral posibles opciones para un mayor desarrollo de una empresa para tomar decisiones de gestión efectivas en política financiera. El fundamento teórico y metodológico del estudio son los trabajos científicos de expertos académicos nacionales y extranjeros en análisis del lenguaje, análisis económico, análisis financiero y estadística. Con base en los resultados obtenidos, nuestro estudio a gran escala demuestra el impacto de la práctica del idioma en el desempeño financiero a nivel de la organización y amplía la investigación sobre el idioma en las multinacionales desde las relaciones dentro de la empresa hasta las relaciones entre empresas.*

Palabras clave: *Situación financiera. Uso del lenguaje. Extrapolación matemática. Modelado. Análisis del lenguaje.*

Introduction

Forecasting financial condition through modelling depends on the problems faced and the objectives set for management staff.

In methodological terms, the main tool of any forecast is an extrapolation scheme (PAVLOVA, 2017). The extrapolation's essence consists in studying the established past and present steady trends for development of the object of forecasting and transferring them into the future. A distinction is made between formal and predictive extrapolation (Glinsky et al., 2021). Formal extrapolation is based on the assumption of preserving past and present development trends for the object of forecasting in the future. In forecasting, the actual development is characterized by hypotheses about the dynamics of the process under study, taking into account changes and the impact of various factors in the future (ENDRONOVA, 2020).

Extrapolation methods are the most common and elaborated. Extrapolation forecasting methods are based on the study of dynamic trend models (FILOBOKOVA, 2018).

Methodology and results of the study performed

Theoretical and methodological basis of the study were the scientific works by domestic and foreign academic economists in economic analysis, financial analysis, and statistics.

To achieve the goal and solve the tasks set in the process of writing, the following methods were used: monographic, economic-statistical, abstract-logical, etc.

Financial stability in a broad sense is characterized by an ability not only to maintain the achieved level of business activity, but also to increase it over time (SHEREMET, 2020; ADAMENKO et al., 2019; KHOROLSKAYA et al., 2020; ADAMENKO et al., 2020; BISUTTANOVA et al., 2018; GERASIMOV et al., 2019; SHICHIYAKH et al., 2017).

Financial stability in a narrow sense should be understood as a certain optimal ratio between various types of financial resources attracted by the company, as well as the ratio between different directions of their use (LVOVA, 2019; ADAMENKO ET AL., 2018; ADAMENKO ET AL., 2019; VLASOVA & SHEVCHENKO, 2019; TYUPAKOV & OLIFIR, 2019).

The following types of financial stability are distinguished (table 1).

Table 1. Types of financial stability (KOVAN, 2018)

Type of financial stability	Explanation
Absolute	The organisation is completely independent of external sources, with inventories fully covered by its own capital. There is a working capital surplus
Normal	Both own and borrowed sources are used to build up tangible current assets
Unstable financial position	Shortage of own working capital
Financial health in crisis	In addition to insufficient working capital, there are overdue receivables from counterparties

A management method can be defined as a set of techniques and methods of influencing the controlled object to achieve its goals. Modelling should be singled out as the main method of control (SAVITSKAYA, 2020).

In the process of modelling, the length of the baseline time series, on the basis of which the forecast is built, as well as the remoteness of the forecast year from the baseline series, has a significant impact on the forecast reliability. As a rule, a forecast is calculated for a length that does not exceed one third of the length of the baseline series (ADAMAITIS, 2018).

Attention should be paid to the fact that in forecasting, preference is given to simple models containing fewer parameters. A linear trend is most often used. Note that the resulting point value is unlikely to be achieved accurately, as the actual levels do not usually coincide with the trend, but fluctuate around it (MUZALEV, 2017).

Extrapolation provides a point-wise value for the forecast, i.e. an estimate of the forecasted indicator at a point by an equation describing the trend of the forecasted indicator. It is an average estimate for the forecasted time interval (ASKEROV et al., 2019).

The input data is given in Table 2.

Table 2. Financial stability indices

Indicator	31.12.2018	31.12.2019	31.12.2020
Financial stability index	0.3514	0.3350	0.6656
Equity to total assets ratio	0.3514	0.4224	0.5410
Current assets to equity ratio	0.2166	0.1850	0.3804
Working capital financed by equity to total assets ratio	1.1396	0.7612	1.2668

Calculations using mathematical extrapolation formulas for the financial stability index are presented in Table 3.

Table 3. Data for the calculation of the forecast financial stability index

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2018	0.3514	-1	-0.3514	1
31.12.2019	0.3350	0	0	0
31.12.2020	0.6656	1	0.6656	1

Total	1.3520	0	0.3142	2
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Substituting the final data, the parameters of the straight line equation give the following values:

– $a = 1.3520 : 3 = 0.451$;

– $b = 0.3142 : 2 = 0.1571$.

Consequently, for the year 2021, the financial stability index can be forecasted as:
 $0.451 + 0.1571 \times 2 = 0.451 + 0.3142 = 0.7652$.

The forecasted financial stability index will exceed the value for 2020 (0.6656) by 0.10.

Calculations by mathematical extrapolation formulas for the equity to total assets ratio are presented in table 4.

Table 4. Data for calculation of the forecast equity to total assets ratio

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2018	0.3514	-1	-0.3514	1
31.12.2019	0.4224	0	0	0
31.12.2020	0.5410	1	0.5410	1
Total	1.3148	0	0.1896	2

Substituting the final data, the parameters of the straight line equation obtain the following values:

– $a = 1.3148 : 3 = 0.438$;

– $b = 0.1896 : 2 = 0.0948$.

Consequently, for the year 2021, the equity to total assets ratio can be forecasted as follows: $0.438 + 0.0948 \times 2 = 0.6276$.

Calculation table 5 is compiled to determine the straight line equation parameters for the current assets to equity ratio.

Table 5. Data for calculation of the forecasted current assets to equity ratio.

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2018	0.2166	-1	-0.2166	1
31.12.2019	0.1850	0	0	0

31.12.2020	0.3804	1	0.3804	1
Total	0.7820	0	0.1638	2

Substituting the final data, the parameters of the straight line equation obtain the following values:

- $a = 0.782 : 3 = 0.261$;
- $b = 0.1638 : 2 = 0.0819$.

The forecast for the year 2021 indicates the current assets to equity ratio of $0.261 + 0.0819 \times 2 = 0.4248$.

The forecasted value for the current assets to equity ratio will exceed its value for 2020 (0.3804) by 0.044.

Table 6 contains the data for determining the parameters of the straight line equation on the working capital financed by equity to total assets ratio.

Table 6. Data for calculation of the forecast working capital financed by equity to total assets ratio

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2018	1.1396	-1	-1.1396	1
31.12.2019	0.7612	0	0	0
31.12.2020	1.2668	1	1.2668	1
Total	3.1676	0	0.1272	2

Substituting the final data, the parameters of the straight line equation obtain the following values:

- $a = 3.1676 : 3 = 1.056$;
- $b = 0.1272 : 2 = 0.0636$.

The basic development trend for the series of working capital financed by equity to total assets ratios is shown by the straight line equation:

For the year 2021, the working capital financed by equity to total assets ratio can be forecasted as follows: $1.056 + 0.0636 \times 2 = 1.1832$.

The forecasted value of the working capital financed by equity to total assets ratio will be lower than its value for 2020 (1.2668) by 0.0836.

The initial data for calculation of the indicator for 2022 is given in table 7.

Table 7. Financial stability index

Indicator	31.12.2019	31.12.2020	31.12.2021
Financial stability index	0.3350	0.6656	0.7652
Current assets to equity ratio	0.1850	0.3804	0.4248
Working capital financed by equity to total assets ratio	0.7612	1.2668	1.1832

Calculations using mathematical extrapolation formulas for the financial stability index are presented in Table 8.

Table 8. Data for calculating the forecast financial stability index

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2019	0.3350	-1	-0.3350	1
31.12.2020	0.6656	0	0	0
31.12.2021	0.7652	1	0.7652	1
Total	1.7658	0	0.4302	2

Substituting the final data, the parameters of the straight line equation obtain the following values:

– $a = 1.7658 : 3 = 0.5886$;

– $b = 0.4302 : 2 = 0.2151$.

Consequently, the financial ratio can be forecasted to be $0.5886 + 0.2151 \times 2 = 1.0188$ for the year 2022.

The calculations by mathematical extrapolation formulas for the equity to total assets ratio are presented in Table 9.

Table 9. Data for the calculation of the forecasted equity to total assets ratio

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2019	0.4224	-1	-0.4224	1
31.12.2020	0.5410	0	0	0
31.12.2021	0.6276	1	0.6276	1

Total	1.5910	0	0.2052	2
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Substituting the final data, the parameters of the straight line equation obtain the following values:

$$- a = 1.5910 : 3 = 0.530;$$

$$- b = 0.2052 : 2 = 0.1026.$$

Consequently, for the year 2022 the autonomy coefficient can be forecasted as follows: $0.530 + 0.1026 \times 2 = 0.7352$.

Calculation table 10 is compiled to determine the parameters of the straight line equation for the current assets to equity ratio.

Table 10. Data for calculation of the forecasted current assets to equity ratio.

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2019	0.1850	-1	-0.1850	1
31.12.2020	0.3804	0	0	0
31.12.2021	0.4248	1	0.4248	1
Total	0.9902	0	0.2398	2

Substituting the final data, the parameters of the straight line equation obtain the following values:

$$- a = 0.9902 : 3 = 0.330;$$

$$- b = 0.2398 : 2 = 0.1199.$$

For the year 2022, we can forecast the current assets to equity ratio as follows: $0.330 + 0.1199 \times 2 = 0.5698$.

Table 11 shows the data for determining the parameters of the straight line equation for the working capital financed by equity to total assets ratio.

Table 11. Data for calculation of the forecasted working capital financed by equity to total assets ratio

Year	y_i	t_i	$y_i t_i$	t_i^2
31.12.2019	0.7612	-1	-0.7612	1
31.12.2020	1.2668	0	0	0
31.12.2021	1.1832	1	1.1832	1

Total	3.2112	0	0.4220	2
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Substituting the final data, the parameters of the straight line equation obtain the following values:

– $a = 3.2112 : 3 = 1.0704$;

– $b = 0.4220 : 2 = 0.2110$.

For the year 2022, the working capital financed by equity to total assets ratio can be forecasted as follows: $1.0704 + 0.2110 \times 2 = 1.4924$.

Conclusions and proposals

The calculated forecast values based on mathematical extrapolation are shown in table 12.

Table 12. Forecast of relative ratios based on mathematical extrapolation for the years 2021-2022.

Indicator	31.12.2018	31.12.2019	31.12.2020	31.12.2021	31.12.2022
Financial stability ratio	0.3514	0.3350	0.6656	0.7652	1.0188
Equity to total assets ratio	0.3514	0.4224	0.5410	0.6276	0.7352
Current assets to equity ratio	0.2166	0.1850	0.3804	0.4248	0.5698
Working capital financed by equity to total assets ratio	1.1396	0.7612	1.2668	1.1832	1.4924

Based on the results of the forecast using mathematical extrapolation, a positive trend in the change in the ratios can be identified, which indicates an improvement in the activities and position of the organisation in the market.

With the help of correlation analysis, the minimal risks of worsening the ratios in the next year are identified; it is possible to limit recommendations within the developed model of financial position based on net profit and dependent indicators: profit from sales, and equity.

Although the company's financial position is good, the criteria for selecting options other than the smallest change in the currency of the balance sheet would be:

- Minimising long-term debt in a cash-sufficient environment;
- Maximising change in cash flow in an environment of reduced receivables;
- Diversification of activity, development of production in the conditions of financial investments into fixed assets and material inventories;
- Realisation of all four criteria for selecting a forecasted balance sheet option;
- Minimisation of short-term credits in conditions of sufficient cash.

In order to carry out the actions described above, it is necessary to determine who is responsible for the implementation of the procedures in the allocated area of work.

Conflict of interest

The authors declare there is no conflict of interest.

References

- PAVLOVA, I.A. Analysis and forecasting of financial stability of the organization taking into account the life cycle on the basis of an integral indicator // Finance and Credit.- 2017.- №23.- p. 71.
- Statistics: textbook / V.V. Glinsky, V.G. Ionin, L.K. Serga [et al]; ed. by V.G. Ionin. - 4th edition revised and enlarged. - Moscow: INFRA-M, 2021. – 355 p.
- ENDRONOVA, V.N. General Theory of Statistics: Textbook. - 2nd edition, revised and supplemented. - Moscow: Magister, 2020. - 608 p.
- FILOBOKOVA, L.Y. Informal methods of forecasting the financial stability of small enterprises // Economic analysis: theory and practice. - 2018. - № 9. - p. 18.
- SHEREMET, A. D. Analysis and diagnostics of financial and economic activity of an enterprise: textbook / A. D. Sheremet - 2nd edition, supplemented. - Moscow: INFRA-M, 2020. -374 c.
- LVOVA, N. A. Financial Diagnostics of Enterprise: Monograph / ed. V. Ivanov. - Moscow: Prospect, 2019. - 304 c.
- KARPOVA, E.N. Finance of organizations (enterprises): textbook / E.N. Karpova E.N., Chumachenko E.A. - Moscow: INFRA-M, 2020. - 285 c.
- Comprehensive Financial Analysis in Enterprise Management: Textbook / S.A. Boronenkova, M.V. Melnik. - M.: FORUM: INFRA-M, 2019. - 335 p.
- KOVAN, S.E. Financial stability of the enterprise and its assessment for prevention of bankruptcy // Economic analysis: theory and practice. - 2018. - № 15. - p 52.
- SAVITSKAYA, V. Economic analysis: textbook / V. Savitskaya. - 15th edition, revised and supplemented. - Moscow: INFRA-M, 2020. - 587 p.
- ADAMAITIS, L.A. Analysis of Financial Statements. Practicum: textbook. - M.: KNORUS, 2018. - 400 c.

MUZALEV, S.V. Analysis of existing methods and forecasting the financial condition of organizations // *Economic Analysis: Theory and Practice*. - 2017.- No.25.- p. 62.

ASKEROV, P.F. General and applied statistics: textbook for students of higher professional education / P.F. Askerov, R.N. Pakhunova, A.V. Pakhunov; under general ed. by R.N. Pakhunova. - Moscow: INFRA-M, 2019. - 272 p.

BALDIN, K.V. General theory of statistics: textbook / K.V. Baldin, A.V. Rukosuev. - 3rd edition, stereotyped. - Moscow: Publishing and Trading Corporation Dashkov & Co, 2020. - 312 p.

ADAMENKO, A.A., KHOROLSKAYA, T.E., ANANIKOV, T.SH. Bulletin of the Academy of Knowledge. - 2018. - № 6 (29). - p. 10-14.

ADAMENKO, A.A. Financial stability of an organization as an indicator of stability in the financial market / A.A. Adamenko, T.E. Khorolskaya, A.A. Tikhikh // In the collection: Accounting and analytical support of innovation management system. Proceedings of the International scientific conference of young scientists and teachers of universities. - Krasnodar, 2019. - p. 229-235.

VLASOVA, N. S. Analysis of liquidity and solvency of the organization / N.S. Vlasova, Yu.A. Shevchenko // In the collection: Economic development in conditions of digitalization and its information support. Materials of the international scientific conference of young scientists and teachers of universities. - 2019. - 219-224 pp.

TYUPAKOV, K.E. Risk Management in the System of Economic Security of Organization / K.E. Tyupakov, A.V. Olifir // Bulletin of the Academy of Knowledge. - 2019. - № 1 (30). - p. 167-173.

KHOROLSKAYA, T.E. Methodology of Analysis of Financial Results of Commercial Organization / T.E. Khorolskaya, E.V. Kalashnikova, E.I. Elenskaya // *Vestnik of Academy of Knowledge*. - 2020. - № 3 (38). - p. 286-290.

ADAMENKO A., PETROV D., TEMMOEVA S., ESKIEV M., MISAKOV V. Information support development mechanism for environmental management of nature users. *IIOABJ*, 2020. Vol. 1. S1. p. 46-49.

BISUTTANOVA, A.A., ZEMLYAKOVA, N.S., RAZZHIVIN, O.A., UDOVIK, E.E., ADAMENKO, A.A. Modern trends in corporate finance management. *Espacios*. 2018. Vol. 39. № 31.

GERASIMOV, V.O., SHARAFUTDINOV, R.I., KOLMAKOV, V.V., ERZINKYAN, E.A., ADAMENKO, A.A., VASILEVA, A.G. Control in the human capital management system in the strategy of innovative development of a region. *Entrepreneurship and Stability Issues*. 2019. Vol. 7. № 2. P. 1074-1088. DOI: 10.9770/JESI.2019.7.2(20)

SHICHIYAKH, R.A., SMOLENTSEV, V.M., SHADRINA, ZH.A., KOCHYAN, G.A., TYUPAKOV, K.E. Methodical basis for the increase in the efficiency of management by objectives of local economic systems (on the example of fruit and berry sub-complex of Krasnodar region) // *International Journal of Applied Business and Economic Research*. 2017. Vol. 15. № 23. P. 305-314.