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USE OF SELECTED INSTRUMENTS OF MANAGEMENT FOR THE IMPROVEMENT OF ECONOMIC SECURITY IN NATIONAL ENERGY SECTOR -RESEARCH REPORT

Summary

The paper discusses the issues of functioning of management and supervisory boards and the use of audit tools in companies from Polish energy sector. The text provides a summary of survey on functioning of supervisory boards and how they apply audit results in their supervisory and counselling activities.

Key words: *management, audit, energy sector, security, corporate governance*

Introduction

When analyzing media reports of the last couple of years one can make a statement that Polish public opinion has been regularly informed on irregularities in functioning of state business entities. Stories of amateur-like management as well as examples of inefficiency and maladministration have been exposed and shamed especially in independent mass media. Undoubtedly, wrong decisions taken on executive level, implementation of inappropriate solutions and taking for granted unreliable data and information as well as ill correlation with the market of services or recipients was caused by inept application of available control instruments. The present study is devoted to the issue of functioning of supervisory boards in Polish companies from energy sector with special emphasis on the application of audit as a tool for conducting day-to-day activities of these advisory bodies. The paper

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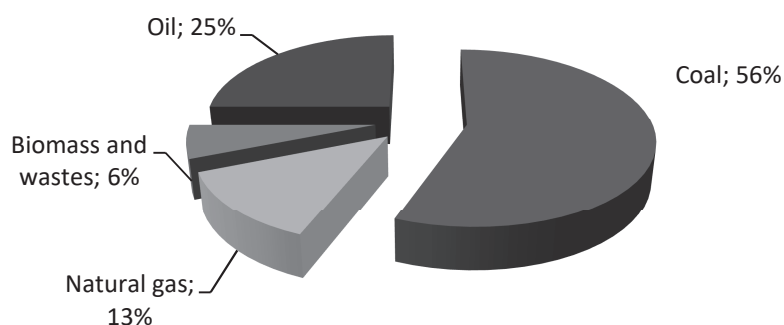
presents results of a survey conducted among executives and supervisory boards members of companies whose main objective is to assure stable and high-quality energy supplies. The authors hope that the text will be of special interest for experts who are scientifically and professionally concerned with security issues (especially energy security); specialists in public sector management, students of managerial sciences, internal security and state security as well as for everybody who holds these issues close to their heart.

1. The energy sector in Poland - outline of subject matter

Energetic security is an immanent element of strategic planning in each democratic and dynamically developing country. To achieve sustainable development, for each state it is necessary to put the issue of producing and distributing energy as its top priority. Energetic sector is a *sine qua non* condition for efficient functioning of a national economic system. Nowadays, development of a country is closely related to the access to energy, and long-term forecasts (up to 2040) for the global economy predict its annual average growth of 2,8%. Considering the increase in efficiency of energy production, it is foreseen that each year the growth in energy sector shall accelerate by 1,1%.

In Poland the production of primary energy relies predominantly on fossil fuels. Among fossil fuels the most important is coal (bituminous and lignite), which satisfies about 56% of Poland's demand for electrical energy. Government analysts predict that consumption of primary energy in our country in the second half of 21st century will be rising by 1.5% per year.

Chart no 1. Structure of demand for primary energy in Poland (by sources – in %).



Source: authors' own work based on data from *Mix energetyczny 2050. Analiza scenariuszy dla Polski*, a report published in Warsaw in 2011 by the Ministry of Economy, p. 7.

Entities in the National Power System (NPS) are responsible for continuity and stability of the energy supplies but they are all separate organisational units, they are supervised by separate institutions and are governed by separate legal regulations. Within NPS there are three underlying subsystems:

- producers of energy;
- entities that service and maintain the transmission grid;
- distributors of energy.

Among manufacturers there are: baseload power plants, industrial power plants, combined heat and power plants (CHPs), hydroelectric stations, solar and wind power stations, biomass and biogas plants. The energy produced by these institutions and entities is distributed through the transmission grid (with varying technical parameters of 750 kV, 400 kV or 220 kV) by the monopolist on the Polish market PSE S. A.¹ The end user, the consumer of energy is supplied through distribution network with low transport parameters of 110 kV and medium and low voltage. The advancements in technology of all industry sectors, development of information technologies as well as growing consumerism generate bigger and bigger demand for energy supplies. The forecasts show that in 2030 Poland will need 217,4 TWh of energy.

¹ Polskie Sieci Elektroenergetyczne S. A.

Table no 1. Forecast of demand for energy in Poland (in TWh).

| Area of demand | 2015 | 2020 | 2025 | 2030 |
|-------------------------------------|-------|-------|-------|-------|
| Final energy | 115,2 | 130,8 | 152,7 | 171,6 |
| Energy sector | 11,6 | 12,1 | 12,7 | 13,3 |
| Waste in transport and distribution | 13,2 | 13,2 | 15,0 | 16,8 |
| Net demand | 140 | 156,1 | 180,4 | 201,7 |
| Own needs | 12,8 | 13,2 | 14,2 | 15,7 |
| Gross demand | 152,8 | 169,3 | 194,6 | 217,4 |

Source: authors' own work based on data from *Prognozy zapotrzebowania na paliwa i energię do 2030* – a report published in 2009 by the Ministry of Economy.

The main resources for the Polish energy sector are fossil fuels which are ninth biggest natural resources on our planet volume-wise. Naturally, in structural approach the most important manufacturing component of electric power (more than 90%) are bituminous and lignite coal.

Table no 2. Electrical energy production in Poland by energy source (2010-2013).

| Source of energy | 2010 | | 2012 | | 2013 | |
|------------------------------|---------|------|---------|------|---------|------|
| | GWh | % | GWh | % | GWh | % |
| Bituminous coal | 87 799 | 55,7 | 80 524 | 49,7 | 81 568 | 49,6 |
| Lignite coal | 48 651 | 30,9 | 54 054 | 33,3 | 56 150 | 34,1 |
| Gaseous fuels* | 4797 | 3,0 | 6259 | 3,9 | 5247 | 3,2 |
| Other fuels** | 4954 | 3,1 | 3991 | 2,4 | 3968 | 2,4 |
| From pumped water | 568 | 0,4 | 428 | 0,3 | 558 | 0,3 |
| Renewable sources of energy: | 10 889 | 6,9 | 16 879 | 10,4 | 17 066 | 10,4 |
| biomass/biogas | 6305 | 4,0 | 10 094 | 6,2 | 8622 | 5,2 |
| water | 2920 | 1,8 | 2037 | 1,3 | 2439 | 1,5 |
| wind | 1664 | 1,1 | 4747 | 2,9 | 6004 | 3,7 |
| Photovoltaic cells | . | . | 1 | 0,0 | 1 | 0,0 |
| Total | 157 658 | 100 | 162 139 | 100 | 164 557 | 100 |

* Natural gas – methane and nitrogen rich, gas from methane recovery from mines, natural gas accompanying the crude oil.

** Oil as an energy source, diesel fuel, non-organic industrial and communal waste.

Source: authors' own work based on data from the Energy Market Agency PLC.

The structure of the energy sector in Poland has been subject to systematic changes since 1997 when all sectors of Polish economy initiated an important transformations phase. The original consolidation

of energy companies belonging to the State Treasury has been replaced by a more vertical structure. At the same time the privatisation processes are under way. Due to the consolidation and transformation processes of energy capital groups, a considerable concentration of potential has been achieved. According to data from the Polish Energy Regulatory Office, three major energy manufacturers (PGE, Tauron and EDF) dispose of more than a half of current installed capacity and make more than two thirds of energy in Poland. The biggest players on the energy market in Poland are:

- PGE Capital Group operating more than 40 power plants and CHPs, 8 operators of distribution networks, 7 energy retailers and a number of lignite mines;
- Tauron Polska Energia Capital Group, the biggest distributor of energy whose distribution grids cover 17% of the territory of Poland;
- Enea Capital Group covering the western and northern-western territory of Poland. Enea operates the coal power plant in Koźienice;
- EDF Capital Group - a French-based global energy giant, in Poland this group holds 10 % of Polish energy market and 15 % of network district heating;
- PAK Capital Group (a group of power stations in Pątnów-Adamów-Konin), the second biggest entity manufacturing energy from lignite coal. PAK consists of four CHPs located in the vicinity of Konin;
- Energa Capital Group which operates 47 hydroelectric stations and a coal power plant in Ostrołęka. In addition to production, turnover and distribution of energy, Energa also conducts activities related to street lighting, design, material supplies, network implementation, specialised transport as well as hotel and IT services.

In a nutshell, the profile of energy sector in Poland presented above shows that this segment of national economy will require, in the near future, a considerable amount of investments. This is due to the fact of natural wastage of infrastructure of power plants and transmission grids. In Poland 40% of energy generators has already been in operation for more than 40 years and 15% is more than 50 years old, which means they should be turned off without delay. It should also be noted that the process of modernising of Polish energy sector is regulated by the EU requirements. Especially important are regulations regarding reducing the

emissions of particulates and oxides of nitrogen as well as carbon dioxide.

2. The role of corporate governance as a body initiating control activities

Corporate governance holds a real sovereignty and control over an institution. It imposes a set of limitations which, in substance, generate added value for its smooth functioning and sustainable growth. Corporate governance foresees frequent activities of audit nature and decision taking mechanisms in circumstances which are not provided in any form of agreement or contract.

When analyzing financial reports of state-owned companies cooperating with the energy sector (including mining companies) it can be presumed that corporate governance is definitely underused. This situation may be explained by archaic perception of this instrument as a form of sovereignty and rigid supervision over an institution by its owner and other stakeholders. In private sector slightly different approach may be observed. Private entities are obliged by law to apply and respect external audit instruments thus they seek new solutions for more efficient application of corporate governance. The essence of corporate governance is providing an institution (i.e. capital group, corporation, holding etc.) with efficiency of performance thanks to which the interests of investors and other stakeholders are protected on appropriately high level. Among operational targets of corporate governance the following must be emphasized: identification and elimination of activities undertaken by dominant shareholders (executives) which lead to abuses and weakening of the condition of the enterprise. In practice, corporate governance is based on formal and informal standards in force in business environments. The most important, of course, are solutions formalized and contained in legal acts in force in the European Union or in legislation of a given country. The most frequently applied solutions are worked out by regulatory bodies of central administration or professional circles, they may also be formulated as internal regulations of a capital group. The system of corporate governance is particularly useful in case of entities functioning as capital groups or holdings.

Leaders of a capital group should concentrate their activities on initiatives that recognize interests of creditors and partners with minority

stakes and at the same time respect all regulations in force and the code of conduct within corporate governance. All decisions both of operational and strategic nature should reflect deep concern for sustainable development of the capital group and the notion of internal corporate cooperation should be based on balancing of interests of shareholders and stakeholders. The most important aspect of efficient utilization of corporate governance seems to be conducted in accordance with the rule of division of ownership and management functions.

At this point it should be noted that in all institutionalised entities (i.e. partnerships, corporations, state administration and local government institutions etc.) different kinds of verification instruments are applied. As audit allows for a more rational exploitation of potential, the present paper also concentrates on selected kinds of internal and external audit. Audit is an instrument which actively, independently and objectively examines efficiency of internal control system and processes of risk management in entities of a capital group. Audit assures effective flow of operations, brings added value to the organisation as it points to weaknesses and suggests improvements. Audits also provides information on how to achieve higher quality of resources, manufactured goods or services.

3. Methodological assumptions of the study

The aim of the study whose outline results are presented therein was to design a corporate governance model consisting of audit instruments and verification of this model in the companies from the Polish energy sector. The intended outcome of the study was related to two aspects. Firstly, the authors wanted to arrive at evaluation of the currently used audit solutions of corporate governance in state-owned companies. Secondly, they wanted to formulate hints on how to modify this instrument so that it could be more efficiently applied in the above mentioned companies. The authors postulated that achievement of this objective would also produce advantage of practical nature: a set of optimum solutions for improvement of efficiency in management of entities in the sector which constitutes a pillar of Polish economy. The general objective of the study is complemented by a number of specific sub-goals including:

- identification of factors impacting efficiency of activities undertaken by members of supervisory boards in energy sector companies;

- definition of a desired professional profile of a member of supervisory board from the perspective of needs of an organisation from the energy sector;
- identification of audit matrix and audit fields as an integrated way to apply the existing potential in information and decision taking processes in different aspects of a company's activity;
- determination of the best possible form of audit to support corporate governance in energy companies;
- identification of factors impacting efficiency of corporate governance in energy sector.

An impulse for taking up this particular issue were cognitive and practical aspects as well as the authors' own experiences acquired on their respective professional paths. Hence, the main objective of the study was formulated in such a way that the obtained results could become a useful constituent of a tool for formulation of feasible and effective recommendations for supervisory boards within corporate governance.

4. Research problems and hypotheses

Conducting scientific research leads to solution of certain cognitive, theoretical or practical problems. J. Apanowicz states that *scientific problem formulated in a research work must in its substantive and logical content provide the possibility for determination of the subject matter of the research and formulation of a chain of theses (problem questions, specific questions) in the presumed scientific problem*².

The main scientific thesis of this paper, understood as 'a study to determine the extent and quality of a certain lack of existing knowledge as well as goal and boundaries of scientific research'³, is that within corporate governance in establishments of the energy sector in Poland there is considerable deficiency in application of audit as an instrument of control. The main thesis is complemented by the following specific questions:

²J. Apanowicz, *Metodologiczne uwarunkowania pracy naukowej*, Warszawa 2005, Diffin, p. 69.

³J. Pieter, *Ogólna metodologia pracy naukowej*, Warszawa-Wrocław 1967, PAN, p. 67.

Specific question 1:

- what factors influence the efficiency of supervisory boards' activities in the Polish energy companies?

Specific question 2:

- what professional competences should a member of a supervisory board possess?

Specific question 3:

- which forms of audit are currently the most common in the control and supervisory processes in the companies of Polish energy sector?

Specific question 4:

- which forms of audit are, in the opinion of boards' members, the most desirable in the process of corporate governance support of energy sector?

In reply to such formulated questions, the following hypotheses may be ventured:

General hypothesis:

[...] corporate governance is an indispensable instrument of management control in companies of Polish energy sector and its efficiency relies on proper cooperation between members of supervisory boards with management boards and on appropriate application of audit.

Specific hypothesis 1:

- the efficiency of supervisory boards in energy companies in Poland depends on close cooperation with top executives of these companies, the foundation of this cooperation is a free flow of reliable information about the condition of the company.

Specific hypothesis 2:

- knowledge and orientation in the sector as well as relevant experience in management are key professional competences which must characterize the members of supervisory boards in energy companies.

Specific hypothesis 3:

- in their supervisory activities supervisory boards most frequently use the instrument of financial audit.

Specific hypothesis 4:

- financial audit is not the only form of control within corporate governance in the Polish energy sector.

4.1. Research methods and techniques

While preparing and conducting this scientific research the following methods and techniques were applied:

- diagnostic survey: questionnaires, expert opinion surveys and document analysis. In the questionnaire section the questions were answered anonymously, the questionnaire included statistical part and the main part with closed questions⁴. The questionnaire was distributed to respondents in printed or electronic version and the respondents were not in direct contact with the pollster. The expert opinion survey was conducted as guided conversation based on a previously prepared scenario. The document analysis included quantitative analysis (with use of analysis sheet) and qualitative analysis (with use of computer software)⁵;
- analysis of literature on the topic (from Polish and foreign sources), including specialist periodical literature on ownership supervision, corporate governance and audit;

⁴ The questionnaire was divided into two parts. The first contained statistical section with 5 basic pieces of information on respondents (sex, age, education, years of professional experience, years as a member of a supervisory board), the second part contained 14 closed questions related to the topic of the study i.e. functioning of supervisory boards, efficiency of using audit in corporate governance, professional competences of board members etc. The respondents, who filled in their answers anonymously, in case of 12 questions (on functioning of supervisory boards) could choose more than one answer.

⁵ A document in the study could be any artefact (of material nature) which expresses a thought, vision, mission, achievement or proposal and serves to recreate actual performance or condition of a given organisational structure in legal form and even a customarily prepared document. Thus, it is an extremely important, vast and detailed source of material on a company, organisation, state or local institution. Examination of this material may help to establish actual picture of facts, occurrences and achievements. The method of document examination in its essence relies on collection, selection, description and scientific interpretation of facts that the author finds interesting. It is an analysis in which constituents of a given occurrence or process are decomposed and interpreted.

- case study method⁶ which included selected aspects of functioning of Tauron S. A. capital group;
- participant observation (active participation in supervisory board meetings of an entity from Tauron Plc. group);
- method of data examination (statistical correlations, documents, legal acts in force and internal regulations – statutes, instructions, ordinances etc.).

The methods and tools applied in the study did not require pre-testing as they have been successfully used for years in many social sciences (management, security sciences etc.). Respondents were presented with a brochure with basic information about the study, its general and specific assumptions and objectives, information on the pollsters, recipients of the study results and other factors correlated with the project.

With respect to the allowed volume of the paper the authors were only able to present results from the survey conducted within the diagnostic poll. Full report will be presented in the form of a monograph.

4.2. Scope of research and formal limitations

The research consisted of several stages. The first stage was the analysis of available literature sources from Poland and abroad on contemporarily applied management instruments with special emphasis on energy sector. The authors paid special attention to texts on corporate governance and ownership supervision. It should be noted that while the issues of management in state administration institutions or in enterprises functioning in other sectors of Polish economy are well represented in literature, the problem of management in energy companies is hardly ever written about.

The next step of analytic nature undertaken in the study was examination of legal acts regulating the functioning of energy sector. In order to accurately present the results of the study it is vital to understand legislation relevant to the subject matter of the study.

Within the third phase of research thorough analysis of the specificity of the environment of the Polish energy sector was conducted.

⁶Apanowicz J., *Zarys metodologii prac dyplomowych i magisterskich z organizacji i zarządzania*, Gdynia 1997, WSAiB, p. 42.

The analysis included examinations of national energy policy, its implementation and directions for future development of the sector.

The last phase of the diagnostic poll was: the questionnaire and expert opinion surveys⁷. The obtained results were confronted with theoretical assumptions and verification of hypotheses allowed for development of a set of recommendations for improvement of corporate governance activities in companies of the Polish energy sector.

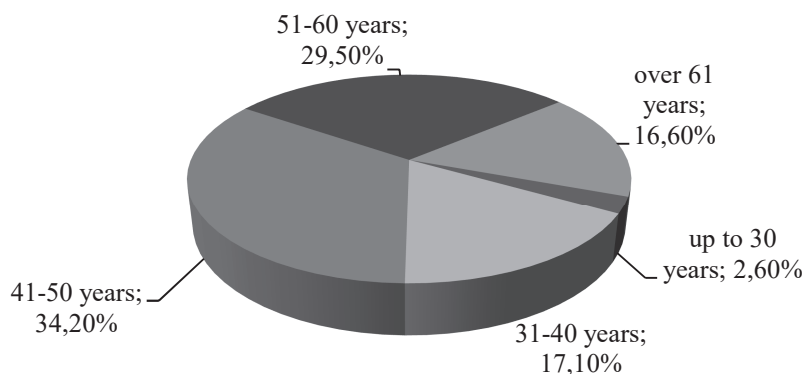
The scope of the subject matter included the activities of the supervisory boards in energy companies with special emphasis on efficiency of implementing corporate governance and application of audit as a instrument of control. The study embraced three national capital groups (Tauron Polska Energia Plc, ENEA Plc. and Polska Grupa Energetyczna – PGE Plc.) which, in total, are responsible for 96% of the Polish energy output .

4.3. Study group

The questionnaire, addressed to members of supervisory boards, was filled in by 61 persons (52 men i.e. 85,2% and 9 women i.e. 14,8%). The return of distributed questionnaires amounted to 78% which allowed for reliable analysis of the collected data. All returned questionnaires were filled in correctly. In the statistical section the respondents had to choose one of five age categories. It turned out that the biggest age group of respondents was 41-50 years (34,2%). The pie chart below presents the profile of respondents in accordance with age.

⁷ The diagnostic poll was conducted by B. Bąk between January 2014 and December 2015 (questionnaires and expert opinion surveys). The poll was conducted on the territory of Poland but predominantly in the provinces of Silesia, Little Poland, Lower Silesia, Great Poland, Lubusz and West Pomeranian where the biggest energy production plants are located.

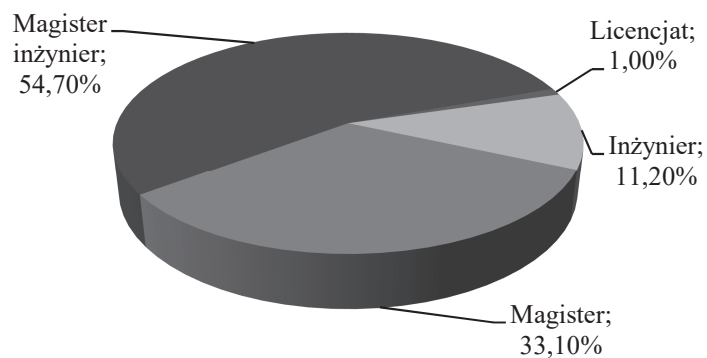
Chart no 2. Age of respondents (%).



Source: author's own work.

All respondents were holders of higher education diplomas and most of them were graduates of technical schools (first and second cycle university programmes: 65,9%).

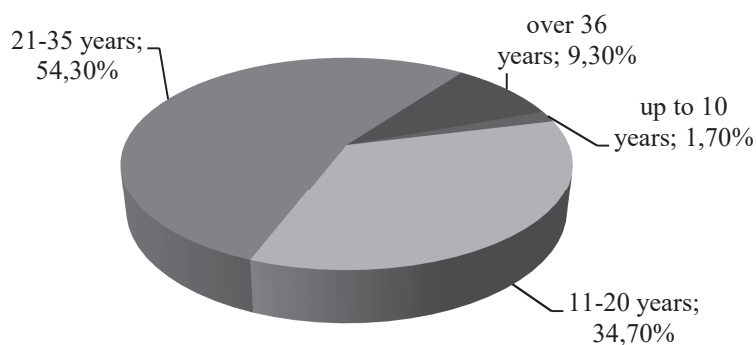
Chart no 3. Academic titles of respondents (%).



Source: author's own work.

As regards the question of seniority, it must be emphasized that vast majority of respondents had considerable length of professional experience. As many as 54,3% ticked the box 21-35 years.

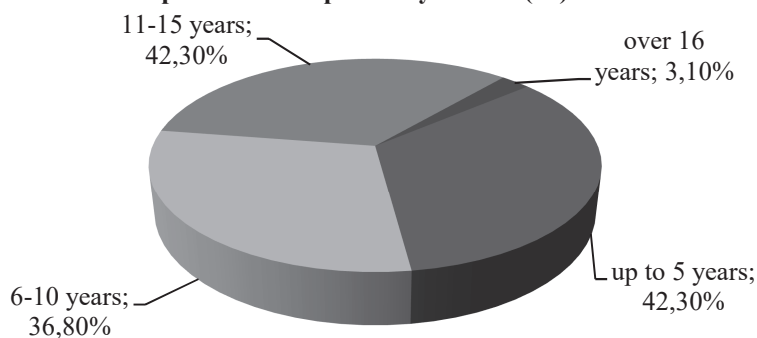
Chart no 4. Years of professional experience of respondents (%).



Source: author's own work.

The last question of the first section of the questionnaire concerned the experience (in years) of respondents in sitting on supervisory boards. The answers provided to this question proved that respondents were experienced supervisory board members. More than 42% had been sitting on the board for at least 11 years. Respondents' respective lengths of experience on supervisory boards are presented in detail in the chart below.

Chart no 5. Years of experience on supervisory boards (%).



Source: author's own work.

4.4. The analysis of answers to the questionnaire

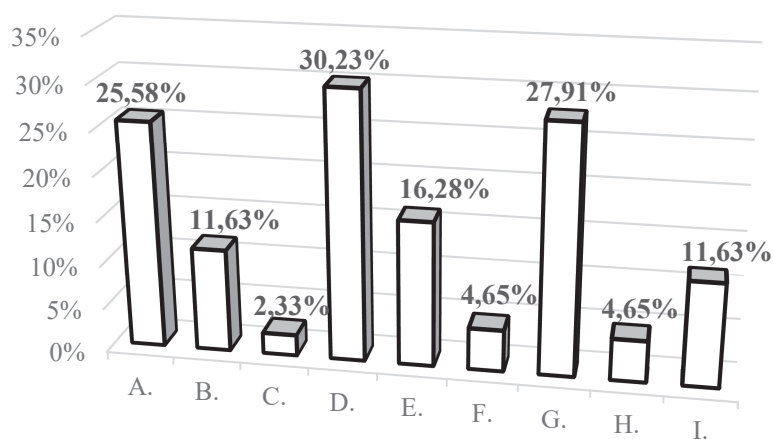
In the main section of the questionnaire for members (presidents) of supervisory boards of companies on Polish energy market there were 14

questions (113 possible answers). The questions referred to three main areas:

- functioning and evaluation of corporate governance;
- the most effective form of audit used by supervisory boards;
- professional competences of supervisory boards members.

In the first question the respondents were asked to point to factors which, in their opinion, hinder the efficiency of supervisory boards' activities. Here the respondents could tick more than one answer out of nine provided. The most frequent replies to this question were: lack of reliable information from the management, insufficient level of cooperation with the management, no time for discussion about the most vital issues for the company. Detailed distribution of provided answers is shown in Chart no 6.

Chart no 6. Answers provided by respondents to the question: *What factors, in your opinion, hinder the efficiency of your work on supervisory board?* (it was possible to tick more than one option).



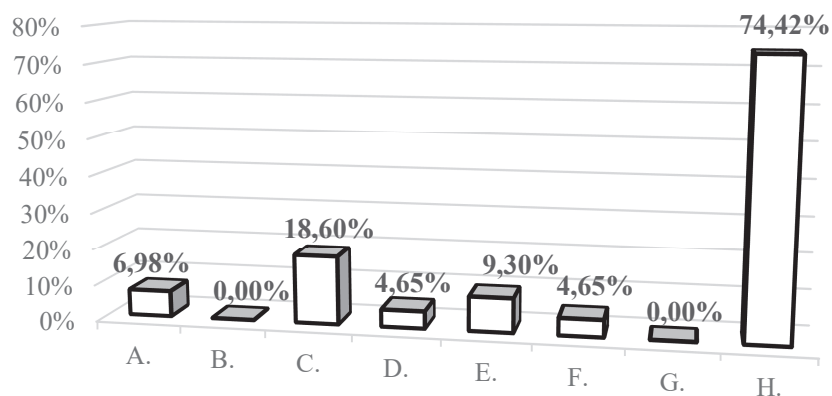
- A. No time for discussion on issues important for the company.
- B. Bureaucratic duties.
- C. Regulatory restrictions.
- D. No reliable information from the management.
- E. Inefficient board meetings.
- F. Dominant position of the chairperson.
- G. Lack of cooperation with the management.
- H. Dominant position of the President of the Board.
- I. Others.

Source: author's own work.

The above data proved that the most important aspect of functioning of supervisory boards in energy sector according to their members is smooth, unhindered and based on good will flow of information between management and members of supervisory board who control the day to day activities of the legal entity (enterprises, partnership, corporation or capital group). Additionally, answers to the first question show that presidents of the board and chairpersons of the supervisory boards are not necessarily eager to cooperate and maintain dialogue on the issues important for effective management of the organisation. Thus, consideration should be given to the current mode of conducting board meetings in the energy sector as a considerable part of respondents pointed to low efficiency of cyclical meetings of management with members of supervisory boards.

In the second question the respondents were asked to tick committees (working teams) that exist in the supervisory board they represent. There were nine options the respondents could choose from (more than one option could be selected).

Chart no 7. Answers provided to the question: *What committees exist in the supervisory board you represent?* (more than one option could be selected).



- A. Audit committee.
- B. Remuneration committee.
- C. Strategy committee.
- D. Risk committee.
- E. Appointment committee.
- F. Restructuring committee.
- G. Others. Please specify.
- H. There are no committees.

Source: author's own work.

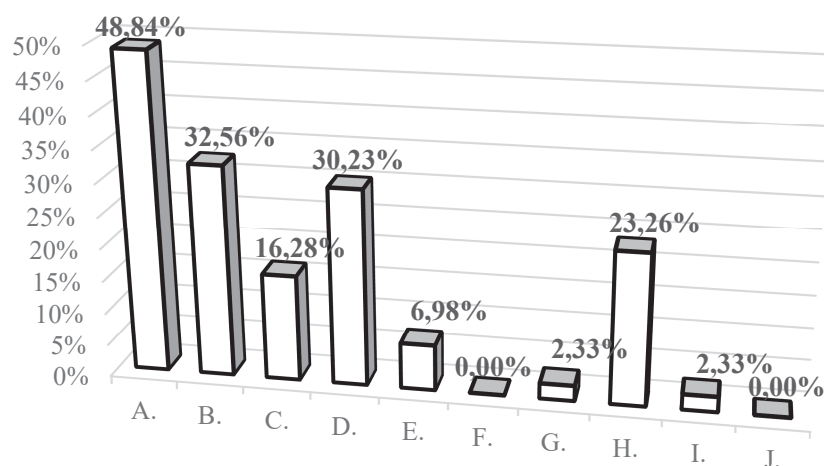
In the light of the above data it can be assumed that in almost $\frac{3}{4}$ supervisory boards surveyed there are no specialised working teams (committees) and, as a consequence, 75% of supervisory boards members do not participate in any constructive activities which would define the current doctrine of functioning of the organisation and would determine the directions of future development.

The second most frequently selected answer was the strategy committee. 18,60% of respondents confirmed the existence of such a committee in their supervisory board. However, such low rate of strategy committees in the companies of Polish energy sector contravenes the main assumption behind the existence of supervisory boards as bodies providing consultancy and support in management and strategic planning processes.

The third most popular answer was appointment committee, this option was selected by 9,30% of respondents. The tasks of appointment committee include evaluation and verification of candidates for key positions in the organisation. It comes as a surprise then, that such a low proportion of energy companies engage members of supervisory boards in such an important aspect of company management. One can even risk a statement that the role of supervisory boards in day to day running of many organisations in energy sector is deliberately marginalised. This statement is even further reinforced by the fact that none of the respondents seemed to have participated in the works of remuneration committee whose job is to verify the remuneration for members of the board of directors and, if necessary, amend their work contracts. This is yet another argument that many supervisory boards are in reality excluded from the process of corporate administration.

The third question referred to major challenges for supervisory board members in the upcoming year. The replies, although very descriptive and subjective, all shared a concern for financial bottom line, business strategy and improvement of performance.

Chart no 8. Replies provided to Question 3: What are the major challenges for you as a member of supervisory board in the upcoming year? (more than one option could be selected).



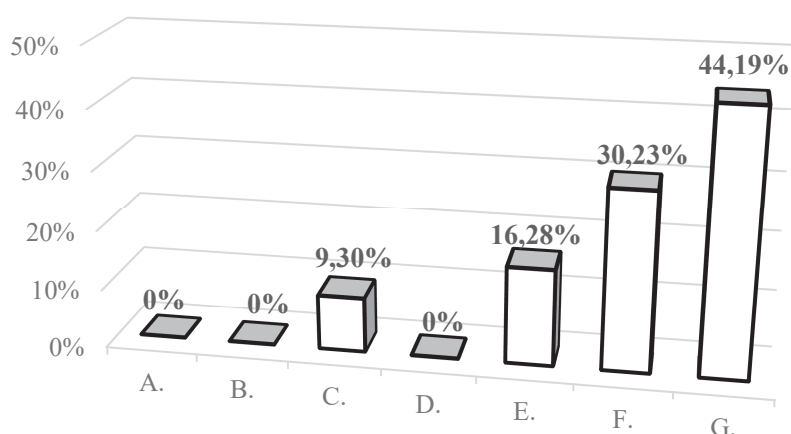
- A. Business strategy .
- B. Improvement of business results.
- C. Risk management.
- D. Economic environment.
- E. Regulatory requirements.
- F. Planning of succession.
- G. Remuneration of key people in the organisation .
- H. Relationship with the board of directors.
- I. Time limitations.
- J. Others.

Source: author's own work.

The third major area of challenge indicated by the respondents was the issue of economic environment and its impact on the condition of the company functioning in the free market reality. Thus, the respondents said they would concentrate their efforts in the year to come on solutions aimed at cost cutting, creating conventional and unconventional distribution networks, improving the quality of service, promoting their goods and services.

Question number 4 was connected with remuneration (scope of annual income), the respondents receive as members of supervisory board in a company from energy sector. The most frequently pointed to scope was below 30,000 PLN (44,19%). In the second place (30,23%) was the scope between 30,000 PLN and 40,000 PLN.

Chart no 9. Replies provided to Question 4: What is the annual income of a member of supervisory board in your company?



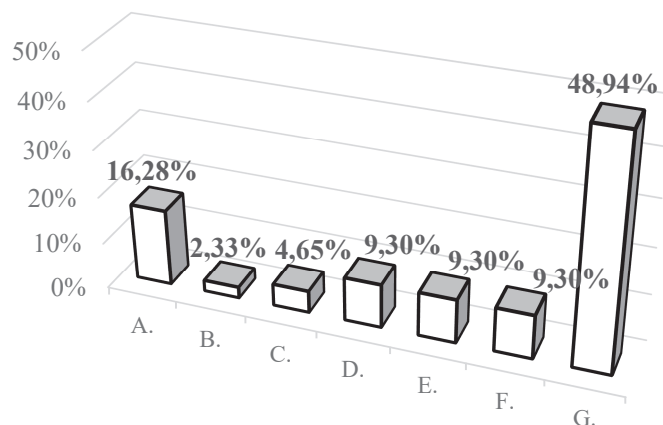
- A. More than 150,000 PLN.
- B. 120,000 PLN – 150,000 PLN.
- C. 100,000 PLN – 120,000 PLN.
- D. 70,000 PLN – 100,000 PLN.
- E. 50,000 PLN – 70,000 PLN.
- F. 30,000 PLN – 40,000 PLN.
- G. Less than 30,000 PLN.

Source: author's own work.

As indicated above, the level of remuneration of supervisory board members in energy companies is comparable to remuneration offered by state-owned companies from other sectors of the economy. Therefore one can formulate a thesis that belonging to the circle of experts sitting on supervisory boards is treated as an honour and symbol of certain prestige, a chance to mingle with the best executives in the sector and, last but not least, as additional source of income.

Question number 5 also revolved around the issue of remuneration. This time, however, the respondents were asked what is the proportion of income of supervisory board member with respect to income offered to members of boards of directors in the company.

Chart no 10. Replies provided to Question 5: Please indicate the proportion of your income as a supervisory board member with respect to income offered to members of boards of directors in your company.



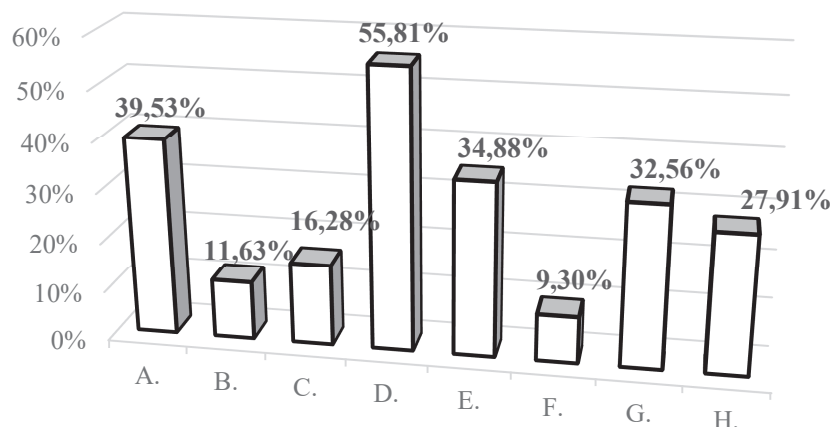
- A. more than 20 %.
- B. 18 % – 20 %.
- C. 16 % – 18 %.
- D. 14 % – 16 %.
- E. 12 % – 14 %.
- F. 10 % – 12 %.
- G. Less than 10 %.

Source: author's own work.

Answers to question 5 show that remuneration of more than a half of respondents amounted to less than 10% of remuneration of the president or other executives from management board. 16% of respondents admitted remuneration of more than 20% of remuneration offered to members of executive boards in their capital group. Taking into account the observations presented above, one may reflect that considerable discrepancies in remuneration of supervisory board members negatively impact the atmosphere between them and members of the board of directors.

In Question 6 the respondents were asked to evaluate communication along the line management – supervisory board.

Chart no 11. Replies provided to Question 6: *Please provide evaluate the communication along the line management – supervisory board. More than one option could be selected.*



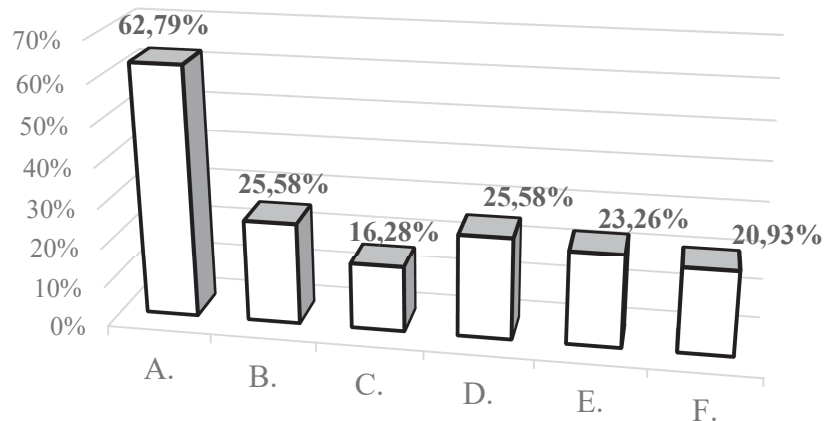
- A. Smooth and clear communication.
- B. Insufficient transparent communication.
- C. Supervisory Board passes to Management Board shareholders' criteria.
- D. Supervisory Board clearly defines their information needs.
- E. Management passes all reliable information to Supervisory Board.
- F. Periodical clogs in information flow occur.
- G. Supervisory Boards provides Management with feedback on their (management's) proposals.
- H. Cooperation between Supervisory Board and Management generates added value.

Source: author's own work.

After analysis of responses provided to Question 6 one gets a picture that satisfies both groups: members of management and members of supervisory boards. More than a half of respondents (55,81%) remarked that supervisory boards members clearly define their information needs and nearly 40% admitted that communication with management is satisfactory and transparent. Undoubtedly, such relationship may be achieved thanks to high level of professionalism on both sides.

Question 7 referred to major expectations with respect to supervisory boards in energy sector in Poland. The most frequent response was connected with competences and expertise of their members. As many as 62% of respondents regarded this factor as the most important requirement.

Chart no 12. Replies provided to the question 7: *Please specify major requirements with respect to members of supervisory boards.* More than one option could be selected.



- A. Competences and expertise.
- B. Knowledge of regulatory environment of the group.
- C. Appointing Management Board as a Team in accordance to the needs of the group.
- D. Motivating the management team.
- E. Non-exceeding the powers.
- F. Decision taking powers.

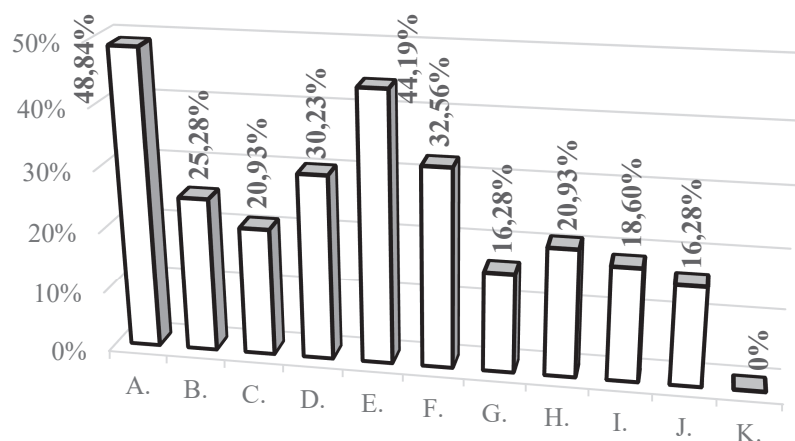
Source: author's own work.

The next two most popular options i.e. knowledge of regulatory environment and motivating the management team were chosen by only 25,58% each. At this point it must be emphasized that the issue of the knowledge of formal, legal, organisational and economic reality of the energy sector is currently an inherent criterion for selection of candidates to supervisory boards. On the contemporary global competitive market of electric energy providers there is no room for wrong short-sighted decisions as it brings high risk of regress for the company. Experts with years of professional experience in the relevant sector guarantee protection against business risks and threats and, should they materialize, come up with appropriate reaction. Only one in four respondents thought that the role of members of supervisory boards was stimulating or motivating the management. The mere fact of being on executive position in a well established organisation (often a market leader) is in itself a key driver for increased efforts. Only 20,93% of respondents ticked the option which referred to decision taking powers of the

supervisory board. This undoubtedly stems from the well grounded awareness about counselling (not managing) role of a supervisory board.

In Question 8 respondents were asked to choose competences and personality traits which make a desired profile of a member of supervisory board. There were 11 variants they could choose from. It turned out that professional experience in management is the most highly valued merit in members of supervisory boards in Polish energy sector (it was chosen by 48,84% of respondents). The chart below presents answers to Question 8 in detail.

Chart no 13. Replies provided to Question 8: *Specify the desired profile of a member of supervisory board. More than one option could be selected.*



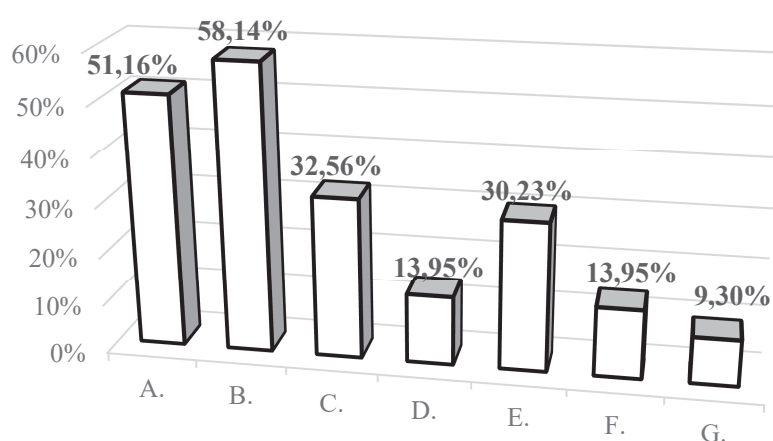
- A. Professional experience in management in relevant sector.
- B. Knowledge of various business models and spreadsheet structures.
- C. Ability to express autonomous opinions.
- D. Resistance to pressure from other board members in the process of taking decisions vital for the organisation.
- E. Good orientation in the energy sector.
- F. Ability of proper assessment of the information package received from the management – is it sufficient in order to take a given decision.
- G. Qualifications and experience allowing for monitoring of management process.
- H. Awareness of the fact that the board works for the highest benefit of the group.
- I. Eagerness to engage in the workings of the board.
- J. Disposing of sufficient amount of time to fulfil obligations of a supervisory board member.
- K. Professional fulfilment and drive for professional development.

Source: author's own work.

The second most often chosen answer was the orientation in the energy sector (44,19%). This in combination with the leading answer is not a surprise because market (sector, industry) and its reality sets the course for functioning of the entities within. Thus, the knowledge of the market and its processes is the most valuable ingredient of qualifications for candidates applying for a place on a supervisory board. The next most popular answer is also interrelated with the previous two – the ability of proper and prompt assessment of information before taking an important decision and analysis of all incoming signals from the corporate environment. It was an important constituent of a good supervisory board member for 32,56% of respondents. Also resistance to pressure is an indispensable skill of a manager acting as an advisor on supervisory board. This point of view was represented by 30,23% of respondents.

Question 9 concerned the most important determinants conditioning the efficiency of supervisory boards' activities. Respondents could tick more than one out of 7 options. The most votes went to an option which in itself points to variety of competences of members of supervisory boards. This variety allows for a real possibility of exercising supervision over an organisation and monitoring of its results. Responses to this question exposed an important skill of members of supervisory boards namely the skill of asking the right questions.

Chart no 14. Replies provided to Question 9: *Specify the most important determinants conditioning the efficiency of supervisory boards' activities. More than one option could be selected.*



- A. Knowledge of business model of the organisation and understanding of its processes.

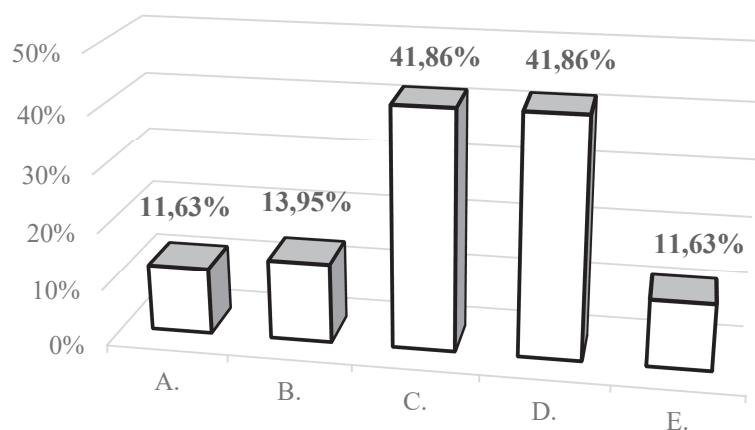
- B. Presence of adequate and diversified competences in members of the board which allow for exercising supervision and monitoring its results (very important skill: ability to ask the right questions).
- C. Absence of conflict of interests – what determines the level of objectivity of the members of the board.
- D. Attentiveness to reliable flow of information between management and supervisory board which is a prerequisite for execution of the duties of the board.
- E. Ability to set challenges/goals for the management.
- F. Non-exceeding their competences by the members of the supervisory board.
- G. Remuneration adequate to the extent of efforts/contribution.

Source: author's own work.

More than a half of respondents (51,16%) held the view that the knowledge of the company's business model and processes occurring within is the vital element for efficiency of a supervisory board. It seems obvious as nowadays it is difficult to imagine functioning of a commercial institution manufacturing and selling its products without understanding the market processes. One in three respondents (32,56%) pointed to the necessity of guarantee that there is no (widely understood) conflict of interests in case of members of supervisory boards so that they could take unbiased decisions without any external burdens. Also more than $\frac{1}{3}$ of respondents (30,23%) claimed that the ability to set organisational and business challenges for the management, is very desirable and should characterize the supervisory board members in Polish energy sector companies.

In Question 10 supervisory board members were asked about the usage of audit in their work. The two top options (41,86% each) suggested that audit is a tool which helps to improve operations, creates added value and allows for more efficient management of the organisation.

Chart no 15. Replies provided to the Question 10: *Why does corporate governance use audit?* More than one option could be selected.



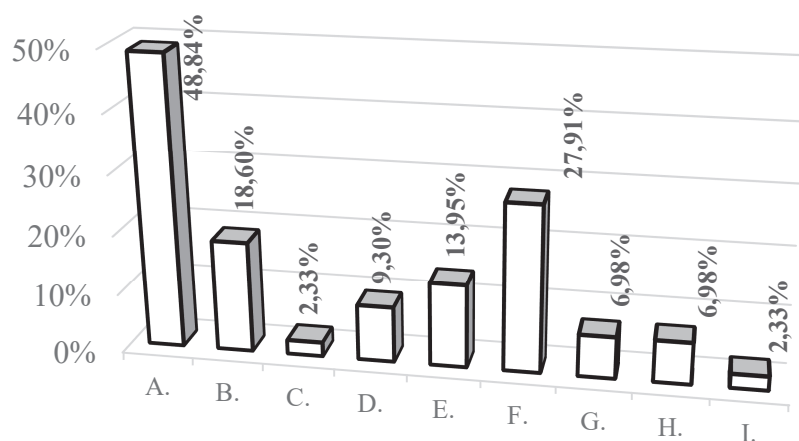
- A. Audit is required by law.
- B. It is a tool that monitors quality of services.
- C. It is a tool that improves operations and creates added value.
- D. It is an effective tool for better management of a company.
- E. Corporate governance does not use audit.

Source: author's own work.

As it could be seen, audit in its various forms is an immanent instrument of control which is successfully used by Polish supervisory boards in corporate management. One in ten of respondents (11,63%) answered that application of audit is prescribed by law. Exactly the same proportion (11,63%) admitted that in the company he/she represents the audit was not used at all.

The essence of Question 11 was to point to the kind of audit which had been, so far, most frequently used in the management process by the company the respondents represented. The first position here was occupied by financial audit, more than half of respondents (48,84%) selected this particular option.

Chart no 16. Replies provided to the Question 11: *What kind of audit is most frequently used in your organisation?* More than one option could be selected.



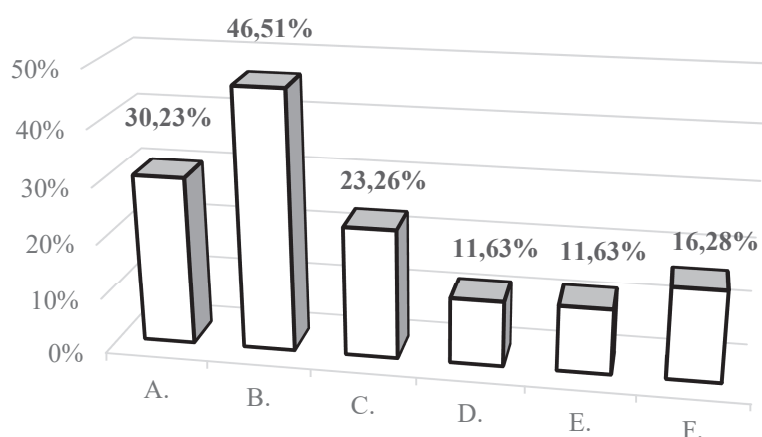
- A. Financial audit.
- B. Legal audit.
- C. Loyalty audit.
- D. Strategic audit.
- E. IT audit.
- F. Efficiency audit.
- G. Communication audit.
- H. HR audit.
- I. Logistic audit.

Source: author's own work.

Regardless of the fact that answers provided to Question 11 fully support hypothesis 3 from an earlier section of the paper, financial audit which is an examination based on domestic and international financial revision standards, is nowadays vital in business environment which seems to place more and more emphasis on corporate responsibility and governance. A quarter of respondents (27,91%) pointed out that their organisation used efficiency audit i.e. examination of efficiency of a company's performance from the point of view of the most important criteria. Hence, also hypothesis 4 is confirmed by responses to Question 11. The essence of this form of control is supposition that each organisation is supposed to operate bearing in mind set goals, cost-effectiveness and the drive to obtain maximum results from efforts as well as investments. The issue of compliance with law of the organisational solutions in a company i.e. legal audit, was in the third place with 18,60% of provided answers.

Question 12 surveyed the way in which supervisory boards use the tool of audit. The answers showed that members of supervisory boards come in contact with audit documents of audits commissioned by the management boards (46,51%). Own initiative in commissioning audits was shown by a third of respondents (30,23%).

Chart no 17. Replies provided to Question 12: Please specify how does your supervisory board use the tool of audit? More than one option could be selected.



- A. Supervisory board commissions audit procedures.
- B. Supervisory board studies results of audit commissioned by the management board.
- C. Supervisory board uses the information provided by internal audit.
- D. Supervisory board does not use audit.
- E. Supervisory board monitors how audit is used by the management.
- F. Audit is used only to a limited extent.

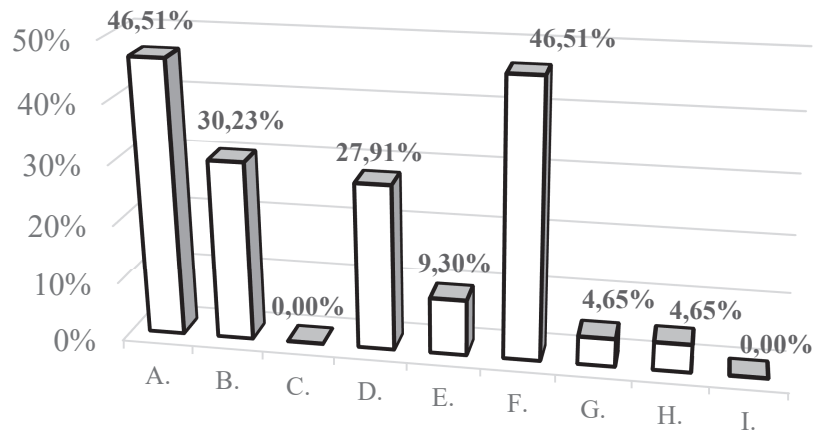
Source: author's own work.

One in five respondents (23,26%) used information about the condition of the company provided by internal audit departments. At this point it must be emphasized that internal control is of vital importance for realisation of goals of the organisation. It helps to easily adapt to constantly changing economic environment, counteracts wastage of resources and reduces costs of operations. Modern internal control not only protects assets of the organisation but also contributes to their multiplication and improves bottom line.

Question 13 referred to the kind of audit which best supports corporate governance. Respondents could choose more than one out of

nine options. This question reflected assumptions of previously mentioned hypotheses 3 and 4 and was closely related to Question 11.

Chart no 18. Replies provided to Question 13: Which forms of audit, in your opinion, best support corporate governance? More than one option could be selected.



- A. Financial audit.
- B. Legal audit.
- C. Loyalty audit.
- D. Strategic audit.
- E. IT audit.
- F. Efficiency audit.
- G. Communication audit.
- H. HR audit.
- I. Logistic audit.

Source: author's own work.

The above chart shows that most respondents chose financial audit and efficiency audit (46,51% each) as the most valuable for corporate governance. Hence, the methodological assumptions set forth by the authors concerning maximising financial results and development of companies are once again confirmed.

It should not be overlooked that introduction of internal audit to units of public finance sector resulted from adjusting Polish legal system to requirements of the European Union. Early initiatives undertaken with respect to internal audit were focused on verification of activities within financial economy. Other important areas of a company's activity which had considerable influence on a company's performance tended to be

ignored. Amendment to the Polish act on public finance⁸ brought about transformation of previously applied controlling solutions into new auditing approach. The new audit concept did not concentrate any more on verification of procedure compliance and management methods but on cause-result analysis which is a key factor in evaluation of results obtained by the company. In this context compliance audit was replaced by efficiency audit.

A third of respondents (30,23%) thought that legal audit should be an important element of control activities undertaken in entities of Polish energy sector. It should be observed that legal audit embraces both legal states and relations occurring in the area of activity of a given company, also in its corporate status. Legal analysis of activities undertaken by authorized decision makers, including compliance with the European law, is a *sine qua non* condition for state institutions but it is also a symbol of modern times.

Strategic audit occupies the third position in answers to Question 13 (27,91%). The respondents saw this tool as a very important form of supporting corporate governance. It is yet another signal of changes in the existing doctrine of controlling and inspection activities in state companies. In this context the following questions must be asked:

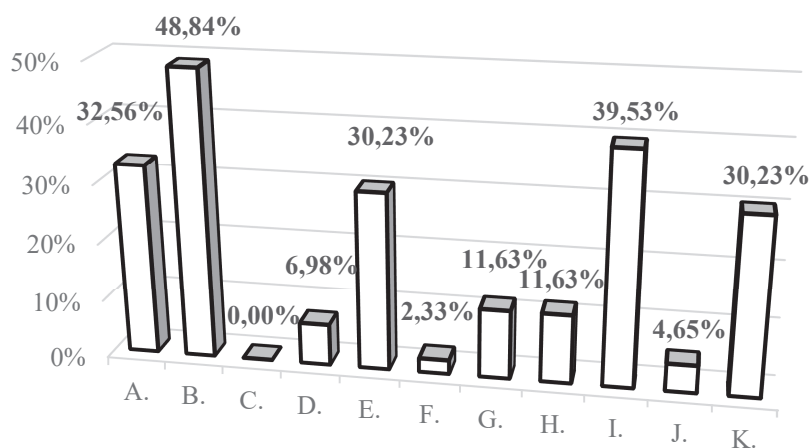
- at which point the company should pause to obtain a reliable evaluation of its condition?;
- what is the best method of reliable verification of the position of the company on the services market?
- what activities ought to be undertaken to improve the position of the company in its business environment or to bring the company closer to the environment it aspires to?

Answers to these questions may be found in strategic diagnosis which refers to elementary issues of soundness of competitive advantage evaluation and to the executive level whose decisions directly translate into unique development path of the company.

The last question of the survey concerned the determinants conditioning efficiency of corporate governance. The respondents could choose a number of options out of 11 suggestions.

⁸Act of 27 August 2009 on public finance (Journal of Laws 2009, No 157, item 1240).

Chart no 19. Replies provided to the question: *Please specify the determinants of efficiency of corporate governance. More than one option could be selected.*



- A. Composition of the supervisory body and number of its members.
- B. Functions of the supervisory body.
- C. Length of tenure.
- D. Frequency of meetings.
- E. System of information flow.
- F. Committees and teams.
- G. Cooperation with auditors.
- H. Procedure of appointing new members.
- I. Selection criteria (knowledge, experience, independence).
- J. Role of chairperson of the supervisory body.
- K. Work conditions (remuneration, efficiency appraisals).

Source: authors' own work.

In light of the above information it should be highlighted that for respondents the functions of supervisory body were the most vital for efficiency of corporate governance (48,84%), next important determinant, as viewed by the respondents, were criteria for selection of new members of supervisory organs (39,53%). Clear determination of responsibilities of a supervisory board is a pre-condition for optimum cooperation with the company's management, stakeholders and shareholders. Wide range of powers assures effective functioning of the board for the benefit of bottom line and sustainable development of the company.

Knowledge, relevant experience and independence are the main criteria which should characterize candidates to supervisory boards in Polish energy companies. The respondents, members of supervisory

boards themselves, who know the sector like the back of their hand, expressed the view that the most important factors for candidates to supervisory boards were: professional experience acquired in relevant sector, understanding of mechanisms and processes that power the sector as well as autonomy and ability to take prompt and independent decisions.

32,56% of respondents replied that the composition of supervisory board, the information flow from decision makers and supervisory body (30,23%) and working conditions of supervisory board members (30,23%) are the main factors which quantify the efficiency of corporate governance.

Information is the basis underlying functioning of each business entity on contemporary, global and very dynamic services market. Multiplicity and wide availability of sources of obtaining data is increasing alongside the technology advancements and deficit of information may lead to the fall of a market player. The volatile environment of a given organisation forces equally dynamic adaptation of this organisation to constantly changing conditions and fast decision taking process facilitates this adaptation and boosts competitive advantage.

Work conditions is a set of factors which characterizes a given work environment and which result from the work process. Work conditions are closely related to the execution of work and impact its quality and efficiency. Thus, it is not surprising that respondents pointed to this factor as one that considerably impacts the quality of functioning of supervisory boards in Polish energy sector.

Conclusions

The evaluation of responses to the questionnaire includes the sum of all undertaken activities (analytical, empirical, comparative etc.). Thanks to multi-faceted approach to the subject matter it was possible to collect information directly relevant to the research problem and to verify the assumed hypotheses. The authors wish to stress that due to strictly defined publishing requirements for papers appearing in Scientific Journal of Bielsko-Biała School of Finance and Law, the paper could present only a part of the obtained results of research. Nevertheless, it is just enough to formulate meaningful conclusions.

The research concerned the behaviour of decision makers (management board members) and supervisory board members who co-create supervision mechanisms. Moreover, special emphasis was put on audit and its application and on new solutions of corrective and counteracting character. In the context of leading research problem of the paper the results of the questionnaire prove the thesis that within corporate governance in companies of Polish energy sector, audit is an underused controlling tool. Such situation may be caused by conservative and stereotypical behaviour of decision makers and lack of trust to the whole range of available forms of control e.g. efficiency or strategy audit. The obtained results, however, allow for a positive outlook for the future. There is a visible trend towards new efficiency solutions which not only help to verify current performance of a company but also contribute to long-term strategies of sustainable development and its direct environment.

The collected results of the survey related to all four detailed problems. The most important factors conditioning the efficiency of supervisory boards, as indicated by the respondents, were reliability of information flow between management and supervisory board and the quality of cooperation between these two organs. As regards the second detailed problem, the respondents pointed to two most valued characteristics of a member of supervisory board in the energy sector in Poland. The characteristics were closely correlated with the industry and included professional experience in management in energy sector and orientation in the sector.

In the context of the third detailed question as the most frequently used controlling tool half of the respondents indicated financial audit which seems to have become an indispensable tool in contemporary inspection initiatives of companies from the energy sector. Other most commonly selected forms of audit were efficiency and strategic audit.

With respect to the main hypothesis which was verified by the presented research it can be said that it was explicitly confirmed. The respondents in their answers seem to agree with the thesis that *.....corporate governance is a vital element of management control in the Polish energy sector and its efficiency depends on close cooperation between members of supervisory board and top executives as well as on creative application of audit.*

As far as detailed hypotheses are concerned, the obtained results allowed to confirm suppositions 1, 2 and 3, and in response to hypothesis

4 about other effective form of control undertaken within corporate governance in energy companies, efficiency and strategy audit were the most commonly selected options. A valuable discovery of the research in authors opinion is identification of new trends and tendencies with respect to traditionally used control solutions.

It should be hoped that the obtained results will serve as a basis for further consideration in this matter and will translate into a new perception of the role of supervisory organs of companies operating in energy sector and will facilitate their work what, in consequence, may improve efficiency of functioning of such entities on local and international service market.

Legal acts

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- [3.] Pieter, J., *Ogólna metodologia pracy naukowej*, Warszawa-Wrocław 1967, PAN.