Formalised risk identification and evaluation models application in the conditions of agricultural enterprises

Aplikace formalizovaných modelů identifikace a hodnocení rizik v podmínkách zemědělských podniků

P. ŘÍMOVSKÁ

Czech University of Agriculture, Prague, Czech Republic

Abstract: Recently we can mention in the CR a step by step enterprise number increase in the area of production, transport services, services and financial organisations, which practically apply internal departments of controlling or audit into their managerial structures. That is why it is required to dedicate a wider publication space to the information on the role and principles of managerial instruments, which are provided by controlling and Internal Audit for business administration and financial management. The goal is to ensure a higher quality of preparation or response on the still emerging forms of our enterprises co-operation with foreign business subjects and to match step at the level of building and in particularly in effectiveness of business informational systems usage for managerial process (especially for planning and decision making procedures control) in all areas of business functions. Internal controlling instruments application and using results of risks evaluations by internal audit simultaneously contributes to the improvement of level and effectiveness of intra-enterprise monitoring as a modern conception of control usage in business management. Management level increase and increase of management competency are the conditions of ensuring our enterprises competitiveness.

Key words: business management instruments, planning and decision making process, control, risk evaluation, risk factors, critical point analysis, controlling, internal audit

Abstrakt: V posledním období lze v ČR zaznamenat postupné zvyšování počtu podniků ve sféře výroby, dopravní obsluhy, služeb i finančních organizací, v jejichž řídících strukturách se prakticky uplatňují interní útvary controllingu či auditu. Je proto zapotřebí věnovat širší publikační prostor informacím o úloze a principech řídících nástrojů, které poskytuje controlling a interní audit pro správu a finanční řízení podniků. Cílem je zkvalitnit přípravu resp. odezvu na stále se rozšiřující formy spolupráce našich podniků se zahraničními podnikatelskými subjekty a srovnat krok v úrovni budování a zejména v účinnosti využívání podnikových informačních systémů pro řídící proces (zejména kontrolu plánovacích a rozhodovacích procesů) ve všech oblastech fungování podniku. Aplikace nástrojů interního controllingu a využívání výsledků hodnocení rizik interním auditem zároveň výrazně přispívá ke zdokonalení úrovně a účinnosti vnitropodnikového dohledu jako moderní koncepce využívání kontroly v řízení podniků. Zvyšování úrovně a kompetentnosti managementu je podmínkou zabezpečování konkurenceschopnosti našich podniků.

Klíčová slova: nástroje řízení podniků, plánovací a rozhodovací proces, kontrola, hodnocení rizik, rizikové faktory, analýza kritických bodů, controlling, interní audit

INTRODUCTION

In the contribution, there is presented a partial knowledge on the basis of the collected and processed groundwork and present business researches. This research is provided within the elaboration of the project "Mechanisms of Emerging Corporate Crisis Symptoms Identification", which was granted by the CR Grant Agency to the team of collaborators at the Department of Management of the Czech University of Agriculture in Prague for the period of the years 2001–2003. One of the project goals is to examine practical application and perspectives for methodological controlling instruments emerging and consequently to examine perspectives of the emerging internal controlling in the corporate business practice in the CR.

Knowledge from the research in selected companies in the CR and their confrontation with the present information about practical controlling and internal audit application as a modern approaches to business management in the EU will be used when solving the CR University Development Fund grant "Teaching Controlling, Using Multimedia Teaching Text" . This grant is being elaborated at the same Department in the year 2001.

The contribution presented at the conference Agrarian Perspectives X – Sources of Sustainable Economic Growth in the Third Millennium: Globalisation Versus Regionalism (CUA Prague, September 18–19, 2001).

Controlling is characterised, in accordance with expert sources, as a logical and natural development level of modern corporate business management (there is used the term TO CONTROL, as a starting point to clear up the mentioned term, as a "very strict management" which aims to keeping the development of business processes in the predetermined extent).

Within this framework, there are used controlling instruments when making decisions on provisions, which must ensure the desired results when following business strategy, e.g. in the area of operational and investment cash flow level increase, risk impact minimising, growth of market performance as a consequence of favourable market production and reaching production parameters of products and services.

Equally, definition of the term: internal audit, as a particular type of business management support recorded number of evolution changes. In accordance with the focus of the presented paper, there is most suitable the definition, approved by the Counsel of the CR Internal Auditors Institute in the year 1999, as a result of international (all over the world) discussion: "Internal audit is independent, assuring and consulting activity, focused on value added and business operation improvement. It helps to reach business goals through establishment of systematic methodological approach for evaluation and improvement of risk management, managerial and control processes effectiveness".

The Table 1 simply illustrates the characteristic common features and differences of both support types as well as effectiveness increase of planning and decision making business management processes.

If internal audit content focus and development prefers and tends to orientation on risk analysis and increase of its management effectiveness, there is no doubt, that it is required to pay attention to methodological identification approaches simultaneously with risk importance evaluation. It is necessary to specify the probability of rise and relevance of risk factors affect, according to the business type, their goal orientation and number of other circumstances.

Methods of risk factors determination and evaluation are, primarily, if they are used within irregular or random business evaluation (and risk factors are often stated intuitively rather then systematically) presently significantly criticised from the point of expert publicity view in the sense of low objectivity and insufficiently conceptual approach.

That is why auditors' publics accents the so-called system methodological approaches formalised models when identifying and evaluating risks. Their practical application extension would lead to risk evaluation sub-

Table 1. Characteristics of common features and differences

	Controlling	Internal audit
The main goal	Economical performance growth – stability and financial health – long term profitability and liquidity	Harmony of groundwork and reality in particular business areas
Responsibility	– management of business returns orientated potential – collection, selection, evaluation and passion information on – Building and operation of planning and control mechanism for decision making processes optimalisation	– risk analysis, providing assurance – Correctness, expediency and economy of examined groundwork and features control – Recognising the rate of keeping prescripts, rules etc. and results documentation – preterite procedures examination (in sense of correctness, expediency and economy)
Inputs	All accountant and operation groundwork, at presence primarily profit and loose statement	All accountant and operation groundwork
Frequency of processing	Continuous management and co-ordination through persons, having interest in the process	Periodical, meanwhile frequently non-periodical (random) examination, through persons, having no interest in the process
Outputs	Difference analysis of planned indicators and realities and provisions suggestions	Auditor reports, based on risk analysis and provisions suggestions
Data accuracy	Is supposed	Is verified
Organisational focus	Internal	Internal
Place in organisational structure (recommended)	Accounting department, budgeting, calculations, price creation (line or command formation)	Internal audit department (just command formation)
Time orientation	Future	Future, prevention

jectivity decrease along with internal auditors work increase, e.g. thanks to higher level of loose size and probability connected with different business risks evaluation.

GOALS AND METHODOLOGY

The present knowledge from the business practise in the CR informs about the fact that managerial instruments, provided by controlling and internal audit, are mostly used in business, where foreign partners take part in management and operation.

That is why, in accordance with the present situation development (weak and slow rate of modern methods of intra-plant monitoring in our businesses introducing, agricultural businesses including), our paper does not aim at the present total and detailed methodological instruction for performing internal audit (further we will use the abbreviation IA).

If management makes a decision to establish IA departments on the principles of recognition, source analysis and causes of risk arising and consequently risks affects minimising, each company will have to elaborate its own implementation (on the basis of acquiring general knowledge), regarding the concrete, really existing risk factors.

The goal of this paper is then primarily to emphasise important relationships when analysing sources and risk causes, to accent the importance of switching to such managerial principles, which are focused at the effective risk management.

There were in agricultural companies collected arguments about (here already mentioned) the necessity of own IA function implementation. The data were collected in accordance with the examination and review of the generally mentioned risk factors and warning source and risk cause indicators in business practice. There was also taken into account a search for specifically showing factors, which indicate so called inherent risks.

Companies should think more about the probability of risk rising in connection with new corporate plans, when creating a business plans and consequent business projects. They should think of the matter during the preparation of the projects, at the time of its realisation and when evaluating prognosis of the supposed results – project benefits (Dvořáček 2000).

It was mentioned that we miss in the managerial practice the intensive awareness of the coherence and relations of risks, which arise in the particular areas of company (we think of the company as a system).

Practically, risks are inosculating though all business areas and in particularly, if we take into account projects, which have material and financial influence on the substantial part of business activities, it is strongly required to evaluate simultaneously risks of the whole business and risks of the particular projects and their role in the business project portfolio. The starting point is to recognise generally significant risks, which take place in business practice with a certain probability and to evaluate specific – inherent risks and also to search for solving their restraints.

Selection and application of the formalised methodological procedures for IA and for other forms of intra-plant monitoring are in fact based on some definition of the term "risk" acceptance (Fotr 1999): "As risk we understand the probability of some occurrence or activity negative influence on certain business activity. Risk identification is the base for selecting areas, which are to be audited. Business risk areas are starting points for the IA activities".

METHODOLOGY

– recognition and brief characteristic of the generally identified and mentioned risk factors, their evaluation in accordance with their importance in consonance with the propositions of the CR Internal Auditors Institute;
– comparison with knowledge from research, undertaken in middle and big size agricultural businesses (coops and joint stock companies in the region of East and West Bohemia);
– discussion on warning indicators and their possible use for risk factors identification;
– characteristics, categorisation and purpose of formalised methodological procedures, which are recommended within the Professional Practice Standards of the Internal Auditors Institute, usage;
– selection of risk factors and practical example for agricultural business;
– final summary of knowledge from research in farming businesses.

RESULTS

I. Overall characteristics of the examined companies

The field research was, at first stage, undertaken in total in 6 companies, of them there were three co-operatives and three joint stock companies.

The smallest one of the examined companies (joint stock company) covers approximately 2000 ha of agricultural land and the biggest (also joint stock company) covers more then 5000 ha of agricultural land from which there is 4600 ha of arable land. Acreage of the others is 3000-3500 ha of agricultural land, from which there is 1/3 of land covered by grass. All companies farm the in area of worse land conditions (potato-corn area).

There are companies with combined production and the share of animal market production represents 50–60% of the total company market production (cattle breeding with stronger orientation on milk production, poultry production including turkey breeding, pork breeding has not a significant share). Market production of crop production represents 30–40% (cereals, significant share has winter rape, in one case potatoes – mostly for planting). Two of the co-operatives have significant non-agricultural activities.

One top manager (principal managers, in two joint stock companies they were also chairmen of the board of directors, principal economists, principal agronomist) of each company was questioned at fist stage of the research.

The research took place in two stages: in first stage, there were delivered written materials to the top managers to provide a detailed information on the matter of intra-plant monitoring in form of IA departments and in matter of business risk areas recognition. There were also framed basic questions for second stage – consultation. There were placed, in accordance with the previous auditor institutes researches, the following questions: which risks do they think to be the most significant for own business activities and what base do they use for the risks recognition.

The guidepost for the second stage of research i.e. consultations and answer formulations were already mentioned: written materials i.e. schematic surveys of generally mentioned risk factors (see Table 2 and 3) and a schema of warning indicators for the particular business areas system (see Table 4). Preliminarily, it is necessary to state that consultations in all companies proved the still surviving traditional rather negative attitude to function – existence and organisational implementation of intra-plant monitoring departments.

Quality and need to control managerial and organizational decisions is according to respondents replaced by accent on responsibility of managers and if there is a small number of team members (5–9 experts), it is replaced by mutual control.

II. Characteristics of the generally known risk factors

Examination of the generally known risk factors possible occurrence and providing analysis of the generally

Table 2. Risk factors

Order	Risk factor
1.	Quality of internal control system
2.	**Competency** (in sense of **skills**) of **management** (e.g. to establish business visions and plans, to set effectiveness criteria when selecting business plan out, to make decision on alternative solutions when realising project, etc.); position and role of management regarding to company owners, business partners, ability to effectively manage and use human resources out, etc.
3.	**Integrity** (in sense of **entirety**) of **management**... integration or disintegration relations among particular management levels in company (importance of existence or non-existence of strategic – tactic – operational level of management); need to establish close-focused, specialised managerial functions (for e.g. importance of marketing, distribution, human resources manager, etc.)
4.	Size of business unit (possible indicators are e.g. total returns (turnover), assets and their structure and size – differences)
5.	Fresh changes in accountancy system.
6.	**Activity complexity (complication)** (difference in risk rising probability for example in accordance weather company is auto-cephalous producer of certain product or line or if it is a sub-supplier or if it has a sub-supplier, * weather its activities are situated only into own resort or if activities are diversified, * how complicatedly or on the contrary easily basic inputs are obtained ...raw materials, biological character of production processes influence; * number and complexity – cohesion and territory-range cost-demands of technological procedures; * by what forms is producer or entrepreneur of service connected into distribution chain etc.)
7.	**Fresh changes in area of key human resources**
8.	**Assets liquidity**
9.	**Deteriorative economical conditions of business unit**
10.	Fast growth (* share of self-financing and extraneous capital at business growth, * possibilities of obtaining or usage of additional capital for coverage and keeping growth rate, * market situation – suppliers, buyers)
11.	Extent of information computer processing (own informational system X extraneous services; system complexity)
12.	Duration from last audit (* finding relevance, * time, required for corrective steps realisation, * real time and * effectiveness of correction)
13.	Press on management in order to achieve goals (example: company is in a crisis situation, * press of other organisations – ecological, * unions, * country – regional institutions, * owners, * EU...)
14.	**Extent of government economy regulation**: antimonopoly steps, National Control Office, banking policy
15.	**Level of employee morals**
16.	Audit plans of external auditor forms
17.	Political influence exposition (for e.g. negative attention of publicity, press...)
18.	Level of filling the need of IA independence in – if it already exist
19.	Distance to unit (for e.g. subsidiary company to headquarters, although this factor evidently hangs together with factors, mentioned at first places...2, 3, 4, 6)

known risk factors influence enable to identify, within the business system, such areas and activities, which mean either an actual cause of could be a potential risk cause and which threaten the business performance and development perspectives. Survey of the generally known risk factors is presented in the descending order, which was, for the CR companies, determined by the Institute of Internal Auditors on the basis of empirical research (Fotr 1999).

Comments to discussion: as it was already mentioned, managers of the examined companies were, at the time of the undertaken research, ready to think of internal audits in their companies only in theoretical features – for the future. They mentioned them as a control body only by articles of association or by status stated revision body. This was the reason which made them to suggest the change of risk factors importance order (comprised in Table 2). They took into account primarily the aspects of actual and long term problems of farming companies.

– Respondents market as primary risk factors problems, connected with management skills and integrity. They were concordant with accenting the substantial importance of presence or lack of suitable human resources either in managerial and manual area; absence of organisational skills and business efficiency of managers at all managerial levels seems to be a significant threat of business performance. As the risks were evaluated, simultaneously with these factors, also market factors seven (changes in the area of key human resources – it is considered as a risk of loosely established – functioning business contacts) and 15 (level of employee morals and lose of skilled manual workers and difficulties when replacing them).
– As a risk factor at position No 4 is, in the generally valid scheme, there was stated the size of company. Managers of the examined companies did not attach primary importance to it, they do not consider it from audit and its tasks when recognising and correcting the mistakes point of view.
– Regarding the present situation of agricultural businesses, respondents consider posting the risk factor No 14 (Extent of government economy regulation) as generally low rated. At this point, as well as in the case of the deteriorating economical conditions, managers recognise the need for more precise and transparent intra-plant control, although on the condition, that it would be undertaken on bases of management order and would contribute to facilitating the regulatory steps preparation.

Following information served to the questioner mostly as a support. The information is included in Table 3 and enabled the managers to pay attention to the matter of specific (coherent) risks, which flow from the characteristic particularities for each business area. From the point of auditorial activity view, it is necessary to recognise such inherent risks and to evaluate detachedly their occurrence probability and importance of their influence in short and long term.

In following Table 3, there is expressed the importance of basic risk factors, in accordance with **business unit activity object**:

Comments to discussion: A quite uniform opinion flew from the discussion: from the viewpoint of risk factors significance for production companies, there are valid opinions, stated for Table 2. From the viewpoint of characteristic farming particularities (mutual influence of biological and economical processes), there are significantly more important specific risk factors related to production procedures complexity and production complexity.

On this aspect base, it is required to evaluate the risks rising from decreasing the assets liquidity (these risks are not stated in the officially valid order of risk factors significance for production companies).

Next to the generally known fact (when changing the legal form of agricultural companies to joint stock com-

Table 3. Differences in importance of risk factors in accordance with business unit activity object

Order	Banks and Insurance companies	Production	Others
1.	Quality of internal control	Quality of internal control	Quality of internal control
2.	Management skills	Management skills	Management skills
3.	Management integrity	Management integrity	Management integrity
4.	Fresh changes in accountancy system	Unit size	Fresh changes in accountancy system
5.	Unit size	Deteriorating economic position	Operations complexity
6.	Assets liquidity	Operations complexity	Assets liquidity
7.	Changes in area of key human resources	Changes in area of key human resources	Unit size
8.	Operations complexity	Fresh changes in accountancy system	Deteriorating economic position
9.	Fast growth	Fast growth	Changes in area of key human resources
10.	Government regulations	Press on management in order to achieve goals	Fast growth

panies, there is also changed the structure of fixed assets in favour of significant increase of their liquidity and assets, threatened current liquidity were accented). This does not touch only the difficulty of solving the matter of outstanding assets (in particularly short term) but it touches also the necessary level of volume and structure of supplies and consequently the need of liquid means for their obtaining during the year.

Long duration of the turnover capital fixture during the year is a significant risk of agricultural production (particularly in crop production). It influences negatively the working capital availability in agricultural companies.

Consequently, there is the stated risk area (production – need for capital), which is connected with risks related to the need of turnover increase (market performances).

The Table 4 was a part of the mentioned written material, which was a base for consultation. There is a simply illustrated system of warning indicators (risks symptoms). It should be elaborated and concretised for the particular area in own company by management of IA department.

Comments to discussion: There were found significantly wide scale of differences when recognising risks sources and causes in mentioned system of generally recommended warning indicators. It flew either from present situation of particular monitored agricultural companies' economy and from characteristically specific aspects of big agricultural companies economy in area of farming.

Within the paper and taking into account its size, it is possible to state the following selection of incentives:

- *Whole company, financial and economy management*
  - even if most of the questioned managers know well the problems of company performance evaluation on base of profit indicators, it is yet the conventional way, flowing from accountancy statements control (mostly in month intervals); it is preferred, in the examined companies, before the more suitable managerial instruments (for e.g. monitoring and control of cash flow in real time);
  - in farming conditions – in the determined region – managers of companies do not consider differences at the level of production and other operational costs between their farm and another (neighbour) agricultural company as a significant risk; there was accented, within the consultations, rather the necessity of co-operation and informal passing on of information between companies; respondents, in connection with this area, stated significant reminders about informational systems of different institutions in the CR, they mentioned the factual inconsistency of information from the particular sources (published statistic indicators of the Research Institute of Agricultural Economics and other research institutes, breeding and floricultural unions, etc.);
  - new business projects and evaluation of their number and benefit: agricultural companies have to, under the present conditions, solve number of recommended and required changes, which are related to the position of agriculture when preparing the entrance of the CR into the EU, the problems bear character of partial projects but in complex, they require a substantial volume of financial means (technological additional devices – meters, etc., hygiene devices, ecological requirements); these partial projects (their benefits are hardly quantified) decrease space for investment projects with effective production and costs effectiveness realisation.
- *Production, sales, marketing*
  - increase of labour costs and share of labour costs on production costs are felt like a threat mostly in companies with high share of animal production in the production structure, primarily with cattle breeding, there was recommended for monitoring an indicator of labour costs share on returns;
  - there is often solved lack of prompt financial means for providing operational activities during year in examined companies (and it starts to happen more frequently, input or service suppliers require payment in

Table 4. Warning indicators for particular business areas system

Whole company
– depositions from work relations are given by experts and managers
– development of cash flow
– development of liquidity
– development of profit
Finance and economics
– level and development of costs compared to competitors
– ration of successful and unsuccessful projects
– number of newly introduced projects
Supply and stock economics
– share of buying prices in material costs
– development of total stocks in comparison with unsold stock
Production
– development of production volume
– development of labour costs, share of labour costs on production costs in comparison with competitors
– development of in-orders
Sales
– production portfolio matrix
– development of "turnover"
– development of prices
– development of profitability from "gross margin"
– development of market share
Company administrative
– number of workers
– administration economy (measured by performance indicators)
Big projects
– financial differences against investment plan
– time differences against project realisation plan

advance) through compensations. Risk, which limits business activity, would be decline of business partners number by which there is permitted to use compensations out. There could be considered as a warning indicator decrease of payment ability (development of cash flow from operational activities);

– there were primarily discussed, in area of risk indicators application in volume and structure of production development, in monitored companies' possibilities of business activities development in commercial and non-agricultural area, which provide opportunities to balance cash flow; number of agricultural companies recently fall back from commercial activities regarding to results uncertainty in order to low competitiveness regarding to retailing chains. Returns from non-agricultural activities development and increase in comparison with volume of market agricultural production is limited, for e.g. regarding to requirements and conditions of providing means from the Support and Guarantee Farm and Forestry Fund (PGRLF).

- *Investment projects*

– Limited extent of investment objects, by which it could be permitted testing operation is relatively significant disadvantage for agriculture companies. If company does not achieve approval of testing operation, in most cases it leads to decline of return on investment and to prolonging of return on investment duration. Possibility to reach advantageous bank loan seems to be an important risk factor, if we take into account the generally known inconvenient ratio of high capital costing ness and low rate of profit of significant part of projects in agriculture. Significant differences in possibilities to reach extraneous long-term capital are recorded, at this respect, either among the examined coops and joint stock companies (guarantee providing) and among regions. It flows from the discussion, from the point of agricultural company view, it could be recently considered to be relatively advantageous long-term investment loan with interest 9.5–10% p.a.

III. Characteristics and purpose of using formalised methodological procedures of risks evaluation out

Standard model of risks evaluation, which could be applied on any business does not exist in the auditorial practise, because each company has its own characteristic features and auditors have to look for the most significant risk causes, i.e. risk factors having the higher occurrence probability.

Usage and precise following of formally accepted and recommended procedures for risk recognising and evaluating helps to decrease of subjectivity and mistakes in auditors activities.

When setting out priorities for auditors work in company (in accordance with"Standards for Professional IA Practise", it is required to respect the following points of view:

– financial risks of whole business
– possible risks and looses in particular business system areas
– requirements of company management
– substantial changes in business processes, programs and other forms of intra-plant monitoring
– alternative business opportunities to operative reach of profit
– terms and results of last audit, capacity of IA department.

Characteristic of methodological procedure – **alternative A**

Result of methodological risk recognising procedure in alternate A is, for given business units of examined company, **resultant risk factor calculation.**

Methodological procedure is (in scheme) illustrated in the following Table 5.1. and 5.2.

Characteristic of methodological procedure – **alternative B**

Result of methodological risk recognising procedure in alternative B is creation of plan for IA activities, for e.g. for the period of one year on principle of setting risk of each business unit of the examined company.

Importance of this model is in deflection from the current practise, which does not use such formalised evaluation procedure (of environment and risks) and which is characteristic to be based on time (duration) from the last audit in the concrete examined area.

There is presented model methodological procedure for alternative B (for illustration), which uses six risk factors:

1. Last audit findings
2. Existing sensitivity
3. Control environment
4. Credit (trust) of management
5. Changes in area of people or system
6. Complexity

AD 2 Existing sensitivity

Sensitivity represents inherent risk evaluation, which is connected with the examined unit. This is evaluation of that, what could potentially be wrong and what could be following reaction. It could be e.g. risk connected with assets loss, undetected mistake, risk of the negative publicity, etc.

When setting sensitivity, it is necessary to take into account relative size of audited unit, possible risk causation and its probability.

Inherent risk – it is flowing from the audited object nature (it the object specific) … no matter what were the steps, leading to its elimination (prevention). Inherent risks could be then in direct connection with the resultant profit of the concrete business, with specific factors of the examined industry causality, with closely specified quantity (for e.g. production profile, production program structure, region of examined business causality) and number of other specific causalities, which operate within the audited object.

Table 5.1. Methodological procedure of risk recognising

Risk recognising procedure					
1. to prepare particular form for each potential risk area					
2. to review importance (priority) of each from selected – chosen risk factors, i.e. it is worked with e.g. for nine risk factors order of importance is then: from 1 i.e. this is the last place regarding to risk influence importance till i.e. selected risk factor keeps first place.					
3. to set rate of risk for each factor out, from 0 (no risk) to 5 (the highest risk)					
4. to multiply steps 2 and 3					
5. to summarise rates of risk factors importance					
6. to summarise values of particular risk factors, i.e. in this case, if we have nine factors, we will have the summarised value 45					
7. to set level of risk for particular areas as a quotient of the examined factors risk sum and importance factors sum out (i.e. article six of thisprocedure is divided by article five)					
Example of calculated resultant risk factor:					
Business unit	HS_1	HS_2	HS_3	HS_4	HS_5
Resultant risk factor	**3,77**	**2,20**	**3,38**	**2,07**	**2,45**
	↑ Max			↑ Min	

Table 5.2. Methodological procedure – alternative B

First step
There is dedicated, to each from above mentioned six factors, a weight from one to three; 1 – probably no problem 2 – possible problem 3 – likely problem
Second step
Result of this evaluation is multiplied by the factor, which respect duration from the last audit in the examined business unit (area). That duration is respected in following form: • 100%.....similar audit took place in a shorter time than 24 months • 125%.....similar audit took place between 24 months • 150%.....similar audit took place between 24–36 months • 200%.....similar audit took place between 36–60 months Final evaluation is between six to 36 points.
Third step
Results of risks evaluation are divided into four groups ("levels") in accordance with the reached final value: • Higher level takes 10% of the total, it bears the lowest risk. • Another 30% of stratification bears significant risk. • Level, representing 40% of resultant values, bears moderate risk. • Areas with share of 20% of the total bear low risk.
Audit plan is based on following stratification: 1. Units are in area of high risk and all will be audited 2. Units in area of significant risk will be audited in rate of 50% of the total 3. Sample of 25 units will be audited in the area of moderate risk 4. There will be selected 10% of the sample in area of low risk. This group will be audited in order to prove, that the risk evaluation process is right (feedback).

AD 4 Credit of management

It could be characterised by such factors like effectiveness of steps, accepted on basis of the last audit, management experiences for the given working environment or top management sensitivity on quality and grade of lower managers and other employees.

AD 5 Changes in area of people or system

They are mostly connected with reorganisation, business cycle phases, fast growth, new products launching, acquisitions, new laws, promulgations or regulations, human resources fluctuations (workers and managers). If there is no change in examined unit, there is lower need to undertake audit.

AD 6 Complexity

It reflects mistakes or undetected risks risk regarding the complicated environment (activity diversity and their possible diversification, production flatness and possibilities, etc.).

Complexity evaluation depends on variety of factors as e.g.: rate of automation, calculation complexity, mutual coherent activities, number of produced products or services, dependency on suppliers, demand, variety of production times, applied laws and number of other factors (some of them could stay unrecognised or underestimated or under-appreciated).

IV. Risk factors selection and practical example of risk evaluation in agricultural company

The composed sample of risk evaluation formalised procedure was established on the basis of information, collected in the examined joint stock company. The company is organisationally divided into four plants with combined production focus. Plant managers are managed and controlled by top management of the company. There was used methodological alternative A for sample composition. The goal was set as minimising awaited loses. The example of determining resultant risk of factor is described by Table 6.

Chosen risk factors and provided order of importance (priorities):

– Plant management level of qualification and organisational skills
– Quality and frequency of control, undertaken by responsible plant managers
– Complexity and concurrence of production procedures – complexity of production program
– Used technological equipment reliability
– Assets liquidity
– Possibilities of operational changes in technological procedures

Comments to results of risk evaluation formalised methodological procedure application:

There flows a recommendation from the above final risks factors comparison – managers' team of the joint stocks company should concentrate its activities within intra-plant monitoring primarily at plant No 1 and consequently at plant No 2 (there were risks appreciated by the highest values).

Control activities should be concentrated at reinterpretation of managerial knowledge and skills of plant management and particular business units, in accordance with in advance provided risk factors significance. There should be also controlled approach to ensuring control and corrective steps in accordance with delegated authority. There should be reinterpreted also production program rationality in plant No 1.

Another possible procedure for elaboration of intra-plant monitoring instruments, which could enable even further information specification for risk factor evaluation and risk calculation (threshold and marginal values for particular factors), is calculation of fixed assets reimbursement contribution for particular crops and groups

Table 6. The example of determining resultant risk of factor

Procedure of risk determination					
Risk factor No 1	*Plant management level of qualification and organisational skills*				
Risk evaluation		Plant No 1	Plant No 2	Plant No 3	Plant No 4
Incommensurate	5				
Incorrect organisational decisions	4		X		
Need for increased control of top management	3	X			X
Sufficient expertness and organisational skills	2			X	
Very good organisational skills and expert practise	1				
Cannot be applied	0				
Risk factor No 2	*Quality and frequency of control, undertaken by responsible plant managers*				
Risk evaluation		Plant No 1	Plant No 2	Plant No 3	Plant No 4
Control does not exist	5				
Insufficient control extent	4	X			
Sufficient extent, low frequency	3		X		X
Satisfactory extent and frequency	2			X	
Approach to control is over-average	1				
Cannot be applied	0				

Continuation Table 6

Risk factor No 3	*Complexity and concurrence of production procedures – complexity of production program*				
Risk evaluation		Plant No 1	Plant No 2	Plant No 3	Plant No 4
Complexity with big concurrence	5	X			
Complexity with limited production capability concurrence	4			X	
Specialised production program	3				X
Middle complexity with limited capability concurrence	2		X		
Middle complexity without need for concurrence	1				
Low complexity with limited concurrence	0				

Risk factor No 4	*Used technological equipment reliability*				
Risk evaluation		Plant No 1	Plant No 2	Plant No 3	Plant No 4
Very low	5				
Low, over 70% is amortised	4			X	
Crop production – average, standard failure rate, amortised 40-50%	3	X			
Average, higher variable costs on spare parts	2		X		X
Over average	1				
Cannot by applied	0				

Risk factor No 5	*Assets liquidity*				
Risk evaluation		Plant No 1	Plant No 2	Plant No 3	Plant No 4
Significant and highly liquid assets	5				
Assets with average value and good liquidity	4		X		X
High rate of turning assets with low liquidity	3	X		X	
Low value assets with low liquidity	2				
Superiority of fixed and turning assets with low liquidity	1				

Risk factor No 6	*Possibilities of operational changes in technological procedures*				
Risk evaluation		Plant No 1	Plant No 2	Plant No 3	Plant No 4
None	5			X	
Limited potentialities – long transition period, equipment capacity	4				
It is possible to use alternative solutions of production procedures in crop production out	3	X			
t is required higher usage of technical equipment	2		X		X
Over average flexibility	1				
Cannot be accepted	0				

Risk calculation for particular plants

Risk factor	Factor importance	Plant No 1	Plant No 2	Plant No 3	Plant No 4
Plant management level of qualification and organisational skills	6	18	24	12	18
Quality and frequency of control, undertaken by responsible plant managers	5	20	15	10	15
Complexity and concurrence of production procedures – complexity of production program	4	20	8	16	12
Used technological equipment reliability	3	9	6	12	6
Assets liquidity	2	6	8	4	8
Possibilities of operational changes in technological procedures	1	3	2	4	2
Total	21	76	63	58	61

Resultant risk calculation for particular production plants of the joint stock company

	Plant No 1	Plant No 2	Plant No 3	Plant No 4
Final risk factor	3,619	3,000	2,760	2,905

of cattle. Unit reimbursement contribution is calculated as a difference between returns and variable costs, which are calculated at selected unit (most frequently at one ha, one piece or 100 pieces of cattle category).

Comparability of indicators (which are based on Gross Margin) enables fact, there are known, in agricultural and advisory expert practise, methodological procedures of calculations, which are made exclusively using market prices of inputs and outputs from realised production processes.

Gross Margin and consequent marginal value of average turning capital consumption calculation are used, like a controlling instruments, for optimised production procedures (in material even financial expression) projecting for particular production unit or whole company.

It also explain causes of high turning capital costs in agricultural companies, which is one of the real plunge source when ensuring the desired level of assets liquidity and available working capital of such companies.

DISCUSSION

As it has already been mentioned in the introductory part of subchapter "Results", we have to state, through consultation, that there were proved still surviving traditional, rather negative attitudes to function – existence and incorporation of intra-plant monitoring departments organisational.

Quality and need of qualified and objective control of managerial and organisational decisions is regarding to respondents replaced by accent on managers responsibility and when there is a small number of team members (5–9 experts), it is replaced by mutual control possibility.

Even if one of the joint stock companies (which were examined) has established, when founding, a more progressive European model of managerial structure (this model supposes, among other, that department of IA is directly responsible to advisory board), this company did not dedicate importance to the function of intra-plant monitoring with non-conventional control and advisory activity conception.

The above mentioned is reflecting the number of yet non-consistent relationships among managerial bodies (primary – owners and derived – management) of joint stock companies – this is not a characteristic situation only for the examined companies. Equally, it has been already mentioned, management would be willing to think of the IA department establishment in case that the activity of the department would take place regarding the management order.

Other topics to discuss in the matter of specific risks in farming are presented as comments to discussion over the particular figures of risk factors and warning indicators.

CONCLUSION

Within the research focused on administration and financial management of companies in the CR, which was undertaken in the selected non-financial organisations by the company COOPERS&LYBRAND as a part of the PHARE project (1997), there were observed even formalised risk evaluation procedures. Organisations were questioned, what risk they think to be the highest for their own business activities and what their base to recognising the risks is.

Research results showed that the formal procedure (in other words standardised methodological procedure) of risk evaluation is launched by only 20% of companies. It is clear that the managerial bodies of our companies do not yet feel the need for risk evaluation. That is why they do not attach much significant weight to the information on what could be the help of IA or controlling departments in this area, provided that they become an integrated part of the company management.

It shows, in accordance with undertaken research author, even management of middle and big agricultural companies, comprising joint stock companies, temporarily do not think of changing the approach to intra-plant control providing.

Another research will then have to be oriented on the intra-plant monitoring departments benefits quantification, either in form of the IA or controlling.

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Contact address:

Ing. Pavla Římovská, katedra řízení, Provozně ekonomická fakulta, Česká zemědělská univerzita v Praze, Kamýcká 124, 165 21 Praha 6-Suchdol, Česká republika
tel.: +420 2 24 38 22 40, e-mail: rimovska@pef.czu.cz