

# Early warning symptoms of potential risks in the external and internal environment of business enterprises.

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## **Abstrakt.**

*Podniky údajně ztrácí obrovské částky peněz ročně v důsledku na nechtěné nehody, poškození zařízení a neplánované odstávky. Tyto případy jsou obvykle způsobeny z různých důvodů, od jednoduchých zařízení do hlavní konstrukční chyby, nebo chyby lidského faktoru. Pro zajištění přijatelné úrovně bezpečnosti a maximalizování zisku, jsou podniky neustále sledovány. Různé monitorovací techniky se v průběhu celého průmyslu, snaží se za determinovat jakékoli abnormality v chování podniku nebo jeho okolí. Chyby detekce a diagnostiky byly a stále jsou aktivní oblasti výzkumu jak v akademické obce, tak v průmyslu. Systém včasného varování (early warning system, EWS) informuje provozovatele o možnosti vzniku nečekané situace. Provozovatel pak musí pečlivě prošetřit signál EWS a pochopit příčinu problému aby podnik včas mohl reagovat na situace. Cílem práce je zkoumání, defenice a návrh signálů a symptomů včasného varování v rámci rozvoje EWS za za účelem použití v řízení podniku. Práce bude vycházet ze znalosti aktuálních vnitropodnikových aktivit a processů, zvýšení přesnosti determinace nebezpečných jevů a z potřeby vykazování pravdivých ekonomických výsledků a zároveň znalosti reálného stavu ekonomického potenciálu podniku a jeho okolí.*

**Klíčová slova:** systém včasného varování, symptomy, management, konkurence, výroba, podnik, riziko.

**Key words:** EWS, symptoms, management, competitive, production, firm, enterprise, risk.

## **1. Introduction.**

Industries reportedly lose huge amounts of money annually due to unwanted accidents, equipment damage and unplanned shutdowns. These incidents are generally caused by a variety of reasons from simple equipment malfunctions to major design flaws to avoidable human errors. Moreover, safety has grown to be the most important concern over all sectors of industry. To assure an acceptable level of safety and to maximize profit margin, firms and business enterprises are constantly monitored. Different monitoring techniques with Early Warning Systems (EWS) are practiced to indicate any abnormality in the behaviours of a firm, or detect any fault in the components of the firm. After a fault or any other abnormality is detected in the firm, alarms of EWS notify the operator or manager about the unexpected situation. The manager then needs to carefully review the alarm and understand the source of the problem in order to take the necessary corrective action. Modern digital technology has made it very easy to implement various fault detection techniques and configure as many alarms as wanted, but one of the most important parts of EWS are signals of risks or symptoms of abnormality, which we define and review in this paper with a little comments.

## **2. Operational risks.**

- 2.1. *Unplanned stop in production.* It is not just a stop itself and its financial implications, but the reasons which have made it possible. That reasons are the main danger.
- 2.2. *Failures in computer networks is a constantly growing danger.* Programmer attacker may knowingly permit small failures, testing the sensitivity of management and preparing large-scale problems in the system.
- 2.3. *The presence and especially increase of frequent errors in production, supply and design* can tell us about the appearance of systemic problems.
- 2.4. *Fluctuations in the production process, for unknown reasons, may be a sign of growing problems.* Even if these fluctuations are not extremely dangerous, their cause must be absolutely clear to the leaders and managers of the company.
- 2.5. *Discrepancies, inconsistencies in the records or in stocks should be removed immediately upon detection,* the fact of this negative event should be documented, and the reason should be cleared up.
- 2.6. *Spontaneous changes in the manufacturing practice* (work ethic, quality, cleanliness in the premises, etc.) could mean serious and old problems with staff of the company.
- 2.7. *Customer complaints and claims* is a source of information about problems that can cause a franchise risk (the risk of losing market position). Such problems should be quickly, deeply and systematically investigated and the results of the investigation should be messaged to everyone involved in the process.

## **3. Risk of the weakening of the assets.**

- 3.1. *Increase in the rate of concentration of debts in the hands of one creditor* is a potential danger of creation of the conditions for a financial seizure by the creditor, especially if the loans were taken for projects development.
- 3.2. *Disruptions of a schedule of the terms of repayment* may cause an increase of a debtor prestige and degradation of the prestige of the financial strength of the company.
- 3.3. *Abrupt changes in the profits from sales* (abrupt decrease and increase) are dangerous too. The first situation is dangerous as a negative system failure, the latter situation provokes increase of excess capacity.

## **4. Competitive risks.**

- 4.1. *Appearance of a new product* on the market from an effective competitor brings a risk of aggression towards our market niche.
- 4.2. *Recent changes in the regulation of the industry* or business can help our competitors which can be more prepared for these changes.
- 4.3. *Changes in tastes and preferences of our main customers.*
- 4.4. *Changes in the distribution system* is a serious threat if it is organized without alternative or highly concentrated on a small number of channels.

## **5. Franchise risks.**

- 5.1. *The transition of a significant part of customers to a competitor* should be seen in time and parried. This is not only the direct loss in sales, but also a possible sign of systemic problems in quality of products and services produced by our company.
- 5.2. *The threat of prosecution* in many cases is worse than a not very favorable settlement. If reconciliation is not possible, an anticipatory preparation for litigation should be maintained.
- 5.3. *Failures of the closest competitors* is not only successful actions of our company, but may also be a sign of danger for all our industry in future.
- 5.4. *Adverse press coverage can cause rapid and severe damage*, especially if they are valid. It is necessary to identify the initiators of the publication, to try to put a rebuttal, eliminate the uncovered problems and to make this fact known to the public.

## **6. Alarming symptoms in the management system.**

- 6.1. *Noticeable changes in behavior, personal habits and lifestyles of key personnel of the company.* Purchase of an expensive property, frequent trips abroad (especially in countries with offshore status and / or expensive resorts), frequent visits to restaurants, casinos, etc., alcohol abuse may be symptoms of bad faith on the part of company management. These changes should be compared with the success of the enterprise: if everything in the company is without changes, but its management has increased their personal expenses it is a bad sign, and, on the contrary, if the company succeeds, the changes in the behavior of its management is natural, and moreover it's a good sign. It is useful for a risk manager to understand the quality of expensive things, wines, cosmetics. It is useful to draw attention to the behavior of managers' wives.
- 6.2. *The inability of key personnel to articulate and define the mission and overall competitive strategy of the company.* This may indicate either a spontaneous top management, or its weak management training. A risk manager must understand the strategic management of the organization, characteristic of the industry. During the periods of concluding contract it is useful to request written information from company management's meetings.
- 6.3. *Family problems of key employees.* Divorce, property division, quarrels in the family, unjustified departures of children, misogyny (and vice versa) - these symptoms indicate not only psychological tension of key employees of the company, but also about possible serious financial problems. For example, in case of divorce of a private entrepreneur and his wife, a part of his ownership in the company which is a borrower can go to his wife, and then to the third parties.
- 6.4. *Change in the attitude of the company towards the bank or its banker, especially a significant decline of interest in cooperation.* This behavior can mean many things:
  - change in company strategy;
  - disbelief in the possibility of settlement of the customer's problems with the banker;
  - a different source of funding has been found;
  - an intentional bankruptcy is being prepared;

- change in priorities;
- excessive employment of the staff responsible for working with the bank.

Not necessarily that all or any of the abovementioned happens, but this symptom is of a multi-faceted origin. When it is detected it should be carefully checked.

- 6.5. *Personal unreliability of the client (or his representative) or a decrease reliability.* All people from time to time do not keep their word: come late for the meeting, cancel the agreed activities, do not call, do not write, do not tell you about their actions or possible danger, etc. In most of the symptoms it is important to pay attention to: 1) the unreliability of the company which is higher than in a respective social group, 2) significant changes in the level of commitment compared to the past, and 3) a deliberate deception / fraud. Such behavior changes may indicate congestion of the company or some of its key employees, a decrease of interest in co-operation, or decrease of interest in a specific market niche.
- 6.6. *Inexperience of the company in the respective industry or section of business.* This symptom is present mainly during invasion to a new market or launching a new type of business. It is possible to evaluate this experience through the study of the past experience of the manager and key employees of the company or through inviting experts from this industry for discussion.
- 6.7. *Personal changes in the management of the company.* A personal change among key managers is always a hitch in the life of the organization. Especially dangerous are unexpected, conflict, and multiple senior staff changes. Continuity of leadership - that's the key word here. But even in companies where management staff is trained and prepared in advance and systematically, the transition period could be a potential danger. In that case there is a risk of at least a temporary decline in interest in the project, financed by the bank or in the project, in which the company is involved. The degree of interest of the company in the issues of continuity of leadership is quite amenable to preventive diagnosis. What is the relationship between the company president and his vices? Is there too much difference in the salary of members of senior management? Are the management responsibilities and powers in the governance structure divided consciously and systematically? What is the style of management? What is the age of top leaders? What is the health condition of the key figures? All this affects the risk profile of the intensity of the company.
- 6.8. *Changes in the ownership structure of the company.* This is a serious symptom. The emergence of new powerful shareholders, particularly those with a share of more than 5% is perceived as a very serious event all over the world. It may indicate the lack of capital, the emergence of new centers of influence in the company, the possibility of capture or financial execution of the company by new owners, the other major emerging changes or mergers.
- 6.9. *Changes in key personnel.* The very viability of some companies depends on selling of personal skills, knowledge, experience, famous name or special rights (copyrights, patents) some of its leading professionals. In the case of illness or death of people who are faces of the company there could be serious problems in the company. It is useful for a risk manager to be aware of how companies' life depends on the fate of its individual members and how the company is ready for dramatic changes.

- 6.10. *Return of the problems that have already been solved in the past.* This symptom indicates not only that the company has a problem, but that it can not completely solve it. Suppose that last year the company turned to a customer-banker with a request to finance the purchase of new equipment, arguing that the problem of slow sales of its products was caused by aging equipment and a corresponding reduction in quality. The bank agreed. However, this did not help. The client requests a loan to re-snap. What might it say? Firstly, the management either incorrectly assessed the need for a new snap-in, or it has nothing to do with anything. Secondly, the problem of product quality may take a chronic nature. Thirdly, it may indicate the fact that perhaps the previous loan is problematic. Fourthly, the dynamics of sales and marketing of diagnostic problems may become urgent. Fifthly, that may indicate the fact that perhaps the company was faced with a serious problem that has not yet been identified and the consequences of which are difficult to predict.
- 6.11. *Inability of the company to plan its activities.* If a company really tries to plan, but plans have bad quality and were badly made, it may require special training or inviting an outside consultant. Sometimes, however, unclear plans reflect the worldview of the owners or managers of the company. "We are a flexible company, which is hunting for opportunities. We must engage in a battle, but we'll see". It is possible that such a view has a right to exist, but a creditor, an insurer and a business partner should think twice before providing "fortune hunters" with a credit line or insurance or getting involved in other kinds of cooperation. Venture financing has its own rules, which are much different from the normal lending. Unrealistically optimistic projects and forecasts for the future are a bad symptom.
- 6.12. *Poor financial reporting and control.* If the company inaccurately calculates their money, it can not be successful. Are there any coherent written instructions on the financial statements? Is this good reporting form? Is there an internal audit? What is the procedure for making external audits?
- 6.13. *Poor attention to the organizational structure of the company.* Symptoms: lack of clear, accurate and regularly refined organizational and structural schemes, illogical and unequal distribution of responsibilities, spontaneously creates structural units, the lack of the date of approval of the existing structure, unusual job titles, the parallelism in the work, the large number of support units and staff secretaries.
- 6.14. *Attempts to buy other companies (mergers and acquisitions), entry into new business sectors and new geographic markets, opening new lines of business within its industry.* In times of any major financial innovations company vulnerable. Very often, a banker, insurer, a partner and risk manager may require information on major innovations in the company.
- 6.15. *The tendency for risky transactions and unusual risks.* Trying to invest in a "lottery" may be a reflection of the fact that the company has already realized their critical situation and is trying to "get out".
- 6.16. *Unrealistic price politics of the company.* A company may unduly inflate the prices of their products and services or, conversely, too underestimate them. It may be in the nature of conscious intervention on the market or the implementation of profits to its highly competitive products. It may be a measure of the inability to calculate the optimal price.

- 6.17. *Delayed reaction to negative changes in market and general economic conditions.*
- 6.18. *The absence of a visible continuity in leadership.* This makes the company vulnerable to the risk of loss of key managers.
- 6.19. *Unreasonable change in the system of centralization of management.* This may arise due to internal “war” in the company. Excessive centralization is just as bad as an excessive democracy. The style and methods of leadership must be adequate to the life cycles of the industry, company, products, etc.
- 6.20. *The presence or emergence of a company's labor conflicts or problems of labor recruitment.* Strikes, picketing, demonstrations, protracted negotiations with the unions, vandalism, threats towards the management, numerous layoffs, unreasonably high fluctuation of the staff, the court procedures about the violation of labor laws, strengthening of the informal leadership, defamatory articles in the press, sabotage, increased security, unusually frequent inspections in the workplace, strengthening fight for the discipline. *Qualified auditor's or negative opinion.* This is a special kind of diagnosis. The auditor will explain everything, if his opinion about the company is negative. It is necessary, however, to consult with another independent auditor.

## **7. Alarming symptoms company balance.**

- 7.1. *Failures in timely delivery of the balance.* It is definitely a bad sign: the company either works “casually” or its staff is unskilled, or wants to hide something in the hope that a problem would be resolved in the meantime. We should not ignore warnings and even an individual facts of disruption of the timing of reporting, as this may signal that the company entered into the devastating risks.
- 7.2. *Lengthening the period of payment of accounts receivable.*
- 7.3. *Reduction of balances on current accounts and demand accounts belonging to the company, as well as reduction in the flow of cash on hand and balances.* In general, this situation is deteriorating cash position of the borrower. This is one of the factors reducing the liquidity position of the borrower. Accordingly, this symptom may indicate the difficulties of the borrower's relationship with the consumers of its products, difficulties in marketing, production failures rhythm, poor financing, planning and management.

## **8. Concluding remarks.**

The success of the firm depends on the early warning symptoms. One of the most popular lists of early warning symptoms of the problems in the company was developed on request of the American Bankers Association by G. Barrikman in 1993 and became a kind of classic. In this paper we have discussed about list of early warning symptoms which is based on the Barrikman's symptoms list. Although the Barrikman's list was offered for the bankers, for monitoring credit risk of their clients, however experience different international enterprises shows that it is suitable and can be effectively used for the monitoring not only in banks, but and for self-diagnosis of the business enterprises. From the theoretical point of view, the area of analysis early warning symptoms like one of the important and basic parts of Early Warning Systems is still widely open and untouched.

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