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Application of Method of Financial Risk in Serbian Companies - Survey Sample Company

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Abstract: The aim was to obtain information on the use of financial instruments hedging the Serbian large and medium-sized enterprises, as well as to detect any differences between the characteristics of companies that use them or not used. Survey researches based on telephone interviews with financial or accounting managers with a stratified random sample of 101 Serbian companies and conducted in 2010. The contribution of this study comes from testing hypotheses about the relationships between the characteristics of Serbian companies and the use of financial instruments hedging. Finally, in the future, researchers should make use of this work and make a deeper study based on differentiation from Serbian companies. In this way, it would be possible to include different sizes of companies (on the number of employees) to include different types of financial measures in relation to the size of the company, for example, the factor of annual revenues.

Key words: Financial risk management instruments, survey research, χ2-test of independence, t-test differences of means

1. INTRODUCTION

Volatility of market prices, especially commodity prices, interest rates, exchange rates and the risk of collection and the like, not only influence on the performance of enterprises and achieving maximum benefit for the owners, but to a large extent determine the survival of enterprises in the global environment. Financial risks arising from financial transactions, and since all risks eventually have financial consequences, it considered that all risks are directly financially, according to Peterlin-in (2003). In practice, the role of financial professionals taking new dimensions, and Chief Financial Officer (CFO-Chief Financial Officer) in terms of business risk in the international scale and under global pressure all the more willing to share the burden of risk and modify the decision and management system (Pickford, 2001, Brealey , Myers, 2003, Christoffersen, 2003). Jorion (2001) speaks of the years to share the financial industry from the prehistoric times of financial risks management and integrated risk management (Integrated Risk Management or Enterprise-wide Risk Management) which will include looks at the relationship of financial risk with some of its forms: market risk, liquidity risk, credit and operational risk.

Financial risk management practices by companies in the Serbian economy imposed by the author as a topical and unexplored topic of research. Special incentive for this research comes from a part-Peterlin (2003, 2004a, 2004b), Van Horne (1992), Vaughan, Vaughan, (1998), Pickford (2001), Brealey, Myers (2003), Helle J. (2003), Willimack, D.K. et al. (2002), Pierson (2004). The study aims to examine the survey method:

1. Does management in Serbian business methods of protection against financial risks,
2. The degree to which individual risks affecting the operations of the company,
3. What kind of tools designed to apply,
4. To what extent the same time rely on the services of banks and other financial institutions,
5. Which is the position of leadership in terms of quality of their services?

At the same time, investigate the behavior of companies that measures used or not used. Risk is the possibility of performing a situation, which may adversely affect the business, which can lead to disorder in achieving company goals. Management is responsible and in charge of locating and identifying risks, determining its potential impact on business operations in the future and for effective

governance. Different forms of risks that the company faces in its business management can minimize, avoid, and switch to increase the security of your business, but also to accept higher risk and thus generate higher profits for their shareholders. In developed financial and business management, systems can use a set of different financial instruments that ware be implemented through various techniques and methods of risk management. On the concept of risk, especially on the financial risks and financial risks management wrote in his papers and books: Leko, Mates (1993), Van Horne (1992), Orsag (1997, 2003), Koch (1995), Peterlin (2003, 2004a, 2004b), Vaughan, Vaughan, (1998), Brealey and Myers (2003), McClave et al. (2005), Ertugrul and Hegde (2009), Chemmanur et al. (2010), Eugune et al., (2010), Eisdorfer (2010) and others.

Types of risk that is exposed to a particular company depends on many factors such as type of work that the company does, how the activity, micro and macro environment and the like. An important factor from the point of responsibility for risks and opportunities to take risk management actions and company size where they are, in situations where companies are financially stable and more provides a broad range of possible courses of action. Financial risks in the wider sense, refers to such risks drawing money from the company, the risk adverse among the company's financing, refinancing risk, price risk (market risk) and the like. While in the narrow sense means the liquidity risk, currency risk and interest rate risk. Risk management is now a necessary part of business processes and is an integral part of the whole business. The process of risk management in the enterprise used to increase the company value. It consists of clearly defined steps, which, if applied in the proper order for enhanced decision support contributing to better understanding of the risks and their potential consequences. Risk management deals with the identification of opportunities and possibilities of the company, avoiding the threats that come from around the company and that may adversely affect the financial position of the company.

In accordance with changes in economy and finance have been developed and various forms of derivatives where the risks are transferred to the other side. It allows the investor vulnerable to the risk to minimize its exposure and transfer risk to another party that wants to take over and all the consequences that accompany such a decision. Commercial derivative financial instruments are typical for developed financial systems such as the U.S., Western Europe and Japan. Today it is impossible to imagine a developed economy without securities, money, foreign exchange and even more important and significant financial derivatives.

In this paper, it is a pioneering empirical research in the Serbian Chamber of practice, which will provide suggestions for future studies of similar content. Quite apart from the methodological use value results, the author hopes will be achieved practical benefits of specific research findings and that they will promote the instruments of protection from financial risk in the most useful forms. The purpose of the conducted survey research is to capture the state, but also to find out the reasons for not using instruments of protection against financial risks and their lack of use by enterprises. All this would lead to the fact that I can give suggestions for any additional training of financial personnel, and general improvement of efficiency of activity, forms of innovation and modernization of their function and use. Research hypotheses are as follows:

I. It assumed that there is a correlation between risk management and financial management: the primary activities of the company, ownership, share of small shareholders in the ownership structure, tradition and reputation of the company.
II. Hypotheses tested to determine whether there is a connection between the management of financial risks and the following variables: size and development of the total income of the company, the financial situation of the company, firm size, measured by the number of employees.
III. State of quality systems and risk management practices in Serbian companies will research through testing whether the assumptions of dependency between the management of financial risks and the following features: the state of quality systems, development of financial controlling functions, the need for additional education on the protection of financial risk in the enterprise.
IV. Then, starting from the hypothesis that firms whose shares quoted on the stock exchange manage financial risks, the company’s protection from the risk of using the services of various banks and financial institutions are financially successful. Financial risk management in the

enterprise linked to the attitude of enterprises by taking credit or placing their own surplus funds.

V. Orientation of enterprises into international markets and manages financial risks be examined using the following hypothesis: companies that focused on larger markets actively manage risk, companies that are oriented to international markets, and with greater geographic diversification, actively manage risks. In other words, companies oriented to export or import of a developed financial management.

VI. The research function of the modern business managers in companies that manage financial risks will test the hypothesis that management of financial risks depend on: age, gender, education level financial managers. In particular the systematized financial risks which the (Serbian) companies are exposed, methods of protection against these risks, and provides an overview summary of conclusions several recent surveys of similar content from the world. After describing the research, methodology follows the most exciting of the survey results and conclusions.

The paper used methods of descriptive and inductive statistics. Assessment conducted in a number of (post) strata, and the further analysis we used statistical tests, nonparametric and parametric: χ2-test of independence of two features, Levine's test of equality of variance and t-test differences of means of two populations. Even when samples are large, statistical program, instead of z-tests conducted t-tests. Z-test assumes knowledge of key parameters, mean and standard deviation of the population. If that size not known, use the t-test, regardless of the size of the sample. T-test differences between the two populations arithmetic environment ware used when the Levene F-test of differences of variances of two populations showed that there is no reason to reject the null hypothesis (where the population of interest investigations has as strong of variance). Otherwise, use the Welchov t-test differences of means of two populations. See example McClave et al. (2005), Tryfos (1996). The results were analyzed using the software packages SPSS (Statistical Package for the Social Sciences) and Microsoft Excel.

2. REVIEW OF SIMILAR RESEARCH IN THE WORLD

A search of secondary sources of information, literature and the Internet, found the descriptions of similar studies and studies on the use of instruments of protection against financial risks carried out in other countries. In this chapter, we will give the results of functions and four-selected research.

According to survey research conducted by PricewaterhouseCoopers on the Italian corporate treasuries, in cooperation with the Italian Association of Corporate Treasurers 2002nd on a sample of 56 medium and large companies, using a questionnaire with more than 100 questions, 32% surveyed companies exposed to interest rate risk hedging is not used, while 62% adopted only partial hedging. Swap and collar interest rates are the most common forms of hedging instruments, i.e. 81% of them speak swaps, and 44% use collars. Taking into account transactions with exchange rates, Translational and economic exposures, the data indicate that 42% of Italian Treasury partially used for hedging such risks, while 40% do not use any hedging. Measure the main argument of companies that do not use hedging in foreign exchange rates is the fact that such exposure cannot ware. As many as 87% of Italian Treasury does not accept any position in foreign currencies, regardless of the underlying exposure to exchange rate. Futures contracts, options, spot contracts and financing are denominated in foreign currencies are the most used among all instruments for hedging against risks of exchange rate.

Pierson is for 2004 published a special report on the topic: Managing Financial Risk: The chance and necessity. The survey conducted among 200 financial managers of leading Dutch companies and they show that the idea of managing financial risks in the sample-included companies accepted only at the strategic level, it is still necessary to complete the transition to an operational level, with which so far behind in all areas. The survey found that a majority of 63% of the studied companies expected to solve the existing problems within the treasury of the introduction of appropriate modern technologies. Improving the quality of information was the most important ranked in second place by nearly 90% of the company, a measurement of the treasury operations in the third place with 40% of the companies. The survey found that treasury management systems used in many cases have very little support back office. Others are still administratively stronger, but have a weaker

front office. The availability of information related to financial risk management is unsatisfactory, and the management function of financial risks ignored.

In addition, a large Canadian survey on a sample of the top 500 companies conducted by KPMG aimed to determine the profile of risk management. The risk have been identified as a potential threat to company goals, and 80% of respondents see the threat as an opportunity for profit. Risk management function ware characterized as optimizing risk. Most Canadian financial manager believes that the role of the existing risk management to identify, manage, minimize and mitigate existing risks, not predict it. From this, it concludes that the existing risk management processes are passive and reactive, not proactive. Market risk, strategic, economic and threatening risk clients are also important issues for Canadian companies, while the political risk is the least important. Similar to other studies presented here, less than half the respondents considered that the organizations in which employees have only a declarative formal risk management policy. Frequency of reports on the risks varies from sector to sector. Only 45% of executive directors receive reports on key indicators of risk at least once a month while other subjects receive quarterly data and less frequently. Even 7% do not receive any information about risk, which considered unfavorable.

According to research by George Weiss Center in 1998, Among U.S. non-financial companies that use financial derivatives, 42% said they have increased their use, and 13% of them reporting that they have it out. The use of financial derivatives is much higher in large companies (83%) than small (12%), and is higher in enterprises of primary products (68%) and manufacturers (48%) than in the service industry (42%). There is also the conclusion that the intensity increase in the use of financial derivatives in the service companies increased much faster than in other companies.

3. SURVEY RESEARCH METHODOLOGY

3.1. Sampling strategy

Research on the use of instruments of protection against financial risks have been carried out in Serbia in October and November 2010 design of the survey on a sample of 101 enterprises (Statistical Office of the Republic of Serbia). Data collected by telephone interviews and respondents defined as financial managers or competent financial experts. Structured questionnaire, in addition to 19 general, contained 10 specific questions with many choices, especially designed for this research. Will briefly be described sampling strategy, i.e. methods of sample selection and methods of assessment parameters?

The surveys on samples of companies (Business Surveys) see e.g. Cox et al. (1995), as well as some applications in Czaja R, Blair, J. (1996), Groves et al. (1988) and others. The importance of proper use of theory and test samples in practical research see Fraser and Simkins (2010), David L. Olson, Desheng Dash Wu (2008), Millett (2004) and so on. To control the quality of data and indicators of statistical surveys, Zhang et al., (2009) about established risk management in finance see Tarantino and Cernauskas (2011). The sampling methods see examples of Cochran (1977), Kish (1965), Barnett (2002), Levy and Lemeshow (2003), and a survey of Alreck and Settle (1995), Walton (1997) and others.

As a framework for selecting, a random sample of companies served a list of FINA from 2002. It considered that, although incomplete, list of used FINA could serve as an acceptable framework for the selection of medium and large enterprises.

The research has two active strata and for medium and large enterprises. For the selection of units within each stratum, we used the random number generator. Model stratified sample of companies based on "number of employees" as the sole criterion of stratification, was used to (approximately) equal allocation of sample units to strata, and it ensured a controlled representation of two sizes of companies. Thus, in this kind of research on a sample of n = 101 companies included n1 = 51 mid-sized companies (with 51-250 employees), the fraction of choices of f1 = 0.034, and n2 = 50 large companies (with more than 250 employees), the fraction of choices of f2 = 0.123.

During the investigation it was found that companies that use hedging instruments only slightly more likely to belong to the group of large enterprises in terms of number of employees (56.1%) while among the companies that do not manage risk more medium-sized enterprises (55%) so to stratification criteria did not show relevant.

X2-test showed no statistically significant correlation between firm size (measured by number of employees) and the use of hedging instruments ($\chi 2$ = 1.200, p-value = 0.273), so that the analysis results shown here dropped by a special appreciation of the planned stratification.

Only after the completion of the research enterprise, classified by sector, type of ownership, region and other factors. Within the (post) strata used is an impartial method of assessment ratios, and percentages, appropriate to a simple random sample.

When estimating the proportion of the population of interval $p = \frac{M}{N}$,

Where M is the number of units that have a particular characteristic and N is the number of units in the population, with a number of impartial appraisers $\hat{p} = \frac{m}{n}$,

Where m is the number of units in the sample that have a particular characteristic, n is the size of a random sample, the level of reliability $(1-\gamma)$ and the reliability coefficient of normal distribution $Z_{\gamma/2}$, the following formula:

$$\Pr\left\{\hat{p} - Z_{\gamma/2}\sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \prec p \prec \hat{p} + Z_{\gamma/2}\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}\right\} = (1-\gamma) \quad (1)$$

Standard error estimates of proportion, in the case of lack of proportion p of the population, given the following approximate formula:

$$\sigma_{\hat{p}} \approx \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}\sqrt{1-f} \quad (2)$$

If the fraction of choices $f = \frac{n}{N} \prec 0.05$ factor correction for finite population $\sqrt{1-f}$ ignored.

For guidance on the precision of a large number of estimates (in the strata and post strata), with different sizes of samples, data is Table A, which contains the maximum limits of error which, assuming a normal distribution approximation estimator $\hat{p}$, expected with a 95% reliability of parameter estimates for each sample size.

Table A. Limits the maximum error $(\mp Z_{\gamma/2}\sqrt{(\hat{p}(1-\hat{p})/\sqrt{n})}$ with $(1-\gamma)$ =0.95

Sample size	$(\mp 1.96\frac{0.5}{\sqrt{n}})$
25	∓ 20.0%
30	∓ 17.9%
40	∓ 15.5%
50	∓ 14.2%
60	∓ 12.7%
75	∓ 11.5%
100	∓ 10.0%

However, in the case of planned strata, estimates the proportion of population p data stratified sample calculated using the following formula:

$$p_{st} = \sum_{h=1}^{H}\frac{N_h}{N}\hat{p}_h, \quad (3)$$

While the corresponding variance estimates calculated using the following expression:

$$\mathrm{var}(p_{st}) = \sum_{h=1}^{H} W_h^2(1-f_h)\frac{\hat{p}_h(1-\hat{p}_h)}{n_h - 1}, \quad (4)$$

Where $\hat{p}_h = \frac{m_h}{n_h}$ assessor proportion of strata h, N_h the size of strata h, for h =1 ... H, $W_h = \frac{N_h}{N}$

$f_h = \frac{n_h}{N_h}$ fraction of the elections and what is worth for any allocation for whatever number of strata, see Kish (1965). Fraction f_h ignored when less than 0.05.

3.2. Characteristics of companies in the sample

Most of the enterprises included in the sample are in Belgrade (40.59%) from Vojvodina (19.80%), Šumadija and western Serbia (11.88%), southern Serbia (8.91%), eastern Serbia (10, 89%) and partially Central Serbia (7.93%).

In this survey are included medium and large Serbian companies where the "number of employees" the primary factor for determining the size of the company. According to the classification of the European Union, companies can been classified as large companies if they have more than 250 employees and the group of medium-sized if you have more than 50 to more than 250 employees so that the criterion used in the research. The average number of employees in surveyed companies in 2009 was 1027, with a rather large coefficient of variation of 254%.

At least the company in the sample had only 51 employees and the largest 19,694 (Economic Chamber of the Republic of Serbia). Companies classified into different activities according to the Classification of economic activities based on the European classification of economic activities NACE Rev. 1, which is mandatory for all members of the European Union. More than half of companies in the sample, 53.47% comes from manufacturing. Companies from the construction sector are 14.85% of the sample, retail sale of 11.88%, and while companies from other activities: wholesale trade, hotels and restaurants, transport, storage and communication, real estate, renting and business activities involved in the sample with approximately 19.80% stake in the sample. Given the sample size of 101 companies, NACE classification is too detailed, and the company wills was be classified into two categories:

1. Industrial companies, which include manufacturing, gas, electricity and water and construction;
2. Commercial and service businesses, which include wholesale and retail trade, hotels and restaurants, transport, storage and communication, and real estate, renting and business activities.

Most of the enterprises belong to the group of industrial companies (over half), and a smaller number are trade and service companies (Table 1).

Table 1. Companies in the sample by group activities

ACTIVITIES	Number of companies	Percentages
Industrial Companies	69	68,32
The trade and service companies	32	31,68
Total	101	100

The study examined the age, or reputation of the company. The oldest old company is 172, and the youngest just 4 years. The average age of 39.14 years, the company is the coefficient of variation of 92%. Approximately one half of the companies are under 25 years of age (50 companies - 49, 5%), and it is a little over 75 years (the company with a long tradition and great reputation - 14, i.e. 13.86%).

Companies ranging from 26 to 75 years are 37, i.e. 36.64% of the total number of surveyed companies. The number of firms in the sample who registered as joint stock companies is 50 (49.50%), while limited liability companies a little less, i.e. 40 (39.60%). Further, the sample is 8.92% of companies that are public companies and 1.98% of companies that belong to the social.

Of the studied companies that registered as joint stock companies, shares of companies only in a minority of cases listed on the Stock Exchange (22.22%). For other companies the respondents answered that the shares not quoted on the Stock Exchange or "not know ", with a high probability that these companies are not even launched its shares on the market. The lowest total income researched the company for about 7 million Dins (Serbian), and the largest about 118 billion Dins. The average

total income was 6.6 billion Dins with a coefficient of variation 99.9%. Distribution of companies according to total income, indicating that most companies in a range over 1 billion Dins (46.54%). Less than 50 million diners have nine companies i.e. 8.91% and between 50 million din to 1 billion, 45 companies, which amounts to 44.55% of the company.

In the questionnaire, respondents asked about whether or not increasing the total revenue in their company over the previous year. In the majority of the studied companies (47.54%) total revenue growth, a smaller number of companies (19.65%) fall in total revenue over the previous year while 32.81% responded that the revenue is almost the same as last year.

According to the respondents, as much as 80% of the company generally has a good financial situation of the company. In a small number of companies is a very bad financial situation (2%), mostly bad (10.9%) or very good (6.9%).

In terms of generating sales, the majority of companies operate in most European markets (39.73%), and many of them operate on the Serbian market (35.79%). Only a small number of companies have a strong market position in the regional (14.21%) or international (10.27%) market.

Average share of exports in total revenue of the company is quite large and is as high as 54.95%, but should take into account that the answer to this question, only 64 companies, and that the standard deviation of 30.74% and the coefficient of variation of 56%. Other companies that have not responded to this question, most likely have a small share of exports in total revenue, or even do not export, so the real average share of exports should be lower.

According to the structure of funding is the largest average share of financing from own resources (79.87%), followed by the financing bank loans (29.96%). Great is the average share of funding from other sources (57.67%), but this source of funding has led only six subjects. In assessing the representative ness of the average share of funding from its own funds and bank loans is necessary to take into account the large dispersion of the share of bank loans (the standard deviation of 25.9 and coefficient of variation of 86%), and shares of other sources (standard deviation and coefficient of 46.3 variation of 80%).

A significant number of the studied companies use in their business systems for quality management according to ISO (57.42%). Total 15.90% of companies will soon receive ISO certification and the management company has decided to 4% of the studied companies or is considering implementing the 2.88% of companies). Almost 20 companies (19.80%) management does not consider the introduction of ISO standards.

Financial Controlling is carried out in most of the studied companies, including the nearly three-quarters (there is an organizational unit of 10.95%, controlling by another 41.63% units in the studied companies, controlling external consultant performs at 21.86% of companies in the sample). So, in a small number of companies there is an organizational unit for controlling, while in most of the controlling company by another unit (for example, accounting or finance) or an external consultant or auditor. It should be noted that a quarter of companies do not conduct financial controlling.

3.3. Characteristics of respondents

Focused on collateral from financial risk, and therefore conducted an interview with a person who is best versed in the subject. Respondent was in most cases the head of accounting or financial officer. The largest number of respondents was female (71.34%), and males only one-third.

The youngest participant is 26 years old and the oldest 62nd the average age was 45.73 years, with a low standard deviation of only 8.24 years and the coefficient of variation of 18%. However, the distribution of respondents by age group shows a different picture, because even though 40.6% of respondents have more than 50 years, and the distribution of respondents by age right asymmetric.

The largest number of respondents had completed university, academy or high school (68.4%). Much fewer respondents completed high school (15.8%), and only a small number of respondents have a secondary school or high school. In addition, very few respondents have masters or doctoral degree. Faculty of Economics ware often referred to as an educational institution at which the participants gained a diploma (68.4%), followed by higher school of economics (15.5%).

4. ANALYSIS OF RESEARCH RESULTS

4.1. Impact of financial risk to the business enterprise

For research purposes the financial risks classified into four groups: liquidity risk, currency risk, interest rate risk and price risk. Respondents was asked to indicate the extent to which certain types of risks affect their business, where they were offered answered negatively affected, somewhat difficult, slightly difficult, and not at all difficult business.

Liquidity risk in most cases a negative effect on business, because of the liquidity crisis in which the Serbian economy is in years. The largest number of companies believe that the currency risk of a negative effect on their business, possibly as a result of the fact that, because of the possibility of holding foreign currency deposits of enterprises, in recent years the rate of less predictable. Most enterprises believe that interest rate slightly or somewhat more difficult business, and the same applies to price risk.

Table 2. Structure of companies in the sample under the influence of certain types of risks to the business

Impact of risk	Types of risk			
	Liquidity risk	**Currency risk**	**Interest rate risk**	**Price risk**
Not at all difficult business (1)	8%	11%	13%	9%
Slightly more difficult business (2)	21%	20%	33%	33%
Somewhat difficult business (3)	34%	32%	35%	35%
Very negative impact (4)	37%	37%	19%	23%
Total	**100%**	**100%**	**100%**	**100%**

4.2. The use of hedging instruments of financial risks

Services of banks used in the third investigated Serbian companies, followed by services of insurance companies, which use dozens of companies. It turned out that these subjects in more than half the cases are satisfied or very satisfied. A small number of respondents were dissatisfied or somewhat satisfied with the services of banks. Very few companies use the services of investment funds, financial consultants or other organizations. Few users of their services are generally satisfied or very satisfied. Instruments protect against financial risks are used in two-fifths of companies (40.6%); much less the company has developed a clear policy of hedging.

Table 3. Using instruments to protect against risk (n = 101)

Instrument	**Knows**	**Use**
Liquidity risk		
Analysis of cash flow investing activities	30%	27%
Analysis of individual components of assets and liabilities by source of funds	28%	25%
Analysis of the creditworthiness	42%	23%
Currency risk		
Forward foreign exchange contracts (Currency futures)	17%	15%
Policy sales prices	16%	14%
Forward foreign exchange business (Currency forward)	12%	11%
Harmonization of Payment (leading and lagging)	11%	10%
Management of assets and liabilities	10%	10%
Natural insurance, i.e. linking payments (netting)	9%	5%
Currency exchange (Currency swap)	8%	8%
Currency options	8%	7%
Interest rate risk		
Harmonization of maturity and duration	8%	8%
Interest rate futures contract	7%	6%
Exchange rate (Interest rate swap)	5%	4%
Interest rate risk management in the money market	4%	4%
Currency futures work (Forward rate agreements)	4%	3%
Interest rate options	3%	3%
The interest cap, collar or bottom	3%	2%

Respondents asked to the selected method of protection against risks to state whether they know and/or used (not analyzed in this paper hedging of price risk).

Instrument of protection against liquidity risk about one-third of respondents know (30%) and cash flow analysis used investing activities (27%) and analysis of certain parts of assets and liabilities according to sources familiar with the funds 28% of respondents while 25% used. On the other hand, analysis of credit known by as many as 42% of respondents, but it uses only 23%.

Instrument of protection against currency risk is usually known (17%) and benefits (15%) currency futures contract, a similar situation with the policy of selling price. Something less known (12%), benefits (11%) forward foreign exchange business, and the approximate percent of the measured alignment of payment and management of assets and liabilities. In less than 10% of the company are experts familiar with the linking of payments, currency substitution and currency options, and be used by companies of 5-8%. An instrument to protect against interest rate risk was very rarely use in Serbian companies. He is best known and most used alignment maturity and duration, but only 8% of the investigated companies. Interest rate futures contract known 7%, while it uses 6% of respondents, while other instruments known and used less than 5% of respondents.

Respondents asked to state the reasons for not using instruments of protection against financial risks and in most cases state that hedging instruments are not well known. Very large number of respondents believes that the instruments are not efficient, and other reasons rarely mentioned. On the other hand, almost half of respondents did not want additional training on financial risk, which means that respondents do not use instruments because they poorly known, nor wish to be was trained on them.

4.3. Correlation characteristics of the company and use the instruments of financial risk management

The research results of methods of managing financial risks analyzed through the correlation of management of financial risks and the following company features:

(1) General characteristics of enterprises,
(2) The basic characteristics for the classification of companies,
(3) Monitoring trends in contemporary management,
(4) Using the services of financial institutions,
(5) Orientation of enterprises into the international market,
(6) Functions of financial manager.

A company divided into two groups: companies that said to use the instruments of protection against financial risk (41 companies) and companies that said to not use (60 companies). These two groups would compare the company to test the association of selected characteristics of enterprises and the use of hedging instruments. The exception is the testing of hypotheses about the relationship of business enterprise and using the services of financial institutions, when the comparable features of companies that use the services of banks to protect against risk (29 companies) and who do not use bank services (72 companies).

4.3.1. General characteristics of Serbian companies that manage financial risks

General characteristics of enterprises for the purpose of this study defined as the primary activity of the company, ownership, the proportion of small shareholders in the ownership structure and reputation of the company. Examine the hypotheses that examine the connection between the general features of Serbian companies and the use of instruments of protection against financial risks, which listed in the introductory part of the paper.

Companies to a lesser extent, differ according to their activity and use of instruments to protect against financial risk. Most companies that use the instruments of protection against financial risks come from the manufacturing industry, construction and retail trade. Companies that do not manage financial risks also come up in manufacturing, construction and retail trade. However, this group has many companies from the tourism sector, and real estate, renting and business activities.

Table 4. The percentage of companies in the sample by use of instruments of protection against financial risk and by activities (NACE classification)

Basic business enterprises	Used	Not used	Total
Manufacturing	34,7%	18,8 %	53,5%
Supply of gas, electricity and water		0,9%	0,9%
Construction	3,9%	10,9%	14,8%
Retail	6,2%	4,8%	11,0%
Wholesale	2,4%	1,4%	3,8%
Hotels and restaurants	0,6%	2,1%	2,7%
Transport, storage and communication	5,4%	4,9%	10,3%
Real estate, renting and business activities	0,3%	2,7%	3%
Total	53,5%	46,5 %	100%

In certain categories of activities were less than 5 businesses, so it will be for the purpose of testing the statistical significance of companies (101 companies) grouped according to sectors in the industrial, commercial and service, as described in part, on the characteristics of companies in the cause. *Conducted a Pearson chi-square test (χ2), which showed no statistically significant correlation between the activities of the company and managing financial risk (chi-square = 0.818, p-value = 0365).*

Table 5. The number of firms in the sample by use of hedging instruments by group activities

Industries	Used	Not used	Total
Industrial Companies	39	30	69
The trade and service companies	15	17	32
Total	54	47	101

Table 6. The number of firms in the sample by use of hedging instruments with regard to the form of property

Form property	Used	Not used	Total
Joint-stock company (a.d.)	27	23	50
Limited Liability Company (d.o.o.)	16	24	40
Public Companies (j.p.) and social enterprises (d.p.)	6	5	11
Total	49	52	101

Companies that use hedging instruments often registered as joint stock companies from companies that do not manage financial risks. *Conducted a Pearson chi-square test showed that there was no statistically significant correlation between the types of ownership of enterprises and financial risks management (chi-square = 1.923, p-value = 0.382).*

Sample included respondents from companies that registered as joint stock companies asked to indicate the structure of ownership with respect to a portion of the state, small shareholders and large shareholders. Average share of large shareholders in companies that registered as joint stock companies was 51.23% (25), an average annual share of state from 27.78% (14), and the lowest average share of small shareholders of 20.99% (11). It can be concluded that the largest share owned by a.d. type have large shareholders.

Table 7. The number of firms in the sample by using hedging instruments with respect to share ownership of small shareholders

Small shareholders	Used	Not used	Total
Small shareholders have an ownership stake	3	4	7
Small shareholders have no ownership stake	2	2	4
Total	5	6	11

The assumption of the study was that companies in the ownership structure of small shareholders are increasingly using methods of protection against the risk of companies that do not. Hypothesis was rejected because it was conducted Pearson's chi-square test showed that there *was no statistically significant correlation between the management of financial risks and the share of small*

shareholders in the ownership structure even at a high theoretical level of significance (chi-square = 0.052, p-value = 0.819).

Reputation of the company measured by its age since its establishment, which means that the tradition of the company's reputation measures. The average age of companies that use hedging instruments was 41.59 years and average age of companies that do not manage financial risks is 36.79 years. Conducted a t-test differences mean age enterprises with regard to the use of hedging instruments and concluded that *there was no statistically significant difference between the average age of companies that use hedging instruments and the average age of companies that do not use (t = 0.953, p-value = 0.341).*

Table 8. Reputation of the company (average age) of the company with respect to the use of hedging instruments

Using instruments	The average age of companies	Standard deviation
Used	41,59	36,27
Not used	36,79	35,27

4.3.2. Correlation between categories of financial risk management with the basic features for classification of enterprises

Basic characteristics to classify companies as size and movement of total revenue, the financial situation of the firm and firm size expressed in number of employees. In this section, examine the hypothesis about the connection between categories of financial risk management with the basic features for classification of companies listed in the first part.

Companies that use-hedging instruments have a much higher average total income (9.671 million Dins) from the companies that do not manage financial risks (3.131 million Dins). He taken to t - test the differences of average total income due to the use of hedging instruments. *They conclude that there is a statistically significant difference between the average size of the total income of the company to use instruments of protection from financial risk and the average size of the total income of the company that does not use such instruments to the probability of error of 0.10 (t = 1.789, p-value = 0.059).*

Table 9. The average total income of companies in the sample with respect to the use of hedging instruments

Using instruments	Average total income	Standard deviation	Standard Error Mean
Used	9671152296	1549347902	154163970,3
Not used	3131873277	1007845546	100283138,9

In companies that use the instruments of protection against financial risks total revenue in the current year growth of more frequent (34 companies) than is the case with companies who do not manage financial risks (14 companies). On the other hand, companies that do not use hedging instruments often stagnated by the size of total income (12 companies) than is the case with companies that actively manage financial risks (7 companies). *Pearson Chi-square test showed a statistically significant correlation of movement of total revenue and managing financial risks with probability α = 0.01 (chi-square = 9.029, p-value = 0.001).*

Table 10. The number of firms in the sample by use of hedging instruments with regard to the movement of total revenue in the current year compared to previous

Development of total revenues	Used	Not used	Total
Growth	34	14	48
Remain at the same level of total income	7	12	19
Fall	15	19	34
Total	56	45	101

However, at first glance there is the big difference as far as the financial situation of enterprises and the use of instruments of protection against financial risk. The financial situation in enterprises that manage the risks in most cases is generally good (82.9%), but similar situations and

with companies that do not use protective measures (78.3%). In other categories, there are also big differences.

Table 11. The number of firms in the sample by use of hedging instruments with regard to the financial situation of the company

The financial situation	Used	Not used	Total
Very bad	1	1	2
Mostly bad	5	6	11
Mostly good	43	38	81
Very good	3	4	7
Total	52	49	101

For testing statistical significance, due to the small number of companies by groups connected to the category of very poor and mostly poor and mostly good categories and very good. *Conducted Pearson's chi-square test showed that the sample did not provide enough arguments to reject the null hypothesis according to which there is no statistically significant correlation between assessed financial situation in the company and managing financial risk (chi-square = 0.17, p-value = 0.680).*

Table 12. The number of firms in the sample by use of hedging instruments with regard to the financial situation of the company - fewer categories

The financial situation	Used	Not used	Total
Very or mostly bad	6	7	13
Very or mostly good	46	42	88
Total	52	49	101

The average number of employees is much higher in the studied companies that use hedging instruments (1,277 workers) in relation to companies that do not manage financial risks (945 employees). Conducted a t-test differences of the average number of employees with respect to the use of hedging instruments, and it was concluded *that there was no statistically significant difference between the average number of employees in firms that use hedging instruments and the average number of employees in companies who do not (t = 0.89, p-value = 0.187).*

Table 13. The average number of employees in the sample with respect to the use of instruments of protection from financial risk

Using instruments	The average number of employees	Standard deviation	Standard Error Mean
Used	1277	219,49	21,84
Not used	945	261,33	26,00

Companies that use hedging instruments often fall into the group of large enterprises in terms of number of employees (56.1%), while among the companies that do not manage risk more medium-sized enterprises (55%). *According to Pearson chi - square test there was no statistically significant correlation between firm size (measured by number of employees) and the use of hedging instruments (chi-square = 0.8, p-value = 0.371).*

Table 14. The number of firms in the sample by use of hedging instruments with regard to the size of the company

Company Size	Used	Not used	Total
Medium Enterprise (51-250 employees)	23	28	51
Large Enterprise (more 250 employees)	27	23	50
Total	50	51	101

4.3.3. With contemporary management trends and management practices in Serbian companies

Modern management trends specified for the purposes of this study as the use of quality systems, development of financial controlling and the need for additional training in the company. Models of Excellence (Business Excellence) rest on some of the quality system: ISO standards, "Six

Sigma" approach, Total Quality Management, or TQM, or the Japanese system of business improvement methodology for "20 keys" or the like. The first part set out the hypotheses about the connection between modern management trends and risk management practices, which will now been tested.

Companies that use hedging instruments more frequently (63.3%) are certified by the ISO norm (for any of the standards: ISO 9001, ISO 9002, ISO 9003 or ISO 14000 and it was in the company or at least in some parts of) compared to companies that do not manage financial risks (52.6%). Companies that manage financial risks are also more active and positively oriented towards the quality system (whether the company is in the process of obtaining ISO certification, or if the only decision taken management to be in to go, or at least thinking about the management quality system). Conversely, companies that do not use hedging instruments also often do not even consider the introduction of ISO standards.

Table 15. The number of firms in the sample by use of hedging instruments with respect to the state system of quality

Quality System	Used	Not used	Total
The company has ISO	32	26	58
The company is in the process of obtaining ISO	10	6	16
Management has just decided to introduce ISO	1	3	4
Management is considering introducing ISO	1	2	3
Management does not think about ISO	8	12	20
Total	52	49	101

For testing statistical significance, due to the small number of companies by groups, are connected to related categories of Table 15, as shown in Table 16 *Pearson's chi-square test showed that there was no statistically significant correlation between the state system of quality management and financial risk (chi-square = 1.376, p-value = 0.502).*

Table 16. The number of firms in the sample by use of hedging instruments with respect to the state system of quality (combined categories)

Quality System	Used	Not used	Total
The company has ISO	32	26	58
The company is in the process of obtaining ISO	12	11	23
Management does not think about ISO	8	12	20
Total	52	49	101

Companies that use hedging instruments often implemented financial controlling in any organizational form. For testing companies merged into two categories: companies that have the financial controlling and companies that do not.

Table 17. The number of firms in the sample by use of hedging instruments with regard to the development of the functions of financial controlling

Performance of financial controlling	Used	Not used	Total
There is an organizational unit for controlling	6	5	11
Controlling by another unit	24	18	42
External consultant / auditor	12	10	22
Does not give effect to the financial controlling	8	18	26
Total	50	51	101

Table 18. The number of firms in the sample by use of hedging instruments with regard to controlling the function of financial development - fewer categories

Performance of financial controlling	Used	Not used	Total
Implements the financial controlling	42	33	75
Does not give effect to the financial controlling	8	18	26
Total	50	51	101

Conducted a *Pearson chi-square test showed a statistically significant correlation implementation of financial controlling and managing financial risks with probability of error of 0.05 (chi-square = 4.917, p-value = 0.026).*

Interestingly, the studied companies that already use the instruments of protection against financial risks often express the need for additional training in this area. Probably this is the case that the managers of these companies are aware of the dangers that their company has the financial risks, and measures of partial knowledge is not enough, and these are additionally want to learn. However, the difference between companies that use and that do not use hedging instruments is not great. *Pearson's chi-square test confirmed that there was no statistically significant correlation between the management of financial risks and the need for additional education about them (chi-square = 0.256, p-value = 0.612).*

Table 19. The number of firms in the sample by using hedging instruments and the need for additional training on financial risk

The need for education	Used	Not used	Total
There is a need for additional education	25	22	47
There is no need for additional education	26	28	54
Total	51	50	101

Table 20. The number of firms in the sample by using hedging instruments is considering listing shares on the stock exchange

Listing of shares	Used	Not used	Total
The shares are quoted on the Stock Exchange	12	10	22
Shares are not quoted on the Stock Exchange	31	48	79
Total	43	58	101

4.3.4. Using the services of financial institutions by the entrepreneurs and the connection to the management of financial risks

Protection against financial risks is much more effective if they use the services of financial institutions. There are three hypotheses about the connection using the services of financial institutions by the entrepreneurs and management of financial risks, which will now, been tested.

It assumed that the average total income of companies who use the services of financial institutions for protection from the risk of higher than companies that do not use such services. The research confirmed this hypothesis.

He taken to t - test the differences of average total income with respect to the use of services of financial institutions. It was concluded that there *was no statistically significant difference between the average total income of the company who use the services of financial institutions and the average total income of the company that these services are not used with probability α = 0.05 (t = 1.26, p-value = 0192).*

Table 21. The average total income of companies in the sample with respect to the use of the services of different banks and financial institutions

Use of services	Mean	Standard deviation	Standard Error Mean
Do not use the services of financial institutions	15957074967	4902005589	487761750,2
Use the services of financial institutions	7183924800	4947081524	492246917,8

Companies that use the services of financial institutions to assess patients more likely to have revenue growth in the current year compared to last, less their incomes remain at the same level or fall, but it is the case with companies who do not use the services of financial institutions. *Pearson's chi-*

square test showed a statistically significant correlation between growth in total income and using the services of financial institutions with probability α = 0.01 (chi-square = 11.304, p-value = 0.0035).

Table 22. The number of firms in the sample by using the services of financial institutions and assess the growth of total income (the previous 2008.)

Development of total revenues	Do not use services	Use services	Total
Growth	13	35	48
Remain at the same level	20	13	33
Fall	12	8	20
Total	45	56	101

The financial situation of the researched companies that use the services of financial institutions is somewhat better than the situation of companies that do not use such services. *Conducted a Pearson chi-square test showed that there is no statistical relationship between the financial situation of enterprises and management of financial risks (chi-square = 4.199, p-value = 0.240).*

Table 23. The number of firms in the sample according to the financial situation of the company is considering using the services of financial institutions

The financial situation	Do not use services	Use services	Total
Very bad	2	4	6
Mostly bad	8	3	11
Mostly good	32	43	75
Very good	5	4	9
Total	47	54	101

The average share of bank loans in the structure of financing of the company is somewhat higher in the studied companies that manage financial risks. He taken to t - test the differences of average share of loans with respect to the use of instruments to protect against risks. It was concluded that *there was no statistically significant difference between the average share of banks in the structure of financing companies that use hedging instruments and the average share of banks in the structure of financing companies who do not (t = 0.527, p-value = 0.600).*

Table 24. The average share of bank loans in the structure of financing sources in the enterprise

Using instruments	Average share of loan	Standard deviation	Standard Error Mean
Used	32,16	23,53	4,71
Not used	28,74	27,32	4,07

Listing of shares on the stock market is more common in those companies in the sample that use hedging instruments. However, this difference is not great. *Conducted a Pearson chi-square test showed that there was no statistically significant correlation between the types of ownership of enterprises and financial risks management (chi-square = 1.649, p-value = 0.199).*

4.3.5. Orientation of enterprises into the international market and financial risk management

Investigated companies operating in world markets more exposed to financial risks of companies that are strictly oriented to the domestic market. Posted two hypotheses described in the introduction, which will now been tested. There is a big difference in the use of hedging instruments with respect to market size. However, companies that focused on regional, European and international market are more interested in the protection against financial risk. *Conducted a Pearson chi-square test showed that there was no statistically significant correlation between market size and management of financial risks (chi-square = 7.704, p-value = 0.052).*

Table 25. The number of firms in the sample by use of hedging instruments With regard to the size of the market

Market	Used	Not used	Total
Serbian	10	26	36
Regional	9	5	14
European	21	19	40
Internationally	6	5	11
Total	46	55	101

Average share of exports in total revenue was slightly higher in the studied companies that manage financial risks. He taken to t - test the differences of average share of exports with respect to the use of instruments to protect against risks. They conclude that *there is no statistically significant difference between the average share of exports in total revenue of companies that use hedging instruments and the average share of exports in total revenue of companies that do not use such instruments (t = 0.476, p-value = 0.636).*

Table 26. Average share of exports in total revenue due to the use of hedging instruments

Using instruments	The average share of exports	Standard deviation	Standard Error Mean
Used	53,89	31,52	5,96
Not used	50,04	32,58	5,43

4.4. Correlation characteristics of managers and the use of instruments of protection against financial risks

Characteristics of managers could influence the use of hedging instruments. For example, one might assume that younger and more educated managers are more likely to use hedging instruments. Hypotheses have been set in the introduction that will be test by comparing the characteristics of managers. Equal the distribution of managers by gender and use of instruments of protection against financial risk. *Pearson's chi-square test confirmed that there was no statistically significant relationships between the gender managers and risk management (chi-square = 0.835, p-value = 0.361). The same is true of research results and for the age managers (chi-square = 0.367, p-value = 0.985).*

Table 27. The percentage of companies in the sample by use of hedging Instruments with regard to gender manager

Gender	Used	Not used	Total
Male	31,7%	26,7%	28%
Female	68,3%	73%	71,3%
Total	100%	100%	100%

Table 28. The percentage of companies in the sample by use of instruments of protection against risk with regard to the age managers

Age Manager	Used	Not used	Total
Do 35 years	12,5%	13,3%	13,0%
35-40 years	17,5%	13,3%	15,0%
40-45 years	20,0%	20,0%	20,0%
45-50 years	10,0%	11,7%	11,0%
More than 50 years	40,0%	41,7%	40,0%
Total	100%	100%	100%

Conclusion of the year confirmed by calculating the average ages of both groups were very similar. Conducted a t-test differences in average age of managers with respect to the use of instruments to hedge and came to the conclusion that *there was no statistically significant difference between the average age of managers who use hedging instruments and the average age of managers who do not use (t = 0.474, p-value = 0.637).*

Table 29. The average manager with respect to the use of hedging instruments

Using the instrument	The average age of managers	Standard deviation	Standard Error Mean
Used	45,25	7,54	1,19
Not used	46,05	8,72	1,13

Education level managers could be crucial for the use of hedging instruments. It can be seen from Table 30 that the managers who have completed college, academy or college, and managers with a master degree and doctorate significantly more likely to use hedging instruments.

Table 30. Number of managers in the sample by use of hedging instruments with regard to their education

Education level	Used	Not used	Total
Middle School	243	598	841
Gymnasium	420	378	798
High school	1287	1960	3247
Faculty, Academy	28763	14837	43600
M Phil and PhD	112	50	162
Total	30825	17823	48648

For the purposes of testing this hypothesis, managers grouped in two sets with regard to education: (1) managers who have education below the college and (2) managers who have at least a university degree. *Pearson's chi-square test showed a statistically significant correlation with probability $\alpha = 0.05$ between manager's education and the use of hedging instruments (chi-square = 5.09, p-value = 0.024).*

Table 31. Managers with regard to education and financial risk management

Education level	Used	Not used	Total
High school or less education	6,33%	16,47%	10,04%
Faculty and higher education	93,67%	83,53%	89,96%
Total	100%	100%	100%

4.5. Analysis of the impact of financial risk to the business enterprises of different characteristics

Analysis of the impact of different types of risks for companies by region, industry, company size and market determines which businesses are most and least vulnerable to liquidity risk, foreign exchange, interest rate and price risk. Respondents asked to assess the extent to which individual risks affecting the operations of their companies. Results were as follows:

1. Liquidity risk are the most vulnerable companies in Belgrade and Vojvodina, mid-sized companies, companies from the manufacturing and construction industries and enterprises that operate in most European and international markets.
2. Currency risk are the most vulnerable companies from Vojvodina and part of central Serbia, a medium-sized enterprises, enterprises in manufacturing and retail trade and hotels and restaurants and businesses that operate in the most international and regional markets.
3. Interest rate risk are the most vulnerable companies from Vojvodina and Šumadija and western Serbia, a medium-sized enterprises, enterprises in manufacturing and wholesale trade and most companies that operate internationally.
4. Companies operating in southern and eastern Serbia most exposed to price risk. These include companies in manufacturing and wholesale trade and most companies that operate in the domestic and international markets. Medium and large companies alike are at risk from the impact of price risk.

5. PROSPECTS AND RECOMMENDATIONS

The main result of this research is that Serbian companies do not have a clear policy of active risk management. However, similar studies conducted worldwide have shown that the same is true for international companies, even those leading.

According to the results here presented research, Serbian companies recommended the following:

1. Within the company should conduct a thorough education of their financial staff that is not familiar with the issues of financial risk, or hedging instruments to been used. For efficient risk management are necessary and knowledge of the broader market situation, i.e. the interdependence of movement of market factors and elements of building the competitiveness of businesses and the impact of financial market institutions, as well as knowledge of specific hedging instruments. Training should been conducted with care providers, i.e. banks, financial institutions and consultants, and with the help of experts, scientific and educational and scientific institutions.
2. It is useful to create a system of continuous management of their own situation and perspective of risk exposure as well as updates on market protection services, and all with the help of new technologies. Such a system should inter alias contain reports on the effectiveness of action already taken to protect against some of its forms.
3. Entry into the European Union implies high European standards in one of the systems business excellence (e.g. according to ISO). Companies should introduce standards of transparency and oversight of management of financial risks of assisted new information technologies. Such standards should been introduced as part of process control quality system (e.g., total quality management or TQM).

Institutions that offer services for protection against financial risks, including major banks, can accept the following warning conclusions of this study:

1. Instruments of protection against financial risks using only 40% of the investigated companies, and the same proportion of companies want additional training on financial risks. Only about 20% of companies have developed policies to offset the risk, and therefore need the help of appropriate hedging instruments manufacturers and financial consultants in introducing and developing the policy.
2. The main reason why companies do not use methods of risk protection is insufficient information on possibilities, i.e., methods, instruments, measures, mechanisms, and protection of existing services, and the perception of respondents that there are tools that offered under an effective and too expensive.
3. Protection services of the financial risk should be transparent to clients and staff of banks and financial institutions should be accessible, where it is important to their education and kindness. Therefore service providers, especially banks that serve the largest number of clients who are mostly satisfied, you should work on the system information and education, and practical use of such services.
4. Research has shown that there is an association of use of such protection against financial risk and a number of characteristics of companies, national origin, width and other markets. It would be useful to banks and financial institutions and consultants to develop intensive care services, maybe even a particular set specific situations, and they offer a very "vulnerable" to corporate clients.

6. CONCLUSION

Research objectives were to determine the extent to which Serbian medium and large companies use hedging instruments of financial risk and whether there is a difference between the characteristics of companies that these instruments are used or not.

The results of this study are not directly or fully comparable with the research, which several years ago on the topic of financial risk carried out in the world, due to differences in range, both in terms of the set of survey questions, as well as the size and structure of the sample companies. But this common and international studies that examined the financial managers are aware of risk in business, especially financial risk, that politics is seldom clearly defined and often only formally established and reactive and less proactive. Certain functions and risk management are mostly centralized.

It is not yet fully developed awareness of the real risk and its control, the most systematically developed and standardized features "financial risk managers" are absent, and the financial services sector is the only exception. According to the poll here shown, can been summarized that the instruments of protection against financial risks using two-fifths of the companies studied, and the same number of companies want additional training on this. Only one in five companies included in the sample has developed a policy of hedging. Companies often use the services of banks to protect

against financial risk; with those services in more than half, the cases are satisfied or very satisfied. Managers studied most companies fear the risks of liquidity and currency risks, interest rate risk, while the least concerned. The paper examines in detail the companies that based on various characteristics (size, industry, region and market) most at risk of certain types of financial risk.

Respondents spontaneously mentioned that using these hedging instruments: promissory notes, bills of exchange, foreign exchange clauses, guarantees, and insurance quote. Of instruments for the protection against liquidity risk, mostly used in cash flow analysis of investment activity and analyzes the individual components of assets and liabilities according to sources. Of the instruments to protect against currency, risk mostly used currency forward contract (eng. currency futures), the policy of prices and foreign exchange futures transaction (eng. Currency forward). Of the instruments to protect against interest rate risk, the most used alignment maturity and duration, and interest rate futures contract (eng. interest rate futures).

The reasons why companies do not use hedging instruments are insufficient knowledge about risk, and the perception of respondents that they are not sufficiently effective and too expensive. The contribution of this research is to examine the hypothesis that companies that use hedging instruments differ in their characteristics of companies that do not. *We summarize only the main results of the research.*

It turned out that the studied companies that use hedging instruments often registered as joint stock companies, have much higher average income and income from these enterprises often increases over the previous year. Companies with more people being employed more frequently used hedging instruments, the same goes for companies that apply controlling and quality systems in their operations.

A special problem is the use of banking services to offset the risk. Finally yet importantly, the managers of enterprises that use hedging instruments have a higher level of education. Based on these results we can conclude that the use of instruments of protection against financial risks helps successful companies. The only systematic information continuously and proactively monitoring the financial position of the company related to its exposure to the totality of risk can ensure the survival, keeping the position and progress of companies in the turbulent times of domestic conversion, globalization of markets and hence the inevitability of plunging into the rules of competition of international proportions.

The author plans to work in the future the stratification criteria of a company include the available financial criteria, such as total revenue, in order to implement more meaningful research in terms of characteristics and use of instruments of protection against financial risk in Serbian companies.

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