

**THE RELEVANCE OF USING ECONOMIC AND MATHEMATICAL
MODELS IN RISK MANAGEMENT OF FOOD INDUSTRY
ENTERPRISES**

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The existing automatic risk analysis information systems today require a database of various factors which can influence both at the regional and national levels.

The creation of economic and mathematical models of information processing, including incomplete, incorrect, constantly changing data with seasonal factors for the food industry, is relevant.

Thus, when creating economic and mathematical models of management under conditions of uncertainty the following approaches are used: a simulation modeling using gert-networks [1], a VAR-method of assessing of financial risks [2]; stochastic modeling using statistical calculations based on a sufficient amount of statistical information, when it is possible to assess the probability of risk; deterministic modeling in order to identify the most reliable result under conditions where risk factors are identified; game models, when several possible results are created during the implementation of a risk and when the value of the probability of risk is determined with the help of static and strategic games; linguistic models based on fuzzy logic methods using an expert assessment of a degree of uncertainty [3, 4].

As researches have shown, a risk modeling has the following problems: incompleteness of a model; incorrectly specified parameters; overcomplexity; obsolete scenarios and market models; high development, operating and maintenance costs; a high level of interpretational skills is required [5].

Despite limitations and restrictions, a modeling remains one of the most attractive method for predicting of risks and it allows a manager to make a more reasonable decision under conditions of uncertainty.

References

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