Building A Decision Support System Model for Financial Management

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Abstract: with the wide application of financial management decision support system, the financial management system of most enterprises has been effectively improved. At the same time, the efficiency and quality of enterprise financial management are greatly improved. The financial management decision support system can not only improve the level of enterprise financial services, but also improve the intelligence of financial management services, save cost and time, and can more accurately carry out financial management and financial calculation. Actively establish the financial management decision support system can quickly improve the quality of the enterprise financial decision-making, promote the scientific financial management of enterprises, actively change the financial management mode of enterprises, and promote the optimization and development of the financial management decision-making system.

Keywords: financial management; Decision support; System; Model; analysis

1 Introduction

Financial management decision-making is to analyze and select according to the actual financial problems, and extract and analyze the problems of the objects that need decision-making [1]. Financial management decision analysis shall be carried out in chronological order. First, it shall be processed according to the effective information of financial management [2].

Financial management decision-making shall first put forward decision-making problems, second, design financial alternatives, third, select financial decision-making schemes, and fourth, implement financial decisions. The same method of financial information processing can be extracted from these four stages [3]. It is to gather all decision-making problems and decision-making information together to form a complete set of financial information resources while raising financial problems. In the process of financial design alternatives, models and methods needed for financial management decisions can be quickly collected, so that decisions can be quickly processed [4].

When the final result of financial decision is obtained after four stages of processing, it can be accurately applied to specific enterprise financial management decisions to improve the quality of enterprise financial management [5]. The four stages of financial decision-making, as the

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main components of the financial management decision support system, can better build the framework of the financial management system, so that the financial management decision support system can support different levels of financial decision-making events [6].

2 Model structure of decision support system

Support decision-making in a quantitative rather than alternative way. Use a large amount of data and a variety of models to support the decision-making process and provide decision support for users at multiple management levels to support independent and interrelated decisions [7]. For semi-structured decision domain decision support system structure, the combination of multiple models involves a large number of shared and non redundant data files, and it is more appropriate to manage and pass through the database. As shown in Figure 1.

Figure 1: financial flow chart

Decision support system is a multi model, large amount of data, human-computer interaction system [8]. The decision support system has the following functions:

1. solve the semi-structured and unstructured problems often encountered by senior managers.

2. combine analytical models or technologies with traditional data storage and retrieval functions [9].

3. using decision support systems through dialogue

4. be able to adapt to changes in environment and user needs

5. characteristics of decision support system

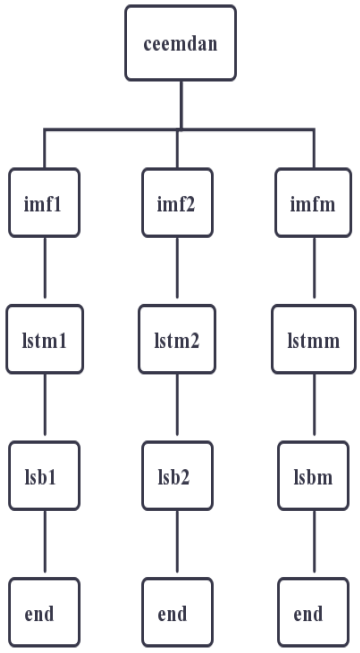

Figure 2: test process of financial support model

The integration of scientific decision-making has been realized. In practical decision-making problems, different models are often used to calculate the same problem. Then select or synthesize the calculation results of these models to get reasonable results [10]. It is a multi model parallel combination decision system [11]. As shown in Figure 2.

The decision-making process needs to use a large number of internal or external data, so a powerful database is a necessary condition for the establishment of a decision support system. Model is not only a method to simplify and express practical problems, but also a powerful method to describe and make decisions [12]. Therefore, modeling can be widely used in problem analysis, model selection, simplification and so on. Problems, even different stages of problem expression [13]. When the model is relatively independent and the data is closed, the organizational structure of the software package should be adopted. As shown in Figure 3.

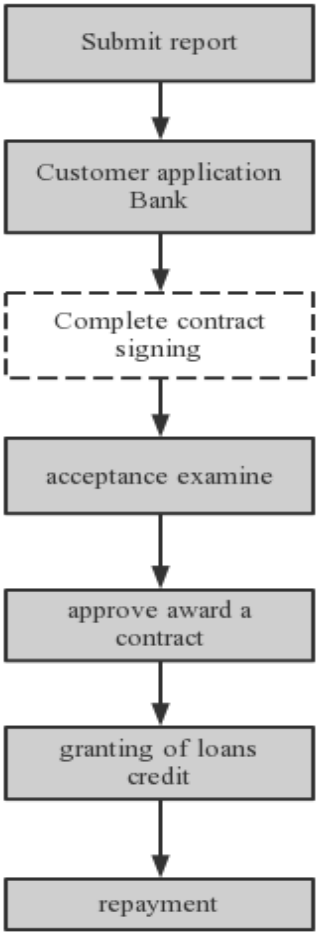

Figure 3: operation mechanism of decision-making program

Financial management decision-making is a complete collection of data, models, methods and structural information, and decision-making is to analyze these information [14]. To form a scientific and reasonable decision-making result, it is necessary to connect these large amounts of data with information resources, and combine these data through the organic combination of system functions, so that they can communicate with the management data in the system and share the financial management decision-making information.

Financial management decision support system can be divided into database management system, model management system, structure management system, method management system and so on. As shown in Figure 4.

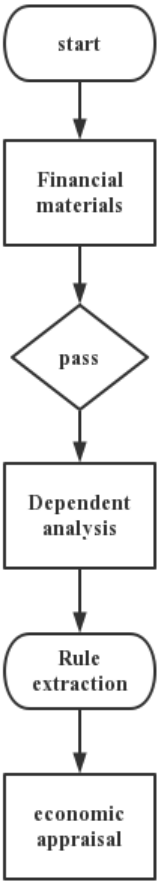

Figure 4: processing system

The financial management decision support system can effectively use the timeliness of data information and arithmetic logic to process and improve the decision information, so as to speed up the processing efficiency of the management system. At the same time, the relationship between the management system and the model base and method base is very close, so the model, management system, method and management system can be regarded as a complete tool system. As shown in Figure 5.

Main process code of the system:

Modulealu (a, b, aluc, r, z);

input [31:0] a, b; //Enter two 32-bit data

input [3:0] aluc; //16 combinations are used to represent 9 operation modes

output [31:0] r; //Output results

output z; //Zero flag bit

```
assign r=cal (a,b,aluc);
assign z=~|r; //Put all 32 bits or of r together and reverse it
function [31:0] cal;
input [31:0] a,b;
input [3:0] aluc;
casex (aluc)
4'bx000:cal=a+b; //add
4'bx100:cal=a-b; //Do subtraction
4'bx001:cal=a&b; //Doing and Computing
4'bx101:cal=a|b; //Do or calculate
4'bx010:cal=a^b; //Do bitwise and operations
4'bx110:cal={b[15:0],16'h0}; //Logical shift left 16 bits
4'bx011:cal=b<<a[4:0]; //Logical shift left [4.. 0] bit
4'b0111:cal=b>>a[4:0]; //Logical shift right [4.. 0] bit
4'b1111:cal=$signed(b)>>>a[4:0]; //Shift arithmetic right by [4.. 0] bits
endcase
endfunction
endmodule
```

Expand 8-bit input to 32-bit:

```
module ext8to32(a,s);
input [7:0] a;
output [31:0] s;
assign s={4{a}}; //Expand a to 32 bits
endmodule
```

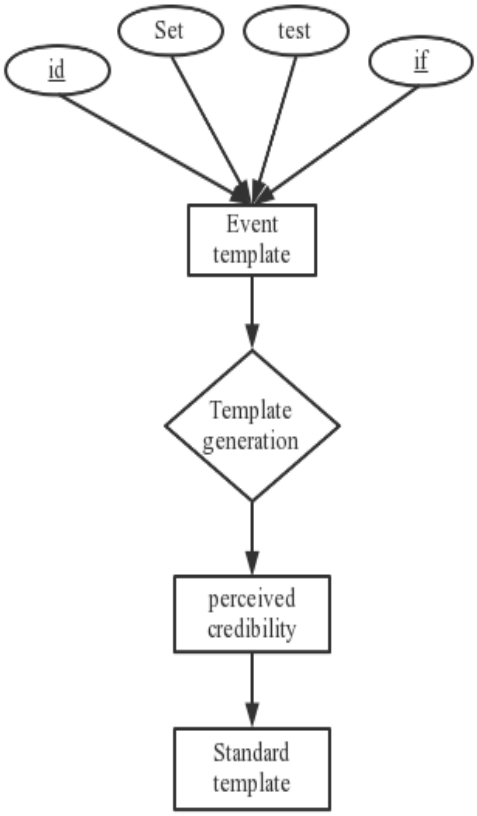

Figure 5: system organization structure

3 Conclusion

Through the analysis of each level of the financial management decision support system model, different functional areas are divided, and the management system is constructed through the functional areas. The model of financial management decision support system can be processed and analyzed at multiple levels, so that each analysis layer can quickly carry out decision deployment and decision analysis, and the financial management decision can be completed more efficiently and quickly.

The financial management decision support system, through the multi-level hierarchical processing mode, greatly improves the timeliness of financial management decisions, improves the accuracy of management decisions, effectively avoids enterprise risks and reduces risk costs. Therefore, we can actively build a financial management decision support system, which can be widely used in the financial management decision-making of enterprises, so as to make the enterprise management more efficient and convenient.

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