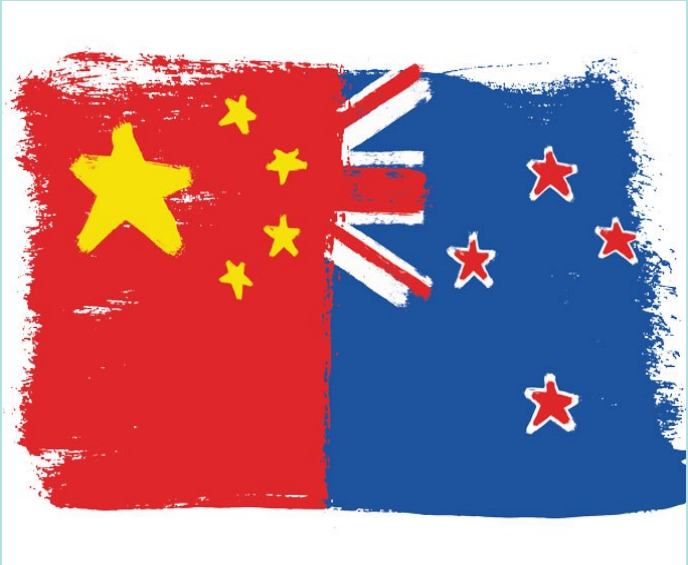# Risk management in mechanical engineering businesses in China and New Zealand (Strategic Risks、Market Risks、Financial Risks)

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I. Introduction

Enterprise risk management refers to the management process of how to minimize the possible adverse effects of risks in a project or a certain risk environment. (Beasley, 2020) Risk management is an important part of modern enterprises. Risk management can help enterprises to anticipate risks and make corresponding adjustments. It is particularly important for multinational companies to understand the risks in the regions they want to invest in. At the same time, it is more important to know how to deal with or reduce the risks in the investment field. To mitigate the risks, it is important to use the hierarchy of controls which include elimination, substitution, engineering controls, administrative controls, and personal protective equipment. For this project, risks involved with Chinese machinery enterprises and New Zealand machinery enterprises were collated, an excel user interface page as established for the data base, to analyze and give solutions. This will make it more convenient for mechanical enterprises of the two countries to consult relevant opinions and solutions when facing risks in the other country.

II. Product—Two versions

Type 1:

The first version has the ability to enable multi criteria filtering of risk level associated with other filtering conditions and displaying multiple search contents. And this version of data filtering is done using normal engineering programming procedures.

Type 2:

This version has the function of single item filtering, and most of the data filtering is done by macro files.

III. Result—Reasons for choosing Type 1

1.Type 1 is available on all tested computers. However, the Type 2 cannot be used on some computers because of the limitation of excel version.

2.The Advantage of Type 1 is that users can easily modify the format of the table to choose a more appropriate size or angle to read the text. Type 1 is more concise and clearer in appearance than the Type 2.

3.For designers, Type 1 has more advantages in terms of updating and filling in content. Designers can input the updated content directly into the data page.
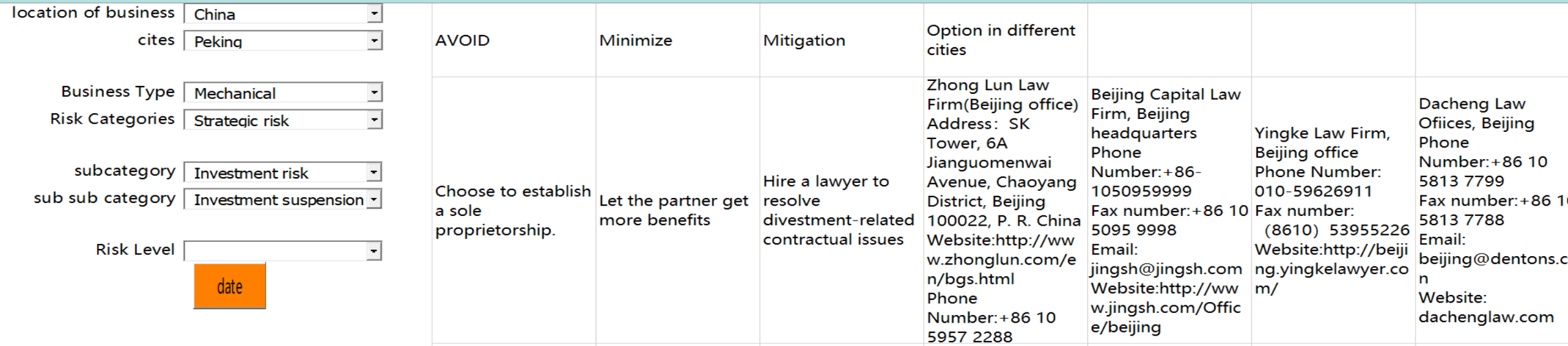

Figure.1:   Excel user interface page—Type 1

Figure.2: Excel user interface page—Type 2

IV. Conclusion

Finally, the project completes the user search interface based on data by using engineering programming technology. Users can search for solutions to possible risks in machinery companies. In the data processing part of the project, the risk is assessed, and the corresponding solutions were investigated. However, there are still many shortcomings in this project. For example, the data must be continually updated in order to remain relevant, as over time the accuracy of the data will reduce. Secondly, different machinery companies may face different risks, and the solutions provided by the project may not solve the customer's problems. The range of data available in the dataset is limited and in risk management, there are always more possible risks to identify. Therefore, the project still has many limitations. To improve the resource created in this project, these limitations must be addressed.

Reference: Beasley, M. (2020). What is Enterprise Risk Management (ERM)? Retrieved from https://erm.ncsu.edu/library/article/what-is-enterprise-risk-management