## Applying the Underwriting Technique to Analyze and Mitigate the Credit Risks in Construction Project Management

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Abstract : Risks management in construction projects is important to ensure the positive feasibility of the projects in which financial risks are most concerned while construction projects always run on a credit basis. Credit risks, therefore, require unique and technical tools to be well managed. Underwriting technique in credit risks, in its most basic sense, refers to the process of evaluating the risks and the potential exposure of losses. Risks analysis and underwriting are applied as a must in banks and financial institutions who are supporters for constructions projects when required. Recently, construction organizations, especially contractors, have recognized the significant increasing of credit risks which caused negative impacts to project performance and profit of construction firms. Despite the successful application of underwriting in banks and financial institutions for many years, there are few contractors who are applying this technique to analyze and mitigate the credit risks of their potential owners before signing contracts with them for delivering their performed services. Thus, contractors have taken credit risks during project implementation which might be not materialized due to the bankruptcy and/or protracted default made by their owners. With this regard, this study proposes a model using the underwriting technique for contractors to analyze and assess credit risks of their owners before making final decisions for the potential construction contracts. Contractor's underwriters are able to analyze and evaluate the subjects such as owner, country, sector, payment terms, financial figures and their related concerns of the credit limit requests in details based on reliable information sources, and then input into the proposed model to have the Overall Assessment Score (OAS). The OAS is as a benchmark for the decision makers to grant the proper limits for the project. The proposed underwriting model is validated by 30 subjects in Asia Pacific region within 5 years to achieve their OAS, and then compare output OAS with their own practical performance in order to evaluate the potential of underwriting model for analyzing and assessing credit risks. The results revealed that the underwriting would be a powerful method to assist contractors in making precise decisions. The contribution of this research is to allow the contractors firstly to develop their own credit risk management model for proactively preventing the credit risks of construction projects and continuously improve and enhance the performance of this function during project implementation. Keywords : underwriting technique, credit risk, risk management, construction project

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