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Insurance industry is a regulated industry. Capital adequacy requirement is the most important area in insurance regulation and supervision of an insurer's insolvency. It is meant to absorb the unexpected losses of an insurance company in order to remain solvent and competitive in the insurance market. In the last two decades, the capital adequacy determination approaches have changed from the traditional "one-size-fits all" approach to risk-based capital (RBC), which reflects insurer's risk profile. The risk-based capital model generally applies a fixed pre-determined percentage to the annual statement amount of an insurance company. The insurance regulator of each country fixes the pre-determined percentage. However, each risk-based capital model has different risks types and risk charges for determining the capital adequacy. Even though many risk-based capital models have been developed, these models fail to take into account the changing and volatile economic conditions. Therefore, the capital cannot be determined adequately and hence cannot provide safety for the insurers. Additionally, the insolvencies problems due to inadequate capital would also not be resolved. Thus, the question of how much capital is enough is still in doubt. In response to that, this study developed a simulation model for determining dynamic risk charges. This study also aimed to model capital adequacy for determining capital adequacy and capital adequacy ratio. Following that, this study investigated the effects of current economic condition towards dynamic risk charges, capital adequacy and capital adequacy ratio. Finally, this

study aimed to identify which dynamic risk charge variables affects the capital adequacy and capital adequacy ratio. The data employed for this study were Kuala Lumpur Composite Index (KLCI), Malaysian Bond Index (MBI), Housing Price Index (HPI), currency rates, bond's yield, duration and mortality rate for the Malaysian population. Several risk measures were selected to determine the risk charges. Then, a simulation procedure was done to transform the risk charges into the dynamic risk charges. The results show that the dynamic risk charges changed over time and a higher risk charges were recorded during the crisis period. This higher dynamic risk charges led to a higher capital adequacy amount during the crisis period. This study also found that the capital adequacy ratio was lower during the crisis period and a higher ratio during the normal period. This study also found the most significant variables that affected capital adequacy and capital adequacy ratio are corporate conventional bond, MGS bond and stocks. Thus, it can be concluded that the new capital adequacy model is a better approach in determining the adequacy of capital as it reflects the ups and downs of the market conditions and helps in better risk management.