ANALYZING THE U.S CREDIT DEFAULT SWAP (CDS) MARKETS: EFFICIENCY, INTERDEPENDENCE, CONTAGION, CAUSAL FLOWS AND ASYMMETRIC DETERMINANTS

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Thesis Submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the School of Maritime Business and Management Universiti Malaysia Terengganu

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DEDICATION

To my dad, you were my inspiration and I love you for making me a good person. To my mother and family, you are my universe. To my lovely wife, we will accomplish the dreams together.

Abstract of the thesis presented to the Senate of Universiti Malaysia Terengganu in the fulfillment of the requirement for degree of Doctor of Philosophy

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The Credit Default Swap (CDS) with its unique characteristic to transfer credit risk has gained considerable attention especially after the financial crises of 2007-08. Extant literature has given less focus to CDS and the pivotal research areas such as efficiency, interdependence, contagion, causal-flows between credit and stock markets and determinants of credit markets are relatively untapped.

In view of the above limitation, this thesis first examines the relative efficiency (power law properties) of the United States of America (U.S) CDS and equity sectors and the mutual interdependence between CDS-equity market pairs. CDS markets are relatively more inefficient as compared to their equity counterparts. The empirical analysis reveals that Basic Materials (Utilities) industry credit market has the highest (lowest) interdependence with other industries. The contagion effects between U.S industry-level credit markets mainly occurred during the global financial crisis of 2007-08.

The Wavelet Squared Coherence (WTC) estimation results show that credit and stock markets are out of phase (counter cyclical) and stock markets lead their credit counterparts. The Banks (Utilities) industry credit and stock markets have relatively high (low) dependence. The causal links are then analyzed through bootstrap rolling window estimations. Bidirectional causalities are found between the credit and stock markets that vary over different sub-samples. Overall business conditions, stock market volatility (VIX), default premia, Treasury bond rate and slope of the yield curve are the major drivers of the CDS-stock nexuses.

Finally, the presence of nonlinearities in the short- and long-run relationships between U.S. industry-wise CDS index spreads and a set of macroeconomic and financial variables, namely industry stock indices, the VIX index, 5-year Treasury bond yields and the crude oil price, is examined using the Nonlinear Autoregressive Distributed Lags (NARDL) approach. The empirical results provide significant evidence of both short- and long-run asymmetries in the linkage between industry CDS spreads and the potential driving factors considered for all industries, confirming the importance of nonlinearity in this context.

The findings provide possible explanation to varying and mixed previous empirical findings in the existing literature, and hence have useful investment implications. The findings of this thesis have relevant implications for investors, speculators, arbitrageurs and policy makers.