

THE IMPACT OF GLOBAL TARIFF PRESSURES AND GEOPOLITICAL CONFLICTS ON CORPORATE DEFAULT RATES

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Article history

Received date : 7-5-2026

Revised date : 8-5-2026

Accepted date : 21-8-2026

Published date : 30-8-2026

To cite this document:

Cheah, C. K., Kong, Y. M., Tan, K. L., Chim, W. K., Ong, H. S., & Foo, C. C. (2026). The impact of global tariff pressures and geopolitical conflicts on corporate default rates. *Journal of Islamic, Social, Economics and Development (JISED)*, 11 (85), 973 – 966.

Abstract: *The escalating intensity of global tariff pressures and geopolitical conflicts in the post-pandemic era has engendered a complex web of macroeconomic dislocations with profound implications for corporate financial stability. Despite a burgeoning body of literature examining trade policy uncertainty and geopolitical risk in isolation, a coherent conceptual framework that systematically links these macro-level triggers to corporate default rates remains conspicuously absent from the scholarly discourse. This paper addresses that lacuna by developing an integrated conceptual framework that maps the pathways through which Global Tariff Pressure Indices (GTPI) and Geopolitical Conflict Indices (GCI) propagate through four transmission channels, namely cost pressure, demand shock, financial market volatility, and supply chain disruption, to elevate firm-level Corporate Default Risk (CDR). Grounded in the structural credit risk tradition of Merton (1974) and its extensions, including the KMV model and the Altman Z-score, the framework synthesises insights from international trade theory, macrofinancial economics, and geopolitical risk scholarship (Caldara & Iacoviello, 2022; Baker, Bloom & Davis, 2016). Six formal propositions are advanced, positing that tariff-induced cost escalation, demand contraction, exchange rate volatility, and supply chain fragmentation each independently and jointly amplify corporate default probabilities, with moderating effects from firm size, sectoral exposure, geographic diversification, and*

institutional quality. The framework carries significant implications for corporate managers in recalibrating hedging strategies and supply chain architecture; for investors and credit rating agencies in integrating geopolitical and tariff risk into credit assessments; and for policymakers in designing counter-cyclical fiscal and trade diplomacy mechanisms. The paper concludes by identifying fertile avenues for empirical validation, including panel data analyses, event study methodologies, and machine learning applications to default prediction.

Keywords: *Corporate default rates, tariff pressures, geopolitical risk, trade policy uncertainty, Merton model, supply chain disruption, deglobalization.*

Introduction

Background of study

The first quarter of the twenty-first century has witnessed an unprecedented unravelling of the liberal international economic order that defined the post-Bretton Woods era. The United States–China trade conflict, inaugurated in 2018 with successive rounds of tariff escalation that ultimately subjected over \$360 billion in bilateral goods to punitive duties, fundamentally disrupted established supply chains and introduced pervasive uncertainty into corporate planning horizons (Fajgelbaum et al., 2020). The outbreak of the Russia–Ukraine war in February 2022 compounded these pressures, triggering sweeping Western sanctions against Russian entities, acute commodity price shocks across energy and agricultural markets, and a realignment of European energy dependency that sent reverberations through industrial value chains globally (Korhonen, 2019). Concurrently, escalating tensions in the Taiwan Strait, trade frictions between the European Union and China over electric vehicles culminating in the European Commission's 2024 imposition of countervailing duties of up to 38 percent on Chinese battery electric vehicle imports (Kee & Xie, 2024), and the progressive "friend-shoring" policies articulated by major economies signal that geoeconomic fragmentation is not a transient phenomenon but rather a structural reconfiguration of the global economic architecture (Aiyar et al., 2023).

Within this turbulent landscape, corporate entities occupy a uniquely exposed position. Firms embedded in globally integrated production networks face simultaneous pressures on their cost structures, revenue streams, access to capital, and operational continuity. The question of how these macro-level disruptions translate into elevated corporate default probabilities is therefore not merely an academic inquiry but one with urgent practical consequences for financial markets, systemic stability, and economic welfare.

Research Problem

Notwithstanding the manifest salience of this issue, the extant literature has developed largely in disciplinary silos, and three distinct gaps motivate the present inquiry. The first concerns what prior default models explain. Structural and reduced-form credit risk models (Altman, 1968; Merton, 1974; Duffie & Singleton, 2012) explain default as a function of firm-level financial ratios, leverage, and asset volatility, conditioned on macroeconomic cycles that enter these models as generic, reduced-form covariates such as GDP growth or aggregate credit spreads (Koopman, Lucas & Schwaab, 2012; Duffie, Saita & Wang, 2007).

The second concerns what these models omit. Because tariff regimes and geopolitical conflicts have historically been absorbed into this generic macroeconomic backdrop, credit risk

scholarship has rarely incorporated the specific mechanisms through which tariff and geopolitical shocks percolate into corporate balance sheets. Conversely, the trade policy uncertainty literature (Baker, Bloom & Davis, 2016; Handley & Limão, 2017) and the geopolitical risk literature (Caldara & Iacoviello, 2022) document the macroeconomic consequences of these phenomena with considerable empirical rigour, but seldom connect their findings directly and systematically to corporate default risk. Each stream therefore stops short of the firm-level credit outcome that is the ultimate concern of the present study.

The third, and most fundamental, concerns why this gap cannot simply be closed by adding a tariff or geopolitical proxy as another macroeconomic control variable. Unlike conventional cyclical covariates such as GDP growth or interest rates, tariff and geopolitical shocks are discrete, policy- and conflict-driven events rather than continuous cyclical ones; they are asymmetric across sectors and geography rather than economy-wide in their incidence; and they propagate through structural channels, including supply chain re-architecture and the severance of trade and counterparty relationships, rather than through aggregate demand or interest-rate transmission alone. Treating them as an undifferentiated macro control therefore obscures rather than clarifies their credit risk implications. This disciplinary fragmentation, compounded by the conflation of a structurally distinct shock class with routine macroeconomic variation, leaves both scholars and practitioners without a unified analytical lens capable of capturing the full causal chain from geopolitical event to corporate insolvency.

Significance of the Study

The practical urgency of bridging this conceptual gap has been sharpened by observable trends in corporate credit markets. Global corporate default rates rose markedly in the aftermath of the 2018–2019 tariff escalations and again in 2022–2023, with Moody's and S&P Global documenting elevated speculative-grade default rates across trade-exposed sectors including manufacturing, automotive, and consumer electronics (Moody's Investors Service, 2023; S&P Global Ratings, 2023). The deglobalization impulse, manifested through reshoring mandates, export controls on strategic technologies including the United States' October 2022 semiconductor export controls targeting China (Bureau of Industry and Security, 2022), and the decoupling of financial systems, threatens to impose permanent structural costs on firms whose business models were optimised for an era of frictionless international commerce (Aiyar et al., 2023). Understanding the credit risk implications of this transition is therefore critical for preserving financial stability in an era of growing economic multipolarity.

Theoretical Anchors

This paper draws on three interconnected bodies of theoretical literature. First, structural and reduced-form credit risk models, most notably the option-theoretic framework of Merton (1974), the commercially implemented KMV model (Crosbie & Bohn, 2002), and the discriminant analysis approach of Altman (1968), provide the micro-financial architecture for understanding how macroeconomic stressors translate into firm-level default probability. Second, international trade theory, encompassing Ricardian comparative advantage, new trade theory (Krugman, 1980), and the political economy of trade policy, furnishes the conceptual tools for analysing the welfare and distributional consequences of tariff interventions. Third, the burgeoning field of geopolitical risk measurement (Caldara & Iacoviello, 2022) and economic policy uncertainty (Baker, Bloom & Davis, 2016) provides the empirical scaffolding for operationalising macro-level stressors.

Research Objectives

This study pursues four principal objectives:

1. To develop a theoretically grounded conceptual framework that articulates the causal pathways from global tariff pressures and geopolitical conflicts to corporate default rates.
2. To identify and characterise the key transmission mechanisms: cost pressure, demand shock, financial market volatility, and supply chain disruption, through which macro-level triggers affect firm-level financial distress.
3. To advance a set of formal propositions that articulate testable hypotheses regarding the relationships between tariff and geopolitical variables and corporate default probability.
4. To delineate the moderating and mediating variables, including firm size, sector, geographic exposure, hedging capacity, and institutional quality, that condition the strength and direction of these relationships.

Research Questions

The study is guided by the following research questions:

1. Through what mechanisms do escalating tariff pressures and geopolitical conflicts increase the probability of corporate default, and how do these mechanisms interact?
2. Which firm-level and institutional characteristics moderate the sensitivity of corporate default risk to tariff and geopolitical shocks?
3. What theoretical extensions to existing credit risk models are necessary to accommodate the macro-level forces of trade policy uncertainty and geopolitical conflict?

Scope and Delimitations

The paper develops a conceptual rather than empirical framework, and as such does not purport to provide definitive quantitative estimates of the relationships under investigation. The analysis focuses principally on non-financial corporations operating in internationally integrated industries, as financial institutions are subject to distinct regulatory and balance sheet dynamics. While the framework is designed to be broadly applicable across national contexts, the illustrative examples are drawn primarily from the US–China trade conflict and the Russia–Ukraine war, given their contemporary salience and the availability of scholarly commentary. The analysis does not extend to sovereign default risk, which is governed by a distinct set of institutional and political determinants.

Literature Review

This review synthesises three literatures that bear on the present inquiry: the credit risk tradition, which explains how firm-level financial deterioration culminates in default; the trade policy uncertainty literature, which documents the macroeconomic consequences of tariff shocks; and the geopolitical risk literature, which documents the macroeconomic consequences of conflict and sanctions. Read independently, each stream is well developed; read together, they leave a specific and unaddressed seam, namely that none traces the mechanisms by which tariff or geopolitical shocks specifically, as distinct from macroeconomic conditions generally, propagate into firm-level default risk. The sections below substantiate this claim in turn, before the closing section draws out its implications for the integrated framework developed in this paper.

Corporate Default Rates: Theoretical Foundations

The scholarly investigation of corporate default has evolved substantially over the past five decades, progressing from early empirical heuristics to sophisticated structural and reduced-form models grounded in financial theory. Robert Merton's (1974) seminal application of option pricing theory to corporate debt constitutes the foundational pillar of the structural credit risk tradition. In the Merton framework, a firm's equity is conceptualised as a European call option

on the firm's assets, with the face value of debt serving as the strike price. Default occurs when the value of assets falls below the value of liabilities at the debt's maturity, and the probability of default is therefore a function of the firm's asset value, asset volatility, leverage ratio, and the risk-free rate. This elegantly parsimonious framework established the principle that corporate default is fundamentally a consequence of deterioration in the relationship between asset values and liability obligations, a principle that remains central to contemporary credit risk analysis (Merton, 1974).

The Merton model was extended and commercially operationalised by Moody's KMV in the form of the Expected Default Frequency (EDF) metric (Crosbie & Bohn, 2002). The KMV model refines the distance-to-default measure by incorporating empirical default frequencies derived from a large proprietary database, thereby translating the theoretical probability of default into an empirically calibrated risk measure. A key contribution of the KMV approach is the recognition that the relevant threshold for default is not necessarily the book value of total liabilities but rather a default point typically estimated as short-term debt plus one-half of long-term debt, reflecting observed patterns of corporate distress and renegotiation (Crosbie & Bohn, 2002).

Parallel to the structural tradition, Edward Altman's (1968) multiple discriminant analysis yielded the iconic Z-score model, which combines five financial ratios: working capital to total assets, retained earnings to total assets, earnings before interest and taxes to total assets, market value of equity to book value of total liabilities, and sales to total assets, into a single composite score capable of discriminating between solvent and distressed firms with considerable predictive accuracy (Altman, 1968). While the Z-score model predates the option-theoretic framework, its enduring practical utility lies in its transparency and its reliance on readily available accounting data. Subsequent refinements by Altman, Haldeman, and Narayanan (1977) and the development of sector-specific variants have extended the model's applicability. Earlier work by Beaver (1966) on univariate financial ratio analysis also demonstrated the predictive power of accounting-based measures in identifying corporate failure.

A complementary strand of credit risk research has developed reduced-form models, pioneered by Jarrow and Turnbull (1995) and Duffie and Singleton (1999, 2012), which treat default as an exogenous Poisson arrival process characterised by a hazard rate. Unlike structural models, which require unobservable asset values, reduced-form models are directly calibrated to observed market prices of credit-risky instruments, rendering them tractable for derivatives pricing and portfolio risk management. The hazard rate in reduced-form models is typically specified as a function of latent state variables, which may include macroeconomic indicators, thereby providing a natural bridge to the macro-financial determinants of default that constitute the focus of the present study.

The role of macroeconomic conditions in driving aggregate default rates has been extensively documented. Koopman, Lucas, and Schwaab (2012) demonstrate that systematic macroeconomic and financial factors account for a substantial proportion of the variation in default rates across credit cycles, with GDP growth, credit spreads, and equity market volatility emerging as particularly robust predictors. Duffie, Saita, and Wang (2007) show that firm-specific covariates, including distance-to-default, profitability, and leverage, interact with macroeconomic conditions in a joint hazard rate model, confirming that both idiosyncratic and systematic factors are indispensable for accurate default prediction. Collectively, this literature establishes that corporate default is not merely a firm-specific phenomenon but is deeply

embedded in the macroeconomic environment, a conclusion that underscores the theoretical plausibility of the linkages investigated in the present framework.

Tariff Pressures and Trade Policy Uncertainty

The economics of tariffs has been a foundational concern of trade theory since Ricardo's formulation of comparative advantage in the early nineteenth century. From a partial equilibrium perspective, a tariff imposed by an importing country raises the domestic price of the affected good, generating welfare transfers from consumers to producers and government, with a net deadweight loss arising from consumption and production distortions (Krugman, Obstfeld & Melitz, 2018). In a general equilibrium context, the welfare consequences are mediated by terms-of-trade effects, retaliation dynamics, and economy-wide factor market adjustments (Fajgelbaum et al., 2020).

At the firm level, the direct impact of tariff increases is an elevation of input costs for firms reliant on imported intermediate goods and raw materials. Using transaction-level import data, Amiti, Redding, and Weinstein (2019) provide compelling evidence that the tariffs imposed during the US–China trade conflict were almost entirely borne by US importers rather than passed through to foreign exporters, implying a direct and substantial cost shock to American firms. Similarly, Fajgelbaum et al. (2020) estimate that the tariffs imposed in 2018–2019 reduced US real income by approximately \$51 billion annually, with manufacturing and agriculture bearing a disproportionate burden.

Beyond the direct cost effects, the scholarly literature has increasingly emphasised the role of trade policy uncertainty (TPU) as a distinct and potent source of macroeconomic disruption. The conceptual foundation for this line of inquiry was laid by Baker, Bloom, and Davis (2016), whose Economic Policy Uncertainty (EPU) index, constructed from newspaper-based measures of policy uncertainty, disagreement among economic forecasters, and the volume of expiring tax provisions, provided the first systematic, cross-country measure of economic policy uncertainty. The authors document a robust negative correlation between elevated EPU and investment, employment, and output, consistent with the real options theory of investment under uncertainty (Dixit & Pindyck, 1994).

Extending this framework to trade policy specifically, Handley and Limão (2017) develop a model in which trade policy uncertainty reduces welfare by inducing option value effects: firms optimally delay export entry and investment in export capacity when facing uncertain future tariff regimes, generating aggregate trade volume reductions even in the absence of actual tariff increases. Caldara, Iacoviello, Molligo, Prestipino, and Raffo (2020) construct a newspaper-based and earnings-call-derived index of trade policy uncertainty and document significant negative effects on business investment and employment in trade-exposed sectors, with their estimates suggesting that the 2018–2019 spike in TPU reduced US GDP by approximately 1 percent. These studies collectively establish that TPU operates as an independent economic depressant beyond the direct effects of tariff implementation.

The financial market consequences of tariff escalation have also received scholarly attention. Fang et al., (2025) find that tariff announcements generate significant negative abnormal returns for firms in directly affected industries, with the magnitude of the equity price reaction corresponding closely to firms' import intensity and export exposure. Gao and Wang (2024) and Caldara et al. (2020) document that credit spreads in trade-exposed sectors widen materially following tariff escalation announcements, suggesting that bond markets rapidly incorporate

tariff risk into assessments of corporate default probability. These findings provide a market-based validation of the theoretical linkages posited in the present framework.

Geopolitical Conflicts and Financial Markets

The systematic measurement and analysis of geopolitical risk has advanced dramatically following the construction of the Geopolitical Risk Index (GRI) by Caldara and Iacoviello (2022). The GRI is derived from text searches of leading international newspapers for references to geopolitical tensions, acts of terrorism, military conflicts, and threats thereof, providing a monthly time series of geopolitical risk intensity from 1900 to the present. The authors document that elevated geopolitical risk is associated with declines in economic activity, investment, and international trade, as well as increases in inflation and oil prices, with effects concentrated in periods of actual military conflict rather than mere rhetorical tension (Caldara & Iacoviello, 2022).

The financial market consequences of geopolitical risk are manifested through multiple channels. Brogaard and Detzel (2015) demonstrate that geopolitical risk commands a significant risk premium in equity markets, with high-GRI environments associated with elevated equity volatility and reduced stock returns. The flight-to-quality phenomenon, defined as the systematic reallocation of capital from risky assets to safe havens such as US Treasury bonds, gold, and the Swiss franc during episodes of geopolitical stress, compresses sovereign bond yields while widening corporate credit spreads, thereby increasing the cost of debt for corporations and tightening financial conditions (Baele, Bekaert & Inghelbrecht, 2010).

Economic sanctions represent a particularly direct mechanism through which geopolitical conflicts translate into corporate financial distress. The sanctions imposed on Russia following its invasion of Ukraine in 2022, including the removal of major Russian banks from the SWIFT payment system, asset freezes on the Russian central bank's foreign exchange reserves, and export controls on advanced technologies, disrupted the financial operations of firms with Russian counterparty exposures, energy supply chains, and commodity procurement channels across Europe and beyond (Itskhoki & Mukhin, 2023). Felbermayr et al. (2020) provide a comprehensive empirical analysis of the trade-reducing effects of sanctions, documenting average bilateral trade reductions of approximately 77 percent between sanctioning and target countries.

The commodity price channel of geopolitical conflicts is of particular relevance to corporate financial distress. Energy and agricultural commodity prices exhibit pronounced sensitivity to geopolitical events, as documented by Hamilton (2013) in the context of oil price shocks and economic recessions. The 2022 Russian invasion of Ukraine triggered a near-doubling of European natural gas prices and a sharp increase in global wheat prices, imposing acute cost pressures on energy-intensive industries and food manufacturers (International Energy Agency, 2022). For firms without adequate commodity price hedging programmes, these shocks translated directly into margin compression and, in extreme cases, liquidity crises.

The literature on political risk and foreign direct investment (Kobrin, 1979; Jensen, 2008) further illuminates the ways in which geopolitical instability disrupts corporate operations by increasing expropriation risk, regulatory unpredictability, and the costs of enforcing contracts across borders. In the contemporary context, the progressive decoupling of technology supply chains between the United States and China, manifested in export controls on semiconductors introduced by the US Department of Commerce in October 2022 and subsequently tightened in

2023 (Bureau of Industry and Security, 2022), and restrictions on Chinese investment in strategic sectors, has forced multinational corporations to undertake costly supply chain restructuring, with implications for capital expenditure, profitability, and balance sheet resilience.

Macro-Financial Transmission Channels

The pathways through which macroeconomic shocks propagate to corporate financial distress have been extensively theorised in the macrofinancial literature. The credit channel, formalised by Bernanke, Gertler, and Gilchrist (1999) in the financial accelerator framework, posits that deterioration in borrower net worth, triggered by adverse macroeconomic shocks, amplifies the initial shock by increasing the external finance premium faced by firms, thereby compressing investment and output in a self-reinforcing spiral. In the context of tariff and geopolitical shocks, the credit channel operates as follows: tariff-induced cost increases and demand shocks reduce corporate cash flows and equity values, eroding the collateral base and creditworthiness of borrowers, which in turn triggers credit tightening by lenders, further amplifying the initial shock (Bernanke, Gertler & Gilchrist, 1999).

The exchange rate channel is of particular relevance for firms with significant foreign currency exposure. Geopolitical conflicts and trade policy uncertainty typically induce exchange rate volatility through multiple pathways: safe-haven capital flows appreciate reserve currency denominations such as the US dollar and Swiss franc; commodity price shocks alter the terms of trade and current account balances of resource-exporting and importing economies; and sanctions and capital controls disrupt the orderly functioning of foreign exchange markets (Fratzscher, 2012). For firms with foreign currency debt obligations or revenue streams denominated in depreciating currencies, exchange rate volatility introduces balance sheet mismatches that can rapidly erode solvency.

Beyond the direct cost effects discussed above, the commodity price channel also operates through revenue effects, illustrating the heterogeneous sectoral impact of geopolitical shocks: firms whose revenues are linked to commodity prices, particularly in extractive industries, may experience windfall gains even as energy- and metal-intensive downstream users face margin compression. This asymmetry is conditioned by the degree of price pass-through, the availability of hedging instruments, and the elasticity of demand for the affected goods (Hamilton, 2013).

The supply chain disruption channel has emerged as a particularly salient transmission mechanism in the post-pandemic era, as the fragility of globally integrated just-in-time production systems has been exposed by successive shocks. Geopolitical conflicts and trade policy changes disrupt supply chains through multiple pathways: export restrictions and tariffs on intermediate goods increase input costs and delay production; sanctions prohibit commercial relationships with entities in targeted countries; and military conflicts physically damage logistics infrastructure and production facilities. Guan et al. (2020) demonstrate that supply chain network topology conditions the propagation of idiosyncratic shocks to aggregate output, with highly centralised networks exhibiting greater fragility. The corporate default implications of supply chain disruptions are manifested through working capital stress, inventory accumulation, and forced recourse to expensive alternative suppliers (Guan et al., 2020).

Research Gaps and the Necessity of an Integrated Framework

Despite the richness of the constituent literatures reviewed above, a critical gap persists: no unified conceptual framework has been developed that explicitly integrates tariff pressures, geopolitical conflict, macro-financial transmission channels, and corporate default risk into a coherent analytical model. The structural credit risk literature has remained largely agnostic about the specific macro-level triggers that drive asset value deterioration, typically treating macroeconomic conditions as an undifferentiated background variable. The trade policy uncertainty literature has focused primarily on aggregate output and investment effects, without systematically tracing the implications for corporate credit risk. The geopolitical risk literature has documented market reactions and macroeconomic effects but has not developed a framework that connects these to firm-level insolvency risk through clearly specified causal channels. These are not three independent gaps to be closed piecemeal; they are symptoms of a common limitation, namely the treatment of tariff and geopolitical shocks as generic macroeconomic noise rather than as a structurally distinct class of shock with identifiable transmission channels, sector- and geography-specific incidence, and policy-contingent dynamics, as argued in the Research Problem above. Only a framework purpose-built to trace these channels, rather than a marginal extension of an existing credit risk model, can close this gap.

Furthermore, the moderating role of firm-level characteristics, including size, sectoral exposure, geographic diversification, and hedging capacity, in conditioning the sensitivity of default risk to tariff and geopolitical shocks has received only fragmented scholarly attention. Lu et al. (2023) find that smaller firms exhibit greater sensitivity to trade policy uncertainty than larger firms, consistent with the latter's greater access to capital markets and supply chain flexibility. However, a systematic treatment of these moderating factors within an integrated credit risk framework remains absent.

The following section addresses this gap by developing a comprehensive conceptual framework that maps the causal pathways from macro-level triggers to corporate default risk, specifying the transmission mechanisms, formal propositions, and moderating variables that constitute the core analytical contribution of this paper.

Conceptual Framework

Framework Overview

The conceptual framework developed in this paper adopts a modular, four-stage architecture that traces the causal pathways from macro-level triggers to firm-level financial distress and ultimately to corporate default. The framework is structured as follows:

Macro Triggers → Transmission Channels → Firm-Level Financial Stress (Moderating) → Default Probability

At the first stage, macro triggers encompass the exogenous shocks emanating from the global trade and geopolitical environment. Specifically, escalations in tariff regimes are captured by the Global Tariff Pressure Index (GTPI), and intensification of geopolitical conflicts is measured by the Geopolitical Conflict Index (GCI). These triggers generate Trade Policy Uncertainty (TPU) as an intervening variable that amplifies and extends the duration of corporate uncertainty beyond the period of initial shock announcement (Baker, Bloom & Davis, 2016; Caldara, Iacoviello, Molodtsova, Prestipino & Raffo, 2020).

At the second stage, macro triggers activate four transmission channels that translate geopolitical and tariff shocks into corporate financial stress: (i) the Cost Pressure Channel, operating through input cost inflation and margin compression; (ii) the Demand Shock Channel, operating through consumption contraction and export revenue decline; (iii) the Financial Market Volatility Channel, operating through credit spread widening, equity value erosion, and exchange rate instability; and (iv) the Supply Chain Disruption Channel, operating through input access restriction, logistics cost escalation, and working capital stress.

At the third stage, these transmission channels generate Corporate Financial Vulnerability (CFV), a multi-dimensional construct capturing the deterioration of firm-level financial health across liquidity, solvency, and operational dimensions. CFV is conditioned by a set of moderating variables at the firm level (size, sector, hedging capacity, geographic exposure) and the institutional level (institutional quality of the operating environment).

At the fourth stage, elevated CFV translates into an increased Corporate Default Rate (CDR), operationalised as the probability that a firm's asset value falls below its liability threshold within a given time horizon. This is consistent with the Merton (1974) structural framework, or equivalently expressed as the hazard rate of default arrival in a reduced-form specification (Duffie, Saita & Wang, 2007).

Key Constructs

Global Tariff Pressure Index (GTPI): A composite index capturing the intensity of tariff interventions affecting a given economy or sector, incorporating weighted average applied tariff rates on relevant import categories, the frequency and magnitude of tariff announcements and implementations, and the degree of retaliatory escalation. Operationally, the GTPI may draw on World Trade Organization tariff notifications, UNCTAD trade data, and news-based measures analogous to the EPU methodology of Baker, Bloom, and Davis (2016).

Geopolitical Conflict Index (GCI): A measure of the intensity of geopolitical tensions and active military conflicts affecting the operating environment of firms, drawing on the Geopolitical Risk Index of Caldara and Iacoviello (2022) as a foundational construct. The GCI additionally incorporates measures of sanctions severity, diplomatic relationship quality, and military conflict proximity that may not be fully captured by the GRI.

Trade Policy Uncertainty (TPU): An index of uncertainty regarding future tariff regimes and trade policy orientations, reflecting the degree of policy unpredictability as perceived by corporate decision-makers. TPU is conceptually distinct from realised tariff levels, as uncertainty effects operate through option value mechanisms (Dixit & Pindyck, 1994) independently of actual tariff implementations (Baker, Bloom & Davis, 2016).

Corporate Financial Vulnerability (CFV): A multi-dimensional latent construct reflecting the aggregate deterioration of a firm's financial health in response to macro-level stressors. Measurable proxies for CFV include: distance-to-default (KMV model), Altman Z-score (Altman, 1968), interest coverage ratio, current ratio, operating cash flow margin, and credit default swap spreads (Augustin, Subrahmanyam, Tang & Wang, 2016).

Corporate Default Rate (CDR): The probability of default within a specified time horizon, measurable at the individual firm level as the EDF from the KMV model or a hazard rate from a reduced-form model, or at the aggregate level as the quarterly or annual default rate for a

specified credit universe, as reported by Moody's or S&P Global (Moody's Investors Service, 2023; S&P Global Ratings, 2023).

Four Transmission Mechanisms

Mechanism 1: The Cost Pressure Channel

Tariff escalations directly inflate the input costs of firms reliant on imported intermediate goods, raw materials, and capital equipment. As documented by Amiti, Redding, and Weinstein (2019) in the context of the US–China tariff conflict, the incidence of tariffs falls disproportionately on importing firms rather than foreign suppliers, implying that the cost burden is borne primarily within the domestic corporate sector. For firms operating in industries with low pricing power or highly elastic demand, such as consumer electronics, automotive components, and textiles, the capacity to pass through input cost increases to final consumers is severely constrained. The resulting margin compression reduces operating cash flows, increases financial leverage ratios, and diminishes the buffer between asset values and liability thresholds, thereby increasing the probability of default as modelled in the Merton (1974) framework.

Geopolitical conflicts compound cost pressures through commodity price channels. Energy price surges, exemplified by the tripling of European natural gas prices following Russia's invasion of Ukraine, impose acute operating cost burdens on energy-intensive industries, including chemicals, metals, and manufacturing (International Energy Agency, 2022). Firms with limited access to long-term commodity price hedging instruments, typically smaller enterprises with weaker market access, are most exposed to this transmission mechanism (Lu et al., 2023).

Mechanism 2: The Demand Shock Channel

Tariff escalations reduce aggregate demand through multiple pathways. Directly, tariffs on consumer goods increase retail prices and reduce consumption volumes. Indirectly, the uncertainty generated by trade policy instability depresses consumer and business confidence, inducing precautionary savings by households and deferral of capital expenditure by firms (Baker, Bloom & Davis, 2016). The consequent demand contraction reduces corporate revenues, amplifying the cash flow deterioration initiated by cost pressures.

Geopolitical conflicts generate demand shocks through distinct but complementary pathways. Military conflicts in key markets directly destroy productive capacity and consumer demand. Sanctions exclude firms from markets, either as exporters denied access to sanctioned country consumers or as importers denied access to sanctioned country suppliers. The geopolitical risk-driven flight to quality reallocates capital to safe assets, tightening financial conditions and constraining the credit available to firms for investment and operations (Caldara & Iacoviello, 2022). In aggregate, demand shocks reduce the asset side of the firm's balance sheet. In the Merton framework, a reduction in expected future cash flows reduces the current market value of assets while leaving the liability side unchanged, thereby widening the probability of insolvency (Merton, 1974).

Mechanism 3: The Financial Market Volatility Channel

Tariff and geopolitical shocks generate financial market volatility through uncertainty amplification mechanisms. Equity markets react negatively to tariff escalations in affected sectors, as documented by Wengerek, Uhde & Hippert (2025), reducing the market value of

corporate equity and thereby compressing the equity cushion that separates asset values from liability thresholds in the Merton framework. Credit markets respond with spread widening, increasing the cost of debt financing and reducing the refinancing capacity of leveraged firms (He & Xiong, 2012; Gilchrist & Zakrajšek, 2012). Exchange rate volatility imposes balance sheet mismatches on firms with currency-mismatched assets and liabilities, potentially triggering technical insolvency even in the absence of operational distress (Fratzscher, 2012). The financial accelerator mechanism (Bernanke, Gertler & Gilchrist, 1999) is particularly relevant in this context. As declining equity values and widening credit spreads reduce the collateral value and creditworthiness of firms, lenders respond with credit rationing and covenant tightening, which in turn constrains investment, reduces operational flexibility, and accelerates the deterioration of financial health. This pro-cyclical amplification mechanism transforms an initial moderate tariff or geopolitical shock into a potentially severe financial distress episode.

Mechanism 4: The Supply Chain Disruption Channel

Tariff escalations and geopolitical conflicts disrupt global supply chains by imposing barriers to the flow of intermediate goods, components, and services across borders. The imposition of tariffs on intermediate goods increases input costs and incentivises supply chain reconfiguration, which is inherently costly, time-consuming, and capital-intensive. Sanctions prohibit commercial relationships with entities in targeted jurisdictions, forcing firms to identify and qualify alternative suppliers, often at higher cost and with degraded quality or reliability. Military conflicts physically disrupt logistics corridors, destroy production facilities, and create force majeure events that void commercial contracts (Guan et al., 2020).

The working capital implications of supply chain disruption are particularly acute. Firms facing supply shortages may accumulate precautionary inventories, consuming working capital and increasing financing needs. Conversely, demand-side disruptions may leave firms with excess inventory and constrained receivables collection. The consequent working capital stress strains liquidity, a dimension of financial health that is particularly critical for the short-term probability of default (Beaver, 1966). For highly leveraged firms with limited liquidity buffers, supply chain disruptions can precipitate rapid transitions from financial stress to formal default.

Formal Propositions

Drawing on the theoretical mechanisms articulated above, this paper advances six formal propositions:

Proposition 1 (Cost Pressure and Default Probability): An increase in the Global Tariff Pressure Index (GTPI) is positively associated with the Corporate Default Rate (CDR) of firms in trade-exposed sectors, mediated by tariff-induced increases in input costs and the consequent compression of operating margins and distance-to-default.

This proposition extends the Merton (1974) framework by introducing an exogenous macro-level shock, specifically tariff escalation, as a driver of asset value deterioration through operating cash flow compression. It is consistent with the empirical findings of Amiti, Redding, and Weinstein (2019) on tariff incidence and the financial market evidence of (Caldara et al., 2020; Gao & Wang, 2024) on credit spread responses to tariff announcements.

Proposition 2 (Geopolitical Conflict and Default Probability): An increase in the Geopolitical Conflict Index (GCI) is positively associated with the Corporate Default Rate (CDR), operating

through demand destruction, commodity price shocks, and capital market volatility, with the magnitude of the effect conditioned by the geographic and sectoral exposure of the firm.

This proposition draws on the GRI evidence of Caldara and Iacoviello (2022) and the commodity price shock literature (Hamilton, 2013), positing that geopolitical conflicts constitute an independent and quantitatively significant source of corporate credit risk.

Proposition 3 (Trade Policy Uncertainty and Investment Deferral): An increase in Trade Policy Uncertainty (TPU) independently reduces corporate investment and productive capacity through real options effects, thereby increasing Corporate Financial Vulnerability (CFV) and, with a lag, the Corporate Default Rate (CDR), even in the absence of actual tariff implementation.

This proposition incorporates the real options framework of Dixit and Pindyck (1994) and the EPU evidence of Baker, Bloom, and Davis (2016), arguing that uncertainty itself, rather than realised tariff levels, constitutes a distinct driver of corporate financial distress through its effect on investment and capacity utilisation (Caldara, Iacoviello, Molligo, Prestipino & Raffo, 2020).

Proposition 4 (Financial Market Amplification): The financial market volatility generated by tariff and geopolitical shocks amplifies corporate default risk through the financial accelerator mechanism, creating a pro-cyclical feedback loop in which declining asset values and tightening credit conditions mutually reinforce each other, generating default rate dynamics that exceed those implied by the initial shock magnitude alone.

This proposition integrates the financial accelerator framework of Bernanke, Gertler, and Gilchrist (1999) with the credit risk architecture of Merton (1974) and KMV, arguing that financial market amplification mechanisms transform moderate macro-level shocks into disproportionately severe credit risk episodes.

Proposition 5 (Supply Chain Disruption and Working Capital Stress): Supply chain disruptions induced by tariff escalations and geopolitical conflicts increase the short-term probability of corporate default by generating working capital stress that constrains liquidity and accelerates the transition from financial vulnerability to formal insolvency, particularly for small and medium-sized enterprises with limited access to external financing.

This proposition draws on the supply chain fragility literature (Guan et al., 2020) and the working capital determinants of short-term default (Beaver, 1966), arguing that supply chain disruption constitutes a distinct and underappreciated channel through which macro-level shocks generate corporate credit events.

Proposition 6 (Institutional Quality as Moderator): The strength of the relationships articulated in Propositions 1 through 5 is negatively moderated by the institutional quality of the operating environment, including the rule of law, financial market development, and trade dispute resolution effectiveness, such that firms operating in high-quality institutional environments exhibit greater resilience to tariff and geopolitical shocks than firms in weak institutional environments.

This proposition integrates insights from the comparative institutional economics literature (North, 1990; Acemoglu, Johnson & Robinson, 2001) with the credit risk framework, arguing

that institutional quality constitutes a macro-level moderator that conditions the transmission of tariff and geopolitical shocks to corporate financial distress.

Moderating and Mediating Variables

Firm Size: Large firms typically possess superior access to diversified financing sources, more sophisticated treasury and hedging functions, and greater bargaining power with suppliers, all of which reduce their sensitivity to tariff and geopolitical shocks relative to small and medium-sized enterprises (Lu et al., 2023). However, large multinational corporations may exhibit greater geographic exposure to geopolitical risks by virtue of their global operations.

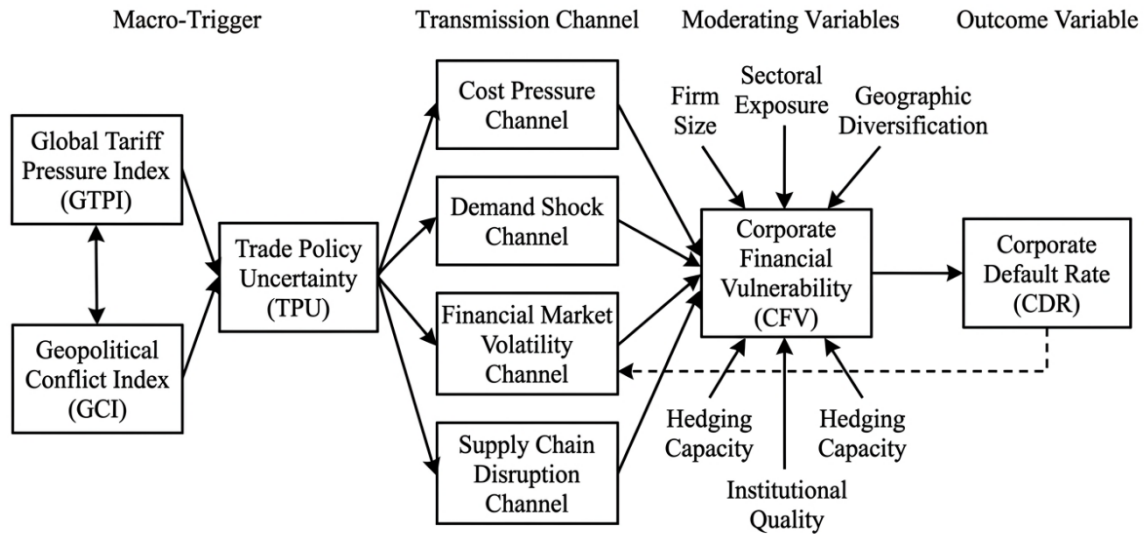
Sectoral Exposure: The sensitivity of corporate default risk to tariff and geopolitical shocks varies systematically across sectors. Manufacturing firms with high import content of intermediate goods, exporters with concentrated revenue in politically volatile markets, and energy-intensive industries are most exposed (Fajgelbaum et al., 2020). Service sector firms and domestically oriented businesses exhibit lower but non-trivial exposure, primarily through the demand and financial market channels.

Geographic Exposure: Firms whose supply chains or revenue streams are concentrated in geopolitical conflict zones or jurisdictions subject to trade restrictions face amplified exposure to the transmission mechanisms described above. Geographic diversification across politically stable, uncorrelated markets reduces this vulnerability, at the cost of operational complexity (Kobrin, 1979).

Hedging Capacity: Access to commodity price hedging, foreign exchange hedging, and credit insurance instruments allows firms to partially insulate themselves from the financial market and cost pressure transmission channels. The availability and affordability of hedging instruments is itself conditioned by firm size and financial sophistication, creating a systematic disadvantage for smaller, less financially sophisticated entities (Augustin, Subrahmanyam, Tang & Wang, 2016).

Institutional Quality: Effective legal systems, efficient capital markets, and robust trade dispute resolution mechanisms reduce the translation of tariff and geopolitical shocks into corporate financial distress by facilitating contract enforcement, enabling access to emergency liquidity, and providing mechanisms for orderly debt restructuring (North, 1990; Acemoglu, Johnson & Robinson, 2001).

Conceptual Framework



The conceptual is organised as a sequential flow chart with four principal layers. The first layer (leftmost) contains two macro-trigger boxes labelled "Global Tariff Pressure Index (GTPI)" and "Geopolitical Conflict Index (GCI)", connected by a bidirectional arrow reflecting their empirical co-movement (Caldara & Iacoviello, 2022), and together feeding into a "Trade Policy Uncertainty (TPU)" intermediate variable. The second layer contains four transmission channel boxes arranged vertically: "Cost Pressure Channel", "Demand Shock Channel", "Financial Market Volatility Channel", and "Supply Chain Disruption Channel", all receiving arrows from the macro-trigger layer. The third layer contains the "Corporate Financial Vulnerability (CFV)" construct, receiving inputs from all four transmission channels, and overlaid with moderating variable arrows entering from above and below, labelled "Firm Size", "Sectoral Exposure", "Geographic Diversification", "Hedging Capacity", and "Institutional Quality". The fourth layer (rightmost) contains the "Corporate Default Rate (CDR)" outcome variable, receiving a single arrow from the CFV construct. Feedback loops are indicated by dashed arrows from CDR back to the financial market volatility channel, reflecting the pro-cyclical amplification mechanism of the financial accelerator (Bernanke, Gertler & Gilchrist, 1999).

Methodology

This paper adopts a conceptual, theory-integration approach rather than an empirical research design. Consistent with the scope set out above, it does not collect or analyse primary or secondary data. Instead, it develops a novel analytical framework by systematically synthesising three established but, to date, disconnected bodies of theory: the structural and reduced-form credit risk tradition (Altman, 1968; Merton, 1974; Duffie & Singleton, 1999, 2012), international trade theory and the trade policy uncertainty literature (Krugman, 1980; Baker, Bloom & Davis, 2016; Handley & Limão, 2017), and the geopolitical risk measurement literature (Caldara & Iacoviello, 2022; Caldara, Iacoviello, Moligo, Prestipino & Raffo, 2020).

The framework is constructed through a three-step integrative process. First, each of the three literatures is reviewed below to identify its core constructs and established findings and, critically, its boundary conditions, namely the phenomena that fall outside its explanatory reach. Second, four transmission mechanisms, the cost pressure, demand shock, financial market volatility, and supply chain disruption channels, are identified as the analytical bridges

connecting macro-level tariff and geopolitical triggers to firm-level financial vulnerability and, in turn, to corporate default; these mechanisms are derived by mapping the empirical findings of the trade policy uncertainty and geopolitical risk literatures onto the theoretical architecture of structural credit risk models. Third, six formal propositions are advanced by specifying the directional relationships implied by this mapping, together with the firm-level and institutional moderators, namely firm size, sectoral exposure, geographic diversification, hedging capacity, and institutional quality, that condition their strength.

Consistent with the conceptual nature of the paper, illustrative evidence is drawn selectively from contemporary episodes, principally the US–China trade conflict and the Russia–Ukraine war, to motivate and ground the propositions rather than to test them; the propositions themselves remain hypotheses for future empirical validation (see Future Research Directions, below). The following section situates this conceptual approach within the rich landscape of prior scholarship, revealing both what is known and what remains to be theorised, before the integrated framework itself is developed in Section 3.

Discussion

Theoretical Implications: Extensions of Credit Risk Theory and the Trade-Finance Nexus

The conceptual framework presented in Section 3 carries substantial implications for the theoretical architecture of credit risk analysis. The dominant structural models of corporate default, the Merton (1974) framework and its KMV implementation (Crosbie & Bohn, 2002), are constructed around firm-level balance sheet dynamics, with macroeconomic conditions typically entering as reduced-form conditioning variables rather than explicitly specified shock mechanisms. The framework developed in this paper argues for a more granular specification of the macro-level triggers that drive asset value deterioration, distinguishing between tariff-induced cost pressures, geopolitical conflict-driven demand destruction, financial market amplification, and supply chain disruption as conceptually and empirically distinct mechanisms.

This extension has theoretical implications for the specification of stochastic processes governing asset value dynamics in structural models. Conventional applications of the Merton framework model asset values as geometric Brownian motion with constant drift and volatility parameters. The framework developed here suggests that the volatility parameter is state-dependent, increasing during episodes of elevated GTPI and GCI, and that the drift parameter is negatively affected by sustained tariff and geopolitical shocks operating through the transmission channels identified in Section 3.3. Incorporating these features would require either regime-switching extensions of the Merton model (Gray, 1996) or time-varying parameter specifications estimated using state-space methods.

For reduced-form credit risk models, the implication is that hazard rate specifications should explicitly include GTPI, GCI, and TPU as explanatory variables alongside conventional macroeconomic covariates such as GDP growth, credit spreads, and equity market volatility. Lando and Skødeberg (2002) demonstrate that intensity-based models can accommodate time-varying covariates in a tractable manner, and the frameworks of Duffie, Saita, and Wang (2007) provide a ready vehicle for incorporating tariff and geopolitical indices into empirically estimated default hazard models.

More broadly, the framework contributes to the emerging trade-finance nexus literature, which seeks to understand the bidirectional interactions between international trade and financial conditions. The evidence suggests that not only do financial conditions affect trade flows, through trade credit constraints (Amiti & Weinstein, 2011) and exchange rate misalignments, but trade policy shocks also affect financial conditions through the mechanisms identified in this paper. Recognising the bidirectionality of this nexus is essential for developing robust models of macrofinancial stability in an era of heightened geoeconomic fragmentation (Aiyar et al., 2023).

Implications for Corporate Managers

The framework developed in this paper has several actionable implications for corporate managers responsible for financial risk management, supply chain strategy, and working capital optimisation.

Hedging Strategy: The cost pressure and financial market channels identified in the framework underscore the importance of comprehensive hedging programmes that encompass not only conventional interest rate and foreign exchange risks but also commodity price risk and, where available, trade policy risk. While standardised financial instruments for hedging trade policy uncertainty do not yet exist, firms can partially insulate themselves through long-term commodity supply contracts, natural hedges constructed through operational diversification, and the use of currency options to manage exchange rate exposure in markets subject to geopolitical uncertainty (Augustin, Subrahmanyam, Tang & Wang, 2016).

Supply Chain Diversification: The supply chain disruption channel highlights the systemic vulnerabilities inherent in highly concentrated, just-in-time supply chain architectures. Managers should undertake systematic supply chain risk assessments that explicitly map geographic and jurisdictional concentration, identify single-source dependencies, and quantify the financial implications of supply disruption scenarios. Dual-sourcing strategies, strategic inventory buffers, and the development of geographically diversified supplier bases, including "friend-shore" alternatives in politically allied jurisdictions, represent effective mitigation measures, albeit at some cost in operational efficiency (Aiyar et al., 2023).

Working Capital Management: Given the particular importance of liquidity in the transition from financial vulnerability to formal default (Beaver, 1966), managers should ensure adequate working capital buffers and committed credit facilities that provide access to liquidity under stressed conditions. The maintenance of sufficient liquidity headroom to absorb supply chain disruption costs and revenue shortfalls is a critical element of geopolitical and tariff risk management.

Scenario Planning and Stress Testing — The framework's multi-channel architecture provides a natural template for corporate scenario analysis and stress testing exercises (Kitsing, 2022). By specifying scenario values for GTPI and GCI and tracing their implications through each transmission channel to corporate financial metrics, managers can quantify the sensitivity of their firm's financial profile to tariff and geopolitical shocks and develop contingency plans accordingly (Hurlin, Lajaunie & Pull, 2026).

Implications for Investors and Credit Rating Agencies

The framework has significant implications for the assessment and pricing of corporate credit risk by investors and rating agencies. The prevailing methodology of major credit rating

agencies, including Moody's, S&P Global, and Fitch, incorporates qualitative assessments of industry risk and country risk that partially capture tariff and geopolitical factors, but these assessments are typically not systematically quantified or dynamically updated in response to changing geopolitical and trade policy conditions (S&P Global Ratings, 2023).

The framework developed here argues for the explicit integration of tariff sensitivity scores, quantifying the proportion of a firm's cost structure exposed to import tariffs, and geopolitical exposure indices, mapping the geographic distribution of a firm's supply chains and revenue streams against geopolitical risk scores, into credit rating methodologies. Such integration would enhance the forward-looking sensitivity of ratings to geopolitical and trade policy developments, potentially providing earlier warning of credit deterioration in trade-exposed sectors (Huang, 2025; Tang & Huang, 2025).

For bond and equity investors, the framework suggests a systematic approach to geopolitically informed portfolio construction. By identifying sectors and individual firms with high exposure to tariff and geopolitical transmission channels and low moderating capacity, including small size, limited hedging, and concentrated supply chains, investors can construct portfolios that are appropriately compensated for geopolitical credit risk or designed to be resilient to geoeconomic shocks (Caldara & Iacoviello, 2022).

The framework also has implications for credit default swap (CDS) pricing. To the extent that tariff and geopolitical risk indices contain information about future default probabilities that is not fully reflected in conventional credit spread determinants, the inclusion of these variables in CDS pricing models may improve pricing accuracy and reduce model error. Augustin, Subrahmanyam, Tang, and Wang (2016) provide a comprehensive review of the CDS literature that could serve as a foundation for this extension.

Policy Implications

The framework carries substantial implications for policymakers at both the national and international levels. At the multilateral level, the analysis underscores the systemic importance of functioning mechanisms for trade dispute resolution and policy coordination. The erosion of the WTO's dispute settlement function, manifested in the effective paralysis of the Appellate Body since December 2019 when the United States' refusal to appoint new judges left the body below the quorum required to hear appeals (Hillman, 2020), has removed a critical institutional shock-absorber that previously contained the escalation of trade conflicts and limited the corporate credit risk implications of tariff disputes. Restoring and strengthening multilateral trade governance mechanisms is therefore not merely a matter of trade policy efficiency but a financial stability imperative.

The International Monetary Fund plays an important complementary role through its Article IV surveillance and Global Financial Stability Reports, which increasingly incorporate geopolitical risk into their macrofinancial assessments (International Monetary Fund, 2023). The framework developed here suggests that IMF surveillance should additionally assess the corporate credit risk implications of geopolitical and trade policy shocks, particularly in systemically important economies and sectors.

At the national level, counter-cyclical fiscal and monetary policy frameworks can mitigate the transmission of tariff and geopolitical shocks to corporate default rates by cushioning demand contractions, maintaining financial system liquidity, and supporting the recapitalisation of financial intermediaries under stress (Bernanke, Gertler & Gilchrist, 1999). The targeted use of

export credit guarantees, trade finance support programmes, and emergency liquidity facilities for strategically important firms can additionally reduce the vulnerability of critical industries to geopolitically induced financial distress.

The framework also argues for greater investment in corporate resilience frameworks at the policy level, including incentives for supply chain diversification, support for financial literacy and hedging capacity among small and medium-sized enterprises, and the development of early warning systems that alert policymakers to emerging concentrations of tariff and geopolitical risk within the corporate sector (Aiyar et al., 2023).

Limitations

The limitations of the present study must be acknowledged candidly. First, as a conceptual paper, the framework is not validated by empirical evidence, and the proposed relationships between GTPI, GCI, transmission channels, and CDR remain hypothetical pending empirical testing. The propositions advanced in Section 3.4 may not survive empirical scrutiny in their exact formulations, and the relative magnitudes of different transmission channels are likely to vary significantly across industries, firm sizes, and institutional environments.

Second, the framework's construct definitions, particularly the GTPI, GCI, and CFV, are not operationalised with sufficient precision to permit immediate empirical implementation. Developing rigorous operational definitions and measurement strategies for these constructs is a prerequisite for empirical validation, and may require significant data collection and methodological innovation.

Third, the heterogeneity of corporate exposures to tariff and geopolitical risks is likely to be extreme, spanning both across and within industries, making it challenging to derive generalisable propositions that apply with equal force across the corporate universe. The framework explicitly acknowledges this heterogeneity through its moderating variable structure, but the specific functional forms of moderating relationships require careful empirical specification.

Fourth, the causal identification of the proposed relationships is complicated by the endogeneity of several key variables. Tariff escalations and geopolitical conflicts are not randomly assigned; they are partly driven by economic conditions and, potentially, by the financial health of corporations themselves, creating potential reverse causality challenges that must be addressed through careful instrumental variable strategies or natural experiment designs in future empirical work (Handley & Limão, 2017).

Future Research Directions

The framework developed in this paper opens several productive avenues for future empirical and theoretical inquiry.

Panel Data Analysis: The most direct empirical test of the framework's propositions involves the estimation of panel data models that regress firm-level default probability measures, including distance-to-default, Z-scores, and credit spreads, on GTPI, GCI, and TPU indices, controlling for conventional credit risk determinants and firm fixed effects. Such analysis would permit the identification of the incremental explanatory power of tariff and geopolitical variables for corporate credit risk, and the estimation of heterogeneous treatment effects across firm size, sector, and geographic exposure categories (Koopman, Lucas & Schwaab, 2012).

Event Study Methodology: The high-frequency market reaction to tariff escalation announcements and geopolitical events, measurable in equity prices, credit default swap spreads, and bond yields, provides a powerful natural experiment for testing the financial market transmission channel. Extending the event study methodology to credit risk instruments would yield direct evidence on the market's assessment of the default risk implications of tariff and geopolitical shocks (Garimella, Kwan & Mertens, 2025; Siriopoulos, Spyridou & Polyzos, 2026).

Machine Learning Applications: The availability of large panel datasets of corporate financial and market data, combined with the rich time-series variation in tariff and geopolitical indices, creates opportunities for machine learning models, including gradient boosting, random forests, and neural networks, to identify non-linear interactions between macro-level triggers and firm-level default risk that may not be captured by conventional linear regression frameworks (Bhatore, Mohan, & Reddy, 2020). Such models may also prove useful for early warning and real-time credit risk monitoring applications.

Experimental and Survey Evidence: Complementing market-based evidence with survey and experimental approaches (Graham, 2022; Campello et al., 2010), including manager surveys on tariff and geopolitical risk management practices and conjoint experiments on the valuation of geopolitical risk by credit analysts, would provide a richer understanding of the behavioural and institutional mechanisms through which macro-level shocks transmit to corporate credit conditions.

Conclusion

Summary

This paper has developed a comprehensive conceptual framework that systematically links global tariff pressures and geopolitical conflicts to corporate default rates through four distinct transmission mechanisms: the cost pressure channel, the demand shock channel, the financial market volatility channel, and the supply chain disruption channel. Building on the structural credit risk foundations of Merton (1974) and the KMV model (Crosbie & Bohn, 2002), and integrating insights from the trade policy uncertainty literature (Baker, Bloom & Davis, 2016; Caldara, Iacoviello, Molligo, Prestipino & Raffo, 2020), the geopolitical risk literature (Caldara & Iacoviello, 2022), and the macrofinancial transmission literature (Bernanke, Gertler & Gilchrist, 1999), the framework offers a theoretically grounded and practically relevant analytical lens for understanding corporate credit risk in an era of heightened geoeconomic volatility.

Six formal propositions have been advanced, positing that tariff-induced cost escalation (P1), geopolitical conflict-driven demand destruction (P2), trade policy uncertainty effects on investment (P3), financial market amplification dynamics (P4), supply chain working capital stress (P5), and institutional quality moderation (P6) collectively determine the sensitivity of corporate default rates to macro-level geopolitical and trade policy shocks. The framework additionally identifies firm size, sectoral exposure, geographic diversification, and hedging capacity as firm-level moderators that condition the magnitude of these relationships (Lu et al., 2023; Fajgelbaum et al., 2020).

Significance of study

The broader significance of the framework extends beyond its immediate analytical contribution to credit risk theory. The structural forces driving the geoeconomic fragmentation of the global economy, including the US–China strategic competition, the erosion of multilateral governance institutions, the securitisation of trade policy, and the progressive decoupling of technology and energy systems, show no signs of abating (Aiyar et al., 2023). On the contrary, the trajectory of geopolitical competition suggests that tariff pressures and geopolitical conflicts will remain persistent features of the corporate operating environment for the foreseeable future.

This structural shift has profound implications for the financial stability of the global economy. Corporate default rates are not merely indicators of firm-level distress; they are barometers of systemic financial health, with elevated default rates signalling stress in credit markets, bank balance sheets, and pension fund portfolios (International Monetary Fund, 2023). The deglobalization impulse threatens to transform what were previously diversifiable, idiosyncratic risks into highly correlated systematic risks, as geopolitical shocks simultaneously affect large numbers of firms across multiple sectors and geographies (Caldara & Iacoviello, 2022). Understanding the channels through which these risks propagate is therefore a prerequisite for the design of resilient corporate, regulatory, and policy responses, which is precisely the purpose the framework developed in this paper is intended to serve.

The emergence of a multipolar world order, in which economic and security relationships are increasingly structured around competing geopolitical blocs rather than universal multilateral institutions, adds further complexity to the corporate risk landscape. Firms operating across geopolitical fault lines face not merely the economic costs of tariffs and sanctions but the existential strategic risk of market exclusion, asset expropriation, and forced supply chain bifurcation (Felbermayr et al., 2020; Itskhoki & Mukhin, 2023). The credit risk implications of these strategic risks are inadequately captured by existing analytical frameworks, and their full assessment awaits the empirical developments called for in the preceding section.

The intersection of geopolitical conflict, trade policy, and corporate finance represents one of the most consequential and underexplored areas in contemporary financial scholarship. As firms navigate an increasingly fractured and volatile global economic landscape, the need for theoretically rigorous and practically actionable frameworks for understanding and managing the credit risk implications of geoeconomic disruption has never been more acute. The conceptual framework developed in this paper represents a step towards meeting that need, providing a foundation upon which empirical researchers, credit risk practitioners, and policymakers can build a more robust and nuanced understanding of corporate default in the age of deglobalization.

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