Department of Corporate Finance

Teaching: Business Valuation

Geopolitical Risk and Firm Valuation: Evidence from Publicly Listed Shipping Companies

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Abstract

This thesis looks into whether geopolitical risk influences the extra returns of publicly traded shipping companies. Given the shipping industry's vital role in global trade and its sensitivity to international political tensions, geopolitical uncertainty might be a significant factor affecting shipping stocks. The study uses monthly data from nine international shipping firms from January 2006 to December 2024 and applies fixed-effects panel regressions to see how geopolitical risk impacts individual firm returns. Geopolitical risk is measured using the Geopolitical Risk (GPR) index developed by Caldara and Iacoviello. The analysis also considers global market trends, oil price changes, and freight market patterns to account for broader economic and industry-specific influences. The results show that, once these factors are included, geopolitical risk does not have a statistically significant direct impact on the excess returns of shipping companies. Instead, stock performance is mainly driven by overall market conditions and freight market trends. This suggests that geopolitical uncertainty mainly affects the sector through general economic factors rather than acting as a standalone pricing element. Overall, the study offers specific insights into how geopolitical risk influences the shipping industry's financial performance and helps deepen our understanding of the return drivers within this sector.

Contents

1. Introduction

In today's globalized economy, no nation is completely self-sufficient. The essential need for food, energy, technology, and other resources has created mutual dependence among countries. By enabling efficient trade across national borders, maritime shipping enhances economic interdependence between nations. Transporting approximately 80 percent of the world's traded goods (UNCTAD, 2024a). As such, the shipping industry is not merely a logistical mechanism, but a fundamental pillar of global economic activity.

The sector's performance mirrors broader macroeconomic trends. Since shipping demand depends on international trade flows, the industry is inherently cyclical and strongly linked to global economic conditions (Stopford M. , 2009). Periods of economic expansion typically increase trade volumes and freight rates, while downturns quickly bring negative effects to shipping companies' revenues and profitability. This sensitivity makes shipping both economically significant and financially volatile.

At the same time, the global environment in which shipping operates has become increasingly uncertain. Rising geopolitical tensions, trade disputes, sanctions regimes, military conflicts, and disruptions in critical maritime routes. Underscores the vulnerability of global supply chains. Recent events have demonstrated how geopolitical developments can reshape trade patterns, increase transportation costs, and introduce uncertainty into financial markets.

Geopolitical risk refers to the risk associated with wars, terrorist acts, diplomatic conflicts, and other political events, that disrupt international relations and economic stability (Caldara & Iacoviello, 2022). A growing body of research indicates that increased geopolitical uncertainty impacts corporate investment choices, financial market fluctuations, and asset prices. However, the extent to which this risk influences specific sectors remains an open empirical question.

Given the global importance of maritime transport, the shipping industry becomes particularly vulnerable to geopolitical developments. When geopolitical tensions escalate, shipping companies may face higher costs, shifts in trade patterns, and disruptions in major maritime corridors. Yet while the operational exposure of shipping companies due to geopolitical events

is evident, it is less clear whether these risks are directly reflected in the stock market valuation of publicly traded shipping firms.

Stock prices incorporate expectations about future cash flows and perceived risk. If geopolitical uncertainty significantly changes expected profitability or risk exposure in the shipping sector, this should, in theory, be observable in excess stock returns. Simultaneously, shipping stocks might mainly react to broader market trends, oil price fluctuations, and freight rate cycles, which could limit the independent effect of geopolitical risk.

This thesis aims to determine whether geopolitical risk has a measurable effect on the excess returns of publicly traded shipping companies, after accounting for market-wide and industry-specific factors. By focusing on firm-level data rather than aggregate indices, the analysis provides a more detailed view of how geopolitical uncertainty interacts with sector-specific financial performance.

Understanding this relationship is important both theoretically and practically. From a research standpoint, it adds to the literature on geopolitical risk by analysing its sector-specific effects within a globally exposed industry. From an investor's point of view, it offers insights into whether geopolitical developments serve as an independent risk factor for shipping equities. Or if their influence is mainly channelled through broader economic factors.

1.1 Research Question

This thesis seeks to answer this question:

“What is the impact of geopolitical risks on the valuation of shipping companies?”

To answer the research question, the study analyses monthly excess stock returns for nine publicly listed shipping firms over the period January 2006 to December 2024. Geopolitical risk is measured using the Geopolitical Risk (GPR) index developed by Caldara and Iacoviello (2022), which captures geopolitical tensions based on systematic news coverage.

The empirical analysis employs fixed-effects panel regressions to estimate the relationship between geopolitical risk and firm-level excess returns. Isolating the independent effect of geopolitical risk, the model controls for global market returns, oil price returns, and freight

market indices, thereby accounting for broader macroeconomic conditions and shipping-specific market dynamics.

The results indicate that geopolitical risk does not have a statistically significant direct impact on shipping companies' excess returns after accounting for market and industry factors. Instead, global market performance and freight market conditions emerge as the main influences on firm-level returns. These findings are discussed in section 7, and they suggest that the financial effect of geopolitical uncertainty on shipping stocks may operate indirectly through broader economic channels rather than through a direct valuation effect.

1.2 Research & Design structure

This thesis employs a quantitative empirical approach using panel data econometrics. Firm-level monthly stock return data are combined with macroeconomic and industry variables to construct a dataset suitable for fixed-effects analysis. The use of firm fixed effects accounts for time-invariant heterogeneity across companies, including variations in fleet composition, operational focus, and geographic exposure.

The dataset covers 227 monthly periods and consists of 1,720 firm-month observations after missing values are addressed. The panel is unbalanced because companies went public at different times and thus do not have the same number of observations. The econometric framework handles this unbalanced structure without requiring strict assumptions about firm coverage.

The remainder of the thesis is structured as follows. Section 2 provides a theoretical background on firm valuation, geopolitics, and shipping. Section 3 presents a literature review on geopolitical risk and its relevance to the shipping industry. Section 4 describes the dataset and variable construction used in the empirical analysis, followed by section 5, which presents the methodological framework. Section 6 reports the empirical findings, and discusses the results in light of theory. Finally, section 7 concludes the thesis and outlines suggestions for future research.

Figure 1.1: Thesis Outline

1.3 Delimitations

This study is subject to some delimitations that define its scope and boundaries.

First, the analysis is restricted to publicly listed shipping companies. Private firms and other segments of the broader maritime value chain—such as port operators, logistics providers, and shipbuilding companies—are not included. As a result, the findings apply specifically to listed shipping equities and may not apply to the entire maritime industry.

Second, the dataset constitutes an unbalanced panel. The included companies were listed on stock exchanges at different points in time and therefore have varying observation lengths. Some companies contribute to the full sample period from 2006 to 2024, while others have shorter time coverage. Although fixed-effects estimation accommodates unbalanced panels without biasing coefficient estimates, differences in firm-specific observation lengths may affect the relative weight of individual companies in the analysis.

Third, the empirical analysis is conducted at a monthly frequency. While monthly data are appropriate for examining the medium-term financial relationships, this frequency may not fully capture short-term market reactions to sudden, unexpected geopolitical events. High-frequency adjustments occurring within days or weeks are therefore outside the scope of this study.

Fourth, geopolitical risk is measured using the Geopolitical Risk (GPR) index developed by Caldara and Iacoviello (2022). Although it’s widely used in empirical research, the index is based on news coverage and may not fully capture all dimensions of political uncertainty relevant to the shipping sector, such as localized maritime disruptions or firm-specific exposure to certain trade routes.

Finally, the study focuses on estimating the direct statistical relationship between geopolitical risk and excess stock returns. It does not attempt to model complex transmission mechanisms—such as how geopolitical events may influence freight rates, trade flows, or investor sentiment through indirect channels. The objective is therefore to identify measurable associations rather than to establish structural causality.

2. Background / Theoretical Framework

This section outlines the foundational elements for the analysis. It begins by examining the role of geopolitical risk and its potential impact on financial markets and asset prices. The chapter then highlights key features of the shipping industry, including its cyclical nature, sensitivity to global trade, and vulnerability to macroeconomic and geopolitical developments. Finally, it reviews relevant literature on stock returns and market dynamics, offering a framework for understanding how external shocks and broader economic conditions may affect the performance of shipping companies.

2.1 Firm Valuation (Market-Based Approach)

Firm valuation in financial markets is commonly analysed using a market-based approach, where the value of a firm is reflected in its stock price (Bodie, Kane, & Marcus, 2021). For publicly listed companies, stock prices aggregate investors' expectations about future profitability, growth opportunities, and risk. Changes in stock prices and stock returns therefore provide a direct measure of how new information affects firm valuation (Campbell, Lo, & MacKinlay, 1997).

According to asset pricing theory, stock returns compensate investors for bearing risk. The expected return on a stock is determined by the risk-free rate and a risk premium that reflects the stock's exposure to systematic risk factors. When new information affects investors' perceptions of risk or expected future cash flows, this information is incorporated into stock prices, leading to changes in observed returns. As a result, stock returns serve as a suitable proxy for variations in firm valuation over time. (Fama & French, 1993)

Under the assumption of semi-strong form market efficiency, publicly available information is rapidly reflected in asset prices. This implies that macroeconomic and political developments that alter expectations or uncertainty should have an immediate impact on stock returns. In this framework, valuation effects are observed not only through firm-specific announcements but also through broader external shocks that influence investor sentiment and risk assessments. (Fama, 1970)

Market-based valuation is particularly relevant for analysing the effects of geopolitical risk. Geopolitical events may increase uncertainty, disrupt economic activity, and raise risk premia demanded by investors, leading to lower stock prices and negative abnormal returns (Fama & French, 1993). Even in the absence of direct operational disruptions, heightened geopolitical uncertainty can affect valuation by increasing volatility and reducing investors' willingness to hold risky assets (Fama, 1970).

Using stock prices and monthly returns to measure firm valuation enables a consistent, timely assessment of how geopolitical risk shapes market perceptions of shipping companies. Given the global and trade-dependent nature of the shipping industry, market-based valuation provides an appropriate framework for capturing the financial impact of geopolitical developments on firm value (Bodie, Kane, & Marcus, 2021).

2.2 Shipping

2.2.1 Introduction to shipping

The shipping industry has evolved to facilitate international trade by connecting sources of supply and demand for various commodities. These include raw materials, manufactured goods, finished products, and transporting passengers, cars, and livestock between ports and countries (Alizadeh & Nomikos, 2009, s. 24)

Over the past century, the volume of seaborne trade has expanded significantly, driving the growth of the shipping industry and its associated sectors, such as shipbuilding, shipbroking, insurance, and shipping finance and investment (Alizadeh & Nomikos, 2009, s. 24) The continuous growth in global trade has also driven the development of larger and more specialized vessels designed to transport specific commodities more efficiently, thereby enabling economies of scale. Furthermore, the industry has developed diverse chartering

arrangements, varying in payment methods, duration and cost allocations, allowing it to accommodate the diverse needs of charterers.

As of 2024, over 80 percent of the world's trade volume is carried by sea (UNCTAD, 2024a) According to Alizadeh and Nomikos (2009), several factors have contributed to the expansion of global seaborne trade volumes. This increase has been driven by the discovery of new sources of raw materials and the rising global demand associated with expanding economies. Technological advancements in ship design and shipbuilding have also enabled the construction of larger and more efficient vessels, reducing transportation costs. Trade liberalization allows companies to outsource production and relocate operations to cost-effective regions, increasing maritime transport demand even further. Finally, the global economic growth has driven higher demand for manufactured goods, reinforcing the need to transport raw materials.

2.2.2 Historical Development of Shipping

For a long time, shipping has been a fundamental aspect of the global trade and economic development. The first sea trade network we know about was developed 5000 years ago. (Stopford, 2009, s. 7). But the earliest recorded instances of maritime trade, date back to the Phoenicians, around 1500 BC. They were shipbuilders and cross-traders (Stopford, 2009, s. 8). Known for their advancements in the shipbuilding and navigation, the Phoenicians established extensive trade networks across the Mediterranean, they facilitated the exchange of goods such as olive oil, textiles and wine. Unlike other nations, they represented a confederation of maritime traders rather than a unified state. (Department of Ancient Near Eastern Art, 2004)

A major turning point in shipping occurred during the Age of Exploration (15^{th} to 17^{th} centuries) as European powers sought to expand their markets and establish new trade routes, particularly to the East Indies and Asia (Keller, 2015) (Stopford, 2009). The growing demand for valuable goods such as spices and silks, drove regular voyages across dangerous sea. (Brodnock & Lenhard, 2023). These long-distance voyages involved substantial risks, including unpredictable weather conditions and the constant threat of piracy. As a result of these uncertainties, the financial burden and exposure to potential loss became to large for individual shipowners to bear alone. To mitigate these risks, shipowners began seeking external investors who would share both the costs and potential profits, receiving a share of the returns if the voyage succeeded.

This early form of investment pooling allowed the investors to spread their risks across multiple voyages rather than relying on a single expedition (Brodnock & Lenhard, 2023). This shift in investment strategy marked a turning point, eventually leading to the creating of shipping companies. Now investors could purchase shares in these companies, benefiting from the returns across all voyages undertaken by the fleet. Among the most well-known were East India Companies, which received royal charters granting them the monopolistic advantages and privileges, allowing them to dominate global trade routes while generating substantial returns (Robins, 2012, s. 23).

In the 18th and 19th centuries, the rise of steam-powered vessels and new strategic routes, such as the Suez Canal in 1869, contributed to the growth of global shipping (Huber, 2013). Shipping companies emerged as key players in the global economy, offering investors a way to gain exposure to international trade (Huber, 2013, ss. 139-238). Investors began allocating capital across multiple vessels and trade routes to spread risk, reflecting early principles of portfolio diversification, making shipping a more attractive investment. These developments laid the foundation for the modern shipping market, in which investors can access global trade through diversified shipping ownership.

In the 20th century, containerization revolution emerged, strengthening shipping's role in global trade even further and establishing it as a key part of modern supply chains (Bernhofen, El-sahli, & Kneller, 2016). As global trade expanded, the demand for efficient, cost-effective shipping grew, making the sector increasingly accessible to institutional investors.

2.2.3 Shipping Segments

The shipping industry is inherently diverse, transporting a wide range of commodities across global trade routes (Alizadeh & Nomikos, 2009). This diversity gives rise to market segmentation, with distinct sectors emerging based on variations in cargo types, vessel specifications, and operational characteristics. Market segmentation ensures that each commodity's requirements match the appropriate trade route and vessel type, providing efficient transportation. According to Alizadeh and Nomikos (2009), market segmentation arises from three primary factors: operational limitations of ports and trade routes, the type of commodity transported and the volume of cargo per shipment. From this, three key sectors are

defined: Containers, Bulk and Tankers. As of 2024, (UNCTAD, 2024b) reports that Bulk and Tankers constitute the most significant segments of the global fleet.

Shipping volume and commodity characteristics are key determinants of vessel choice, as different cargo types requires specific handling and transport solutions (Alizadeh & Nomikos, 2009, ss. 28-29). Container ships transport standardized goods such as electronics and packaged products, bulk carriers are used for loose commodities like coal and grain, and tankers for liquid cargo like crude oil and petroleum products. Larger cargo benefit from economies of scale and therefore typically require larger vessels to optimize costs. In contrast, smaller cargoes, such as agricultural products or petroleum derivates, are transported by smaller vessels. Enabling greater flexibility and port access.

The physical and operational limitations of trade routes and ports also influence vessel selection (Alizadeh & Nomikos, 2009, s. 29). Relevant factors include route characteristics, available port infrastructure, and draught limitations, which may restrict the size or type of vessel used. Larger ships require deep-water ports and are more limited in navigation routes, while smaller vessels offer a greater flexibility, accessing shallow trade routes that larger ships cannot access.

2.2.3.1 Dry Bulk Segment

Dry bulk shipping refers to the transportation of bulk cargo, such as raw materials, on specialized vessels know as bulk carriers (Clarksons. n.d.-c). It developed as a cost-effective solution for transporting large volumes of raw materials, enabling economies of scale. According to Alizadeh and Nomikos (2010, s. 319), the dry bulk shipping industry originated in the nineteenth century with coal shipments on wooden vessels to meet the increasing demand for coal transportation between Northern England and London. Today, dry bulk shipping operates on a “one ship, one cargo” basis, this means that each vessel carries a single type of commodity in response to the growing demand for raw materials. The expansion of international trade has further increased the demand for dry bulk shipping, driving the growth of the global bulk fleet (Alizadeh & Nomikos, 2010, s. 319).

The vessels used for dry bulk vary significantly in size, ranging from small mini bulkers with capacities of up to 10,000 deadweight tons (dwt) to large bulkers capable of carrying up to 400,000 dwt (Clarksons. n.d.-c). According to (Clarksons. n.d.-c), dry bulk cargoes are

typically divided into two main categories: minor and major bulks. Iron ore, coal, and grain are the three primary major bulks, representing up to approximately 67% of the global dry bulk commodity trade. Minor bulks include fertilizer, cement and scrap metal, accounting for 33% of dry bulk trade. In 2024, bulk carriers accounted for approximately 42,7% of the global shipping fleet in terms of cargo-carrying capacity (UNCTAD, 2024b). Demonstrating the crucial role dry bulk has in the global trade, enabling movement of essential raw materials required for industrial production (Clarksons. n.d.-c). Modern industry and everyday activities that rely on products derived from bulk commodities would not be possible without dry bulk shipping.

2.2.3.2 Tanker Segment

Tanker shipping refers to the transportation of liquid cargoes, such as crude oil, chemicals, petroleum products and liquified natural gas (LNG), on specialized vessels known as tankers (Clarksons, n.d.-b). As a solution to the need for transporting bulk liquids, the tanker industry developed, especially in response to the growing demand for oil following the Industrial Revolution (Glen & Christy, 2010, s. 365).

A significant share of the global shipping fleet is used for transporting liquid cargo, with tankers accounting for approximately 28,3% of total cargo-carrying capacity in 2024 (UNCTAD, 2024b). These vessels vat greatly in size, from Panamax tankers with around 80,000 dwt to Ultra Large Crude Carriers (ULCCs) capable of carrying up to 550,000 dwt (ClearSeas, 2024). The segment offers considerable economies of scale, as the large vessels can transport substantial quantities of liquid cargo at a low cost per ton (Glen & Christy, 2010, s. 365).

Tanker shipping is a fundamental component of global trade, as it enables the movement of vital energy resources and industrial commodities across international markets. With global energy demand continuing to rise, the tanker fleet remains crucial to maintaining a stable and reliable supply of crude oil, refined petroleum products and chemicals (Glen & Christy, 2010, s. 365). Consequently, the tanker segment is particularly sensitive to fluctuations in oil prices and geopolitical developments, significantly influencing the demand for shipping services and operators' profitability. The market is characterized by cyclical fluctuations driven by shifts in global economic activity, political crises and supply disruptions (Glen & Christy, 2010, s. 367).

Tanker vessels are typically classified as dirty tankers, which transport unrefined crude, fuel oil or other “dirty” petroleum products, and clean tankers, used for refined petroleum products (S&P Global, 2025). The classification influences both the vessel’s market value and utilization rates, leading to spikes in freight rates (Glen & Christy, 2010, s. 362). In contrast, clean tankers tend to see a more stable demand, this reflects the relatively predictable nature of refined product consumption (Lo, 2023).

2.2.4 The Four Shipping Markets

Shipowners operate across four distinct yet interrelated markets: the freight market, the sale and purchase market, the newbuilding market, and the demolition market (Stopford M. , 2009, s. 178).

The freight market generates revenue through cargo transport and serves as the primary source of cash flow for shipping companies. According to Stopford (2009, p.178), the freight market consists of three sectors: the voyage market, in which transportation services are sold on a per-voyage basis; the time-charter market, where vessels are leased for a predetermined period; and the freight derivates market, where forward contracts are traded based on freight rate indices. Freight rates earned in these markets are the main driver of shipping investors’ activity.

The second market, the sale and purchase market, involves buying and selling second-hand ships (Stopford M. , 2009, s. 178). The buyer is usually another shipowner, so money moves from one company to another without adding new cash to the industry. For example, selling a tanker for $20 million transfers $20 million from one account to another, making the market a zero-sum game (Stopford M. , 2009, s. 178).

The third market is the new building market. Shipowners may enter this market when vessels of a specific size or specifications are unavailable in the second-hand market or when purpose-built ships are required for industrial projects. (Stopford M. , 2009, s. 207). In contrast to the freight market, cash flows in the opposite direction, as money spent on new ships leaves the shipping industry and is used by shipyards to cover materials, labour, and profit (Stopford M. , 2009, s. 178).

The demolition market, also referred to as the recycling market, generates cash inflow for shipowners (Stopford M. , 2009, s. 212). The process is similar to the second-hand market, but instead of other shipowners, the buyers are scrap yards that dismantle ships. According to Stopford (2009, p.178), old or outdated vessels are sold to scrap dealers, providing a valuable source of cash, particularly during recessions.

2.2.5 Shipping Market Cycles

The interaction of cash flows between the four shipping markets drives the industry cycle, influencing investment and chartering activity. Stopford (2010, p.236) defines a cycle as “an interval of time during which one sequence of a regularly recurring sequence of events is completed.” He emphasizes that shipping cycles are rarely regular or predictable, highlighting the importance of understanding their dynamics. The cyclical nature of the shipping industry lead to extreme volatility in daily earnings (Stopford M. , 2010, s. 236). Ideally, shipowners leverage market high by securing premium revenues and reducing risk by fixing time charters or exiting before downturns.

Shipping cycles arise from fluctuations in the balance between the supply and demand for ships (Stopford M. , 2010, s. 238). When growth in demand outpaces available supply, freight rates and second-hand vessels prices typically increase. In contrast, excess supply intensifies competition, leading to downward pressure on freight rates. While this relationship appears straightforward, the dynamics of shipping cycles can differ considerably in real-world conditions.

Stopford (2010, p.238) highlights the time lag in the newbuilding process as a key driver of these fluctuations. High freight rates and strong cash flows encourage shipowners to order new vessels, but since delivery can take up to several years, a significant number of ships tend to enter the market simultaneously. The arrival of these newbuilding’s often causes supply to exceed demand, putting substantial downward pressure on freight rates. As freight rates decline, financially weaker owners may be compelled to sell vessels or retire older ships through demolition, thereby reducing overall market supply and contributing to rate stabilization. As more ships are scrapped, the supply and demand balance improves, rates rise again, and the cycle repeats itself.

Alizadeh and Nomikos (2009, p.237) note that shipping cycles exhibit varying degrees of correlation across different market segments. They analyse spot market rates in the tanker and bulk carrier markets over a 39-year period (1970-2009). Although there are similarities in the timing of cycles between the two segments, the correlation is not perfect. Their findings suggest that different shipping segments are somewhat isolated from each other, with unique supply and demand dynamics influencing their respective cycles.

Stopford (2009) also distinguishes between three types of shipping cycles: long cycles, short cycles, and seasonal cycles. Long shipping cycles refer to extended periods of expansion and contraction in the shipping market, typically lasting several decades. Technological, economic, or regional changes usually drive these cycles. Although they are challenging to define with precision, Stopford (2009, p.96) suggests that long-term cycles exert a substantial influence on freight rates and should therefore be considered in shipping market analysis.

Short shipping cycles typically last a few years and refer to recurring, short-term fluctuations in freight rates and market conditions. According to Stopford (2009, p.96), these cycles follow four stages: (1) market through, (2) recovery, (3) peak, and (4) collapse. Shifts in supply and demand, investor behaviour, and economic shocks primarily drive them. Unlike long cycles, short cycles develop more rapidly, making them highly visible and easier to identify.

Seasonal cycles refer to fluctuations in freight rates that occur within a year. These cycles are commonly observed in shipping markets and are largely driven by recurring seasonal changes in demand for maritime transport. (Stopford M. , 2009, s. 97).

Figure 2.1 illustrates how the cyclical nature of the shipping market leads to high earnings volatility. It shows how dirty tanker spot freight rates fluctuate over time. As Glen and Christy (2010, p.367) point out, participants in the tanker shipping market are aware of the industry’s cyclical nature. However, no reliable method has been developed to consistently predict when the market will shift from one phase of the cycle to the next

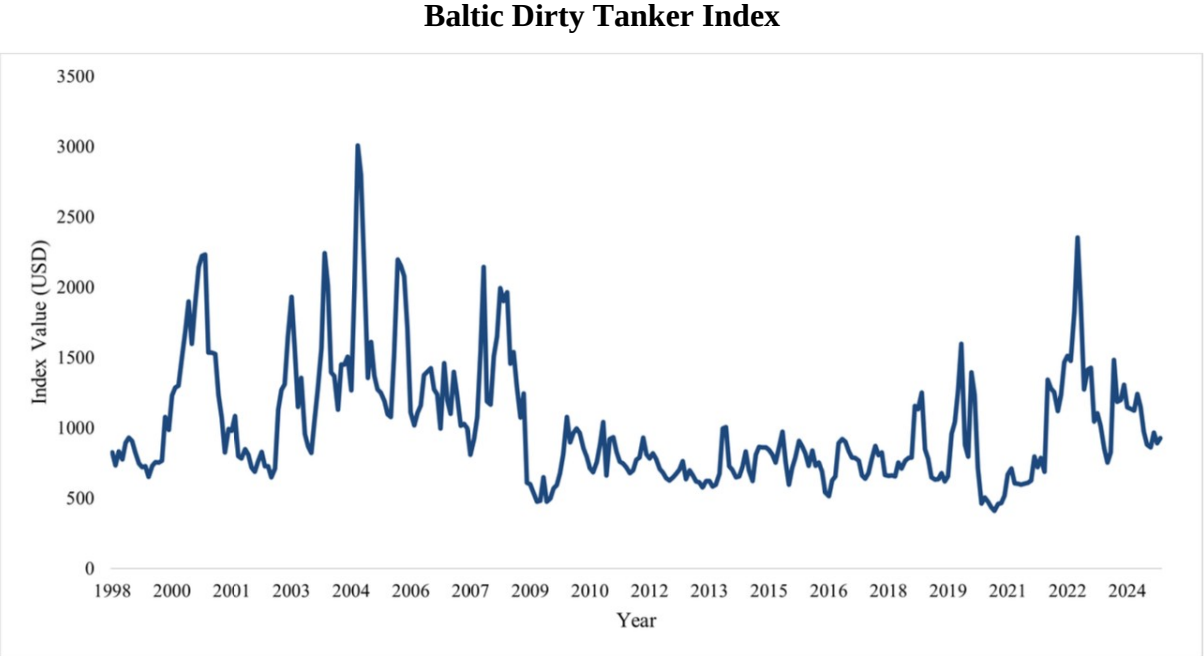

Figure 2.1: BIDY Daily spot freight rates (USD per day). Source: (Bloomberg, 2025a)

2.3 Geopolitics

Geopolitical uncertainty plays a critical role in shaping the global economic environment, with implications for economic growth, inflation dynamics, financial markets, and international supply chains. For companies operating globally, such risks are widely regarded as both highly likely and highly consequential. Major geopolitical developments, particularly armed conflicts, can disrupt financial markets and increase sovereign risk, particularly in emerging economies. These shocks often spread internationally through trade links, financial connections, and shifts in global commodity prices (BlackRock, 2025).

2.3.1 Definition of Geopolitical Risks

Geopolitical risks refer to the risks associated with political events, conflicts, and tensions that affect international relations and the global economic environment. Such risks include wars, military conflicts, terrorism, trade disputes, economic sanctions, and diplomatic tension between countries. These events can generate uncertainty regarding future economic conditions, trade flows, and regulatory environments, thereby influencing financial markets and investment decisions. (Caldara & Iacoviello, 2022).

In financial markets, geopolitical risk is typically understood as an external form of uncertainty —one that firms cannot directly influence but that can affect asset prices through changing investor expectations and perceived risk. Caldara and Iacoviello (2022) confirm this concept by defining geopolitical risk as the risk associated with adverse geopolitical events that can disrupt economic activity and financial markets. Their framework emphasizes that geopolitical risk operates primarily through uncertainty rather than through predictable economic fundamentals.

From a market-based perspective, geopolitical risk constitutes publicly available information that may alter investors' expectations about future cash flows and required returns. Under the assumption of semi-strong form market efficiency, changes in geopolitical risk should therefore be reflected in asset prices and stock returns as the market reassesses risk and uncertainty (Fama, 1970).

2.3.2 Channels Through Which Geopolitical Risk Affects Firm

From a financial economics perspective, geopolitical risk affects firm valuation by influencing investors' expectations regarding future cash flows and the risk associated with those cash flows. In a market-based valuation framework, these effects are reflected in stock prices and returns, which adjust as investors process information related to geopolitical uncertainty. Geopolitical risk is therefore treated as an exogenous source of uncertainty that can influence asset prices even in the absence of firm-specific news (Fama, 1970).

One channel through which geopolitical risk affects firm valuation, operates via the expectations of potential future cash flows. Heightened geopolitical tension may disrupt economic activity, international trade, and investment. Thereby negatively affecting firms' expected revenues and profitability. Even when direct operational disruptions do not materialize, increased geopolitical uncertainty can weaken macroeconomic outlooks and reduce expected demand. Leading investors to scale back their expectations for the firm's future performance. Such revisions are reflected in lower stock prices as markets reassess firms' growth prospects (Caldara & Iacoviello, 2022).

A second and quite central channel operates through changes in perceived risk and required returns. Geopolitical risk increases uncertainty about future political and economic conditions, which may lead investors to demand a higher risk premium (Pastor & Veronesi, 2013). Within

asset pricing theory, an increase in required returns, but holding expected cash flow constant, results in a decline in firm valuation. This mechanism emphasizes geopolitical risk as a consistent source of uncertainty that impacts large parts of financial markets and cannot be completely diversified away (Fama & French, 1993).

Lastly, geopolitical risk may affect firm valuation through financial market dynamics, including investor sentiment and volatility. Periods of elevated geopolitical tension are often associated with higher market volatility, reduced risk appetite, and a reallocation of capital toward safer assets. These conditions can lead to negative stock returns as investors scale back their exposure to riskier equities. Leading to valuation declines driven by market-wide sentiment rather than firm-specific fundamentals (Pastor & Veronesi, 2013).

Together these channels suggest that geopolitical risk influences firm valuation, primarily through financial market mechanisms related to expectations, risk premia, and investor behaviour. This theoretical framework provides a basis for empirically examining the relationship between geopolitical risk and stock returns using market-based valuation measures (Caldara & Iacoviello, 2022).

2.3.3 Exposures of Shipping Companies to Geopolitical Risk

Due to the inherently global and highly interconnected nature of maritime transport. Shipping companies are particularly exposed to geopolitical risk. The shipping industry operates across international borders. They are dependent on stable trade flow, access to ports, and the functioning of global supply chains. As a result, geopolitical tensions, conflicts, and trade restrictions can directly influence shipping demand, transport routes, and operating conditions. The strong dependence shipping markets have on global activity and international trade makes the industry especially sensitive to disruptions originating from geopolitical developments (Stopford, 2009).

An important channel of exposure arises from the geopolitical concentration of key maritime and strategic chokepoints. A significant share of global trade passes through narrow waterways and politically sensitive regions. Making shipping activity vulnerable to regional conflicts, piracy, sanctions, or even military tensions (Stopford, 2009). Disruptions or perceived risks in these regions may increase transit times, insurance premiums, and security-related costs.

Thereby affecting shipping firms' profitability and operational efficiency (Kavussanos & Visvikis, 2006).

Industry analysis further notes that geopolitical tensions, in regions such as the Red Sea or other major trade corridors, have recently forced vessels to reroute. Increasing travel distances and transport costs, which illustrates how geopolitical developments can alter shipping operations in practice (Bisht, 2025).

Shipping industry is also exposed to geopolitical risk through fluctuations in global trade volumes and commodity flows. Geopolitical tensions may reduce trade activity, alter trade patterns, or lead to sanctions and trade barriers, thereby affecting cargo demand. Because freight rates and shipping revenues are closely linked to global trade dynamics, such developments can influence expected cash flows. Although the magnitude and timing of these effects may vary across periods and market conditions (Kavussanos & Visvikis, 2006). Industry reports emphasize that geopolitical conflicts and trade tensions can reshape supply chains, shift energy trade flows, and change demand for certain vessel types. Illustrating an additional pathway through which geopolitical developments may influence shipping markets (Bisht, 2025).

3. Literature Review

3.1 Geopolitical Risk and Financial Markets

A growing body of literature examines the impact of geopolitical risk on financial markets. Caldara and Iacoviello (2022) developed a geopolitical risk (GPR) index based on newspaper coverage of various geopolitical events, and show that increases in geopolitical risk are associated with declines in economic activity, investment, and stock market performance. Their index has become widely used in empirical studies, examining the relationship between geopolitical risk and asset prices.

Political and economic uncertainty has also been shown to influence stock returns through changes in risk premia and investor expectations. Pastor and Veronesi (2013) find that political uncertainty increases expected returns and market volatility, reflecting the additional

compensation investors require for bearing uncertainty. These findings suggest that geopolitical risk may affect stock returns even when firm-specific fundamentals remain unchanged.
Most existing studies focus on aggregate stock market indices or broad financial markets. However, industry-specific responses may differ depending on exposures to international trade, supply chains, and global economic conditions. Making sector-level analysis particularly relevant.

3.2 Measuring Firm Valuation Using Stock Returns

In empirical finance, stock returns are commonly used as a market-based indicator of changes in firm valuation. Stock prices reflect investors' expectations about a company's future cash flows as well as the risks associated with those cash flows. When new information becomes available, whether related to macroeconomic developments, political events, or industry conditions. It is quickly incorporated into prices. As a result, changes in stock prices and returns provide a practical way to observe how markets reassess firm value (Fama, 1970).

Asset pricing theory suggests that shifts in economic conditions or uncertainty, influence expected returns by altering investors' perception of risk. When uncertainty rises, investors may demand higher compensation for holding risky assets, and this adjustment is reflected in stock returns (Fama & French, 1993). For this reason, returns are often used as a proxy for short- and medium-term valuation effects following external shocks.

This approach is widely applied in research examining political and macroeconomic uncertainty. Pastor and Veronesi (2013), for example, show that political uncertainty affects both expected returns and market volatility. Similarly, Caldara and Iacoviello (2022) demonstrate that geopolitical risk shocks are associated with measurable changes in equity markets. These findings support the idea that geopolitical developments can be reflected in stock performance.

Using stock returns as a measure of firm valuation is particularly relevant for industries that are closely tied to global economic activity. Shipping companies operate in a sector where revenues depend heavily on international trade, freight rates, and broader economic conditions. Because financial markets are forward-looking, stock returns provide a timely indicator of how investors interpret changes in geopolitical risk and their potential implications for profitability and risk exposure.

In line with this reasoning, the empirical analysis in this thesis uses excess stock returns as the dependent variable. By focusing on returns above the market benchmark, the analysis isolates firm-level performance and allows for a clearer assessment of whether geopolitical risk has an independent effect on shipping company valuation.

3.3 Shipping Firms and Financial Performance

Shipping markets are characterized by high volatility, strong cyclicality, and a sensitivity to global economic conditions. Freight rates, vessel utilization, and shipping company revenues depend heavily on international trade volumes and macroeconomic developments. Making the sector particularly responsive to external shocks (Stopford M. , 2009).

Research also highlights the unique statistical properties of shipping equity returns. Pouliasis et al. (2018) investigate and find clear evidence of non-normal return distribution, high excess kurtosis, and negative time-varying skewness. Their results highlight that shipping equities are subject to fat tails and asymmetric risk, leading to a higher probability of extreme return outcomes than assumed under standard distribution frameworks. These characteristics reflect the cyclical and highly sensitive nature of shipping markets.

Shipping companies also face substantial financial risk due to their capital structures. Drobetz et al. (2013) analyse the capital structure decisions of globally listed companies, and find that the industry operates with significantly higher leverage ratios compared to industrial firms. This excessive leverage increases financial risk and makes shipping highly sensitive to economic downturns. The study highlights that shipping companies adjust their leverage slowly, particularly during recessions, due to the high costs associated with financial distress. This financial structure may amplify the impact of macroeconomic and geopolitical risks on shipping firm valuation.

Collectively, these findings indicate that shipping firms are particularly sensitive to global economic conditions, suggesting that external risk factors as geopolitical developments may play an important role in shaping shipping stock returns.

3.4 Research Gap and Contribution

A substantial body of literature documents that geopolitical risk affects financial markets and that shipping firms are highly sensitive to global economic conditions. At the same time, most existing studies focus either on aggregate market indices or on broad sectoral effects. Comparatively little attention has been given to how geopolitical risk influences the valuation of shipping companies at the firm level.

Empirical studies using firm-level excess stock returns to examine valuation responses to geopolitical risk, remain limited within the shipping context. While the operational exposure of shipping to global political developments is widely acknowledged, the extent to which such risk is directly reflected in equity prices has not been thoroughly explored.

This thesis seeks to address that gap by analysing the relationship between geopolitical risk and the excess returns of publicly listed shipping companies using a fixed-effects panel framework. By combining firm-level data with a widely used measure of geopolitical risk, the thesis provides sector-specific evidence on how geopolitical uncertainty is priced in the shipping industry. In doing so, it contributes to the broader literature on geopolitical risk by offering a more granular, industry-focused perspective.

4. Data and Variables

This section presents the dataset used in the analysis, including the sample of shipping companies, the data sources, the construction of the variables, and descriptive statistics.

4.1 Composition of the Dataset and Economic Setting

Shipping plays a fundamental role in the global economy, as maritime transport accounts for most of the international trade in raw materials, energy products, and manufactured goods. Because shipping companies operate in highly international and cyclical markets, their financial performance is closely linked to global economic activity, trade flows, and freight market conditions (Stopford M. , 2009). These characteristics make shipping firms particularly sensitive to external macroeconomic and political developments.

From a financial perspective, the valuation of a publicly listed company is reflected in stock prices, which incorporates investors' expectations about future profitability, growth opportunities, and risk. Changes in stock prices and returns, therefore, capture how new information is incorporated into market valuations. This market-based perspective on firm valuation is widely used in empirical finance. Particularly, studies examining how macroeconomic and political uncertainty affects asset prices (Fama, 1970; Fama & French, Common risk factors in the returns on stocks and bonds, 1993).

Geopolitical developments represent an important source of such uncertainty. Events such as international conflicts, trade disputes, sanctions, and political tension may influence global patterns, freight demand, and investor sentiment. As a result, geopolitical risk may affect shipping firms both through real economic channels, such as changes in trade volumes and shipping demand, and through financial channels related to uncertainty and risk premia (Caldara & Iacoviello, 2022).

To empirically evaluate these relationships, this study constructs a dataset combining firm-level stock returns for shipping companies with macroeconomic and market variables. Capturing geopolitical risk, global equity market conditions, commodity prices, and freight market dynamics. This framework allows for an assessment of how geopolitical risk is incorporated into the market valuation of shipping companies while controlling for other factors that influence stock returns.

4.2 Data Collection and Description

This section explains the data used in the empirical analysis and the procedures applied to build the dataset. The final dataset combines firm-level financial data with macroeconomic and market variables. Examining the relationship between geopolitical risk and the excess returns of shipping companies. First, stock price data are gathered for a sample of publicly listed shipping firms. These data serve as the basis for calculating monthly stock returns and excess returns, which are the dependent variables in the empirical analysis. Second, geopolitical risk is measured using the Geopolitical Risk (GPR) index developed by Caldara and Iacoviello (2022). Providing a widely used proxy for global geopolitical uncertainty. Finally, a set of market and commodity variables is included to control for broader macroeconomic conditions and shipping market dynamics. These variables encompass global equity market returns, oil price returns,

and freight rate indices. Reflecting general financial market conditions, energy market trends, and shipping industry activity, respectively. Each dataset component is described in detail in the following subsections.

4.2.1 Sample of Shipping Companies

The empirical analysis is conducted using a panel dataset of publicly listed shipping companies. Consisting of nine companies operating in international maritime transport that are listed on major stock exchanges. The firms included in the sample are Hapag-Lloyd, A.P. Møller-Maersk, Diana Shipping, Star Bulk Carriers, Frontline, Scorpio Tankers, Flex LNG, COSCO Shipping, and Evergreen Marine Corporation, as detailed in Table 4.1.

Companies were selected based on their relevance in global shipping markets, availability of stock price, and with a representation of different shipping segments. Including container shipping, dry bulk shipping, tanker shipping, and liquefied natural gas transport. Including companies from different segments allows the analysis to capture variation in exposure to trade flows and freight market conditions. The stock price data are obtained from Yahoo-Finance and adjusted for dividends and stock splits, ensuring reliable and consistent data for the analysis (Yahoo Finance, 2025). Monthly returns are calculated using adjusted closing prices to ensure comparability across firms.

The sample period begins in January 2006, reflecting the availability of macroeconomic and freight market data, and extends to December 2024. Due to differences in listing dates and data availability across firms, the dataset constitutes an unbalanced panel. Some companies are observed throughout the full sample period, while others enter the dataset later. The fixed-effects estimation framework accommodates this structure, allowing all available firm-level observations to be included in the analysis without imposing a common starting date.

Company	Ticker	Segment	Currency	Exchange
Hapag Loyd	HLAG.DE	Container shipping	EUR	Xetra
Maersk	MAERSK-B.CO	Container shipping	DKK	Nasdaq Copenhagen
Diana Shipping	DSX	Dry bulk	USD	NYSE
Star Bulk	SBLK	Dry bulk	USD	Nasdaq
Frontline	FRO	Oil tankers	USD	NYSE
Scorpio Tankers	STNG	Product tankers	USD	NYSE
FLEX LNG	FLNG	LNG shipping	USD	NYSE
COSCO Shipping	601919.SS	Container shipping	CNY	Shanghai SE
Evergreen Marine Corp	2603.TW	Container shipping	TWD	Taiwan SE

Table 4.1: Overview of Shipping Companies in the analysis

4.2.2 Geopolitical Risk Data

Geopolitical risk is measured using the Geopolitical Risk (GPR) index developed by Caldara and Iacoviello (2022). The index provides a quantitative measure of geopolitical tensions, based on a systematic analysis of newspaper coverage of geopolitical events. Specifically, the index is constructed by counting the number of newspaper articles related to adverse geopolitical events, as a share of total news articles published each month. Using a set of major international newspapers. Higher values of the index, therefore, reflect periods in which geopolitical tensions receive greater media attention and are perceived to be more severe (Caldara & Iacoviello, 2021).

The construction of the index relies on automated text searches of electronic archives from leading newspapers, including publications such as The New York Times, The Wall Street Journal, Financial Times, and others. Articles are identified by keywords related to geopolitical tensions and classified into several categories, including war threats, military buildups, nuclear threats, terrorism, and the outbreak or escalation of conflicts. This methodology allows the index to capture both geopolitical threats and realized geopolitical events (Caldara & Iacoviello, 2021).

The GPR index exhibits clear spikes during major historical geopolitical events, such as the two World Wars, the Cuban Missile Crisis, and the terrorist attacks of September 11, reflecting its ability to capture periods of heightened geopolitical tension. Because the index is available at a monthly frequency and provides a consistent measure of geopolitical uncertainty over time, it has become widely used in empirical studies. Examining the relationship between geopolitical risk, financial markets, and macroeconomic outcomes.

In this study, the monthly benchmark GPR index is used to measure global geopolitical risk. The index is included as an explanatory variable to assess whether periods of elevated geopolitical tension are associated with changes in the market valuation of shipping companies.

4.2.3 Market and Commodity Data

To control for broader macroeconomic and industry-specific conditions, the dataset includes several market and commodity variables. Monthly observations are collected from January 2006 to December 2024, consistent with the availability of firm-level data. The dataset comprises global equity market returns, oil price returns, freight rate indices, and firm-level excess returns, as detailed in Table 4.2.

These variables are included to provide a comprehensive representation of global financial conditions, commodity markets, and shipping industry dynamics. Including these variables ensures that the estimated relationship between geopolitical risk and firm valuation is not driven by general market movements or industry-wide shocks.

The time period is chosen to match the first company's time frame. This ensures that variables and companies share the same starting point, enabling a comprehensive and coherent analysis.

Variables are collected from the Bloomberg terminal, ensuring reliable and consistent data for analysis (Bloomberg, 2025e). All variables are denominated in US dollars, enabling consistency and comparability across the dataset. The monthly US risk-free rate is obtained from Kenneth R. French (French, 2024).

Several of the variables in the dataset are indices that cannot be traded or invested in directly. Instead, they serve as proxies for broader market conditions and economic factors relevant to shipping companies. In particular, global equity market indices, commodity prices, and freight indices provide measures of overall market performance, energy costs, and shipping market conditions. Allowing the analysis to control for factors that may influence shipping firm returns beyond geopolitical risk (Bodie, Kane, & Marcus, 2021).

4.2.4 MXWO Index

The Morgan Stanley Capital International (MSCI) Indices are a collection of global equity indices designed to measure the performance of various segments of the global financial markets (MSCI, u.d.). Within this collection, the MSCI World Index (MXWO) is a prominent benchmark that represents the equity performance of developed markets, dating back to 1969 (MSCI, 2026). The index includes large- and mid-cap stocks from 23 countries, providing a

broad representation of the economic activity in these regions. It encompasses 1,352 companies, covering around 85% of the free-float-adjusted market capitalization in each country. Thus, the MXWO index serves as a broad representation of the global equity market.

4.2.5 CO1 Commodity Index

The ICE Brent Crude Oil Futures (CO1) represents the front-month contract for Brent crude oil traded on the Intercontinental Exchange (ICE) (ICE, 2026). It is a standardized financial instrument representing 1,000 barrels of Brent Crude oil, quoted in U.S. dollars per barrel (ICE, 2026). The minimum price fluctuation (tick size) for CO1 is $0.01 per barrel, with a corresponding tick value of $10 per contract (Bloomberg, 2025c).

The CO1 contract is structured as a 1-month futures contract, operating on a rolling expiration mechanism to ensure continuous pricing (ICE, 2026). Each contract stops trading on the last business day of the second month prior to its contract month (ICE, 2026). The ICE Brent Crude futures contract is physically deliverable via Exchange for Physical (EFP), with the alternative of cash settlement. The final cash settlement price is based on the ICE Brent Index, which is calculated as the average of forward prices for eligible crude grades on the contract's last trading day (ICE, 2026).

4.2.6 BDIY Index

The Baltic Dry (BDI) Index, created by the London-based Baltic Exchange, measures changes in the cost of transporting various raw materials by sea (Bloomberg, 2025b; Kopp, 2025). It is a composite of the dry bulk time charter averages and offers a continuous time series since 1985 (Baltic Exchange, n.d.-a). The BDI is considered a leading indicator of economic activity because fluctuations in the index reflects shifts in supply and demand for raw materials essential to global manufacturing and industrial production (Kopp, 2025). It is made up from three indices: the Baltic Capesize Index (40%), the Baltic Panamax Index (30%), and the Baltic Supramax Index (30%) (Baltic Exchange, n.d.-a). Capesize vessels typically have a capacity above 100,000 deadweight tonnage (dwt), with index-standard vessels measured at around 180,000 dwt (Baltic Exchange, n.d.-a; Kopp, 2025). Panamax vessels typically have a carrying capacity of 82,500 dwt, while Supramax vessels usually carry around 63,500 dwt (Baltic Exchange, n.d.-a).

4.2.7 BIDY Index

The Baltic Dirty Tanker (BIDY) Index tracks the shipping costs associated with transporting unrefined crude and fuel oil by tank vessel, often called “dirty tankers” (MacroMicro, n.d.). The index is composed of 12 routes derived from the Baltic International Tanker Routes (Bloomberg, 2025a), and it tracks three types of vessels: VLCCs, Suezmaxes, and Aframaxes (Baltic Exchange, n.d.-b).

The largest vessel tracked by the BIDY is the Very Large Crude Carriers (VLCC), with a maximum capacity of 320,000 dwt (ClearSeas, 2024). A Suezmax vessel is a medium-sized oil tanker with a maximum capacity of 200,000 dwt (ClearSeas, 2024). Finally, the Aframax vessels carry up to 120,000 dwt, transporting up to 750,000 barrels of crude oil (Clarksons, n.d-a).

Variable name	Ticker	Currency	Variable
MSCI World Index	MXWO	USD	Equities
Brent Crude Oil Futures	CO1	USD	Commodity: Oil
Baltic Dry Index	BDIY	USD	Dry Bulk Shipping Rates
Baltic Dirty Tanker Index	BIDY	USD	Dirty Tanker Shipping Rates

Table 4.2: Overview of variables in the analysis

5. Methodology

This section presents the methodology applied in the analysis. Including the theoretical framework, model specification, and estimation approach used to examine the relationship between geopolitical risk and the valuation of shipping companies. All data processing, calculations, and regression analyses are conducted using the programming language Python. Artificial intelligence tools are used for language correction and improvement, and to assist in structuring and refining the code implementation.

This study examines how geopolitical risk influences the excess returns of publicly listed shipping companies. Monthly firm-level returns are analysed using a panel regression framework that allows for the inclusion of firm-specific fixed effects, controlling for unobserved heterogeneity across companies. In addition to geopolitical risk, the model includes control variables capturing global equity market conditions, oil price movements, and freight market dynamics. This approach allows the analysis to isolate the effect of geopolitical risk while accounting for other systematic factors that may influence shipping firm returns.

Using monthly data enables the study to capture medium-term adjustments in market valuations while reducing short-term volatility and noise in financial markets. The methodology, therefore, provides a suitable framework for examining how external macroeconomic and geopolitical developments are incorporated into the market valuation of shipping companies.

5.1 Model Framework

To examine the relationship between geopolitical risk and the valuation of shipping companies, this study uses a panel data regression framework. The analysis is based on monthly firm-level excess returns combined with macroeconomic and market variables observed over time.

Panel data methods are appropriate in this context because they allow the analysis to exploit both cross-sectional variation across firms, and time-series variation over the sample period. In addition, panel regression techniques make it possible to control for unobserved firm-specific characteristics that may influence stock returns but remain relatively stable over time.

The empirical framework, therefore, focuses on estimating the effect of geopolitical risk on shipping firm excess returns while controlling for broader market conditions and shipping market dynamics. The following sections describe the model specification, estimation approach, and construction of variables in detail.

5.2 Model Specification

To examine the relationship between geopolitical risk and the valuation of shipping companies, this study estimates a panel regression model in which firm-lever excess return are explained by geopolitical risk and a set of macroeconomic and industry specific control variables. Regressions of excess stock returns on systematic risk factors are standard in empirical asset

pricing and are commonly used to examine how macroeconomic variables influence firm performance (Fama & French, 1993).

The baseline regression model is specified as follows:

$$ER_{i,t} = \alpha_i + \beta_1 GPR_t + \beta_2 R_t^{Market} + \beta_3 3_t^{Oil} + \beta_4 R_t^{BDI} + \beta_5 R_t^{BDTI} + \varepsilon_{i,t}$$

Where $E\,R_{i,t}$ denotes the excess return of firm *i* in month *t*, defined as the difference between the firm's stock return and the risk-free rate. The term α_i represents firm-specific fixed effects that capture time-invariant characteristics of each company, while $\varepsilon_{i,t}$ is the error term.

The main explanatory variable is GPR_t, which measures geopolitical risk using the Geopolitical Risk (GPR) index developed by Caldara and Iacoviello. This index captures fluctuations in geopolitical tensions over time and is used to assess whether increases in geopolitical uncertainty are associated with changes in shipping firm returns.

In addition to geopolitical risk, the model includes several control variables to account for broader economic and industry-specific conditions, that may influence shipping company valuations. The variable R_t^{Market} represents the return on the global equity market, measured using the MSCI World Index. Including market return controls for overall market movements and systematic risk affecting equity prices.

Oil price returns, denoted R_t^{Oil}, are included to capture changes in energy prices and global economic conditions. Oil prices are closely linked to global economic activity and transportation costs, both of which may influence shipping markets.

Freight market conditions are captured using returns on the Baltic Dry Index (R_t^{BDI}) and the Baltic Dirty Tanker Index (R_t^{BDTI}), which serve as indicators of demand and pricing conditions in key shipping segments. These variables control for fluctuations in shipping market fundamentals that may affect firm profitability and investor expectations.

The inclusion of these control variables allows the model to isolate the impact of geopolitical risk on shipping firm excess returns while accounting for broader market and industry trends. The empirical setup follows a standard panel regression framework where excess returns are

explained by systematic risk factors and firm-specific effects, a methodology commonly used in empirical finance Felt (Wooldridge, 2010).

5.3 Estimation Method

To estimate the relationship between geopolitical risk and shipping firm valuation, this study employs a panel ordinary least squares (Panel OLS) regression model with firm fixed effects. Panel data methods extend the classical linear regression framework to datasets that contain observations across both cross-sectional units and time. Such methods are commonly employed in empirical finance and economics because they enable researchers to leverage variations across firms and over time while controlling for unobserved heterogeneity (Wooldridge, 2010).

Panel regression framework

In a standard linear regression model, the relationship between a dependent variable and a set of explanatory variables is estimated by minimizing the sum of squared residuals. The ordinary least squares (OLS) estimator finds the set of coefficients that best fit the observed data based on this criterion.

Panel OLS applies the same principle but incorporates the panel structure of the data. In this study, the dataset consists of repeated observations of several shipping companies over time. Creating a two-dimensional structure indexed by firm *i* and time *t*. This structure enables the regression to distinguish between firm-level and time-series variation.

The general form of a panel regression model can be written as:

$$y_{i,t} = \alpha_i + \beta X_t + \varepsilon_{i,t}$$

where $y_{i,t}$ represents the dependent variable for firm *i* at time *t*. X_t represents explanatory variables that vary over time. α_i represents firm-specific effects, and $\varepsilon_{i,t}$ is the error term.

In this study, the dependent variable is each firm's excess return, and the explanatory variables include geopolitical risk and a set of market- and industry-level control variables.

Fixed effects Estimation

A key challenge in empirical finance is the existence of unobserved factors that may influence firm performance but are not directly measurable. Shipping companies vary in characteristics such as fleet composition, operational strategy, capital structure, and exposure to different market segments. Many of these characteristics are relatively stable over time, but they may influence stock returns and firm performance valuation.

If such firm-specific characteristics are correlated with explanatory variables, standard pooled regression methods may produce biased estimates. The fixed effects estimator addresses this issue by allowing each firm to have its own intercept term, thereby controlling for time-invariant unobserved heterogeneity (Wooldridge, 2010).

The fixed effects transformation removes firm-specific averages from each variable, effectively estimating the model using deviations from each firm’s time-series mean. As a result, the estimated coefficients are identified using within-firm variation rather than differences in average returns across firms.

This approach is particularly appropriate in the present context, where the main explanatory variables—such as geopolitical risk and macroeconomic conditions—vary over time but are common across firms. The fixed effects estimator, therefore, isolates how changes in these variables are associated with changes in firm returns over time, controlling for persistent firm characteristics.

Interpretation of Estimated Coefficients

The estimated regression coefficients measure the average change in excess returns associated with a one-unit change in the corresponding explanatory variable, holding other factors constant. For example, the coefficient on the geopolitical risk index reflects the average change in shipping firms' excess returns associated with a one-standard-deviation increase in geopolitical risk, after controlling for market returns, oil prices, and freight market conditions.

Because all explanatory variables are measured at monthly frequency, the estimated relationships should be interpreted as short- to medium-term associations rather than long-term structural effects. The regression does not aim to establish causality but rather identifies statistical associations between geopolitical risk and firm returns within the observed sample period.

Statistical Inference

The statistical significance of the estimated coefficients is evaluated using t-statistics and p-values based on the estimated standard errors. A p-value represents the probability of observing a coefficient at least as extreme as the estimated value under the null hypothesis that the true coefficient is equal to zero. Smaller p-values therefore provide stronger evidence against the null hypothesis.

Financial return data often display heteroskedasticity and serial correlation, especially within firms over time. Ignoring such patterns can lead to underestimating standard errors and drawing misleading conclusions. To address this, standard errors are clustered at the firm level, allowing for any correlation of residuals within each firm while maintaining independence across firms. Clustered standard errors are commonly recommended in panel data analyses to ensure robust statistical inference (Wooldridge, 2010).

Assumptions and Limitations

As with all linear regression models, the panel regression framework relies on several assumptions. The model assumes a linear relationship between the dependent variable and the explanatory variables and requires that the explanatory variables are not perfectly collinear. In addition, the fixed-effects estimator assumes that the unobserved firm-specific effects are time-invariant and may be correlated with the explanatory variables, while the remaining error term is uncorrelated with the regressors.

It is important to note that the empirical analysis identifies statistical relationships rather than causal effects. Geopolitical risk may be correlated with other global economic conditions that also influence shipping markets, and although control variables are included to account for major systematic factors, the possibility of omitted variables cannot be entirely ruled out.

Nevertheless, the panel regression framework provides a suitable and widely used approach for analysing how changes in macroeconomic and geopolitical conditions are associated with variations in firm-level stock returns.

5.4 Variable Construction, Transformations, and Implementation

This section explains how the variables for the empirical analysis were constructed and transformed to ensure consistency and comparability across the dataset. These variables serve as inputs for the panel regression model discussed in Section 5.2. All variables are converted to a monthly frequency and combined into a panel dataset indexed by firm and time. Observations with missing data are removed to maintain consistency. The final dataset includes monthly observations of firm-level excess returns and explanatory variables covering the period from 2006 to 2024.

Stock returns

Firm valuation in financial markets is reflected in stock prices, which incorporate information about expected future cash flows and risk. Empirical finance studies, therefore, commonly analyse stock returns rather than price levels, since returns provide a scale-independent measure of changes in firm valuation and allow comparisons across firms and time periods (Campbell, Lo, & MacKinlay, 1997).

Monthly stock returns are calculated from adjusted closing prices. The simple return is defined as:

$$R_{i,t,} = \frac{P_{i,t}}{P_{i,t-1}} - 1$$

Where $P_{i,t}$ represents the adjusted closing price of firm *i* at time *t*, and $P_{i,t-1}$ represents the adjusted closing price in the previous period.

Monthly frequency is used to capture medium-term changes in market valuation while reducing short-term noise that is common in daily financial data.

Excess Return

The dependent variable in the regression is the excess return of each firm, and it's represented as:

$$E\,R_{i,t} = R_{i,t} - r_{f,t}$$

Where $r_{f,t}$ represents the risk-free rate. Using excess returns is standard in empirical asset pricing because it isolates returns above the risk-free benchmark and allows the analysis to focus on compensation for risk rather than the time value of money (Fama & French, 1993).

The risk-free rate is obtained from the Kenneth R. French Data Library and converted to a monthly frequency to match the return series.

Market and Commodity Returns

Macroeconomic and industry-specific variables are included in the regression to control for systematic factors affecting shipping company valuations. In empirical finance, it is common to explain stock returns using factor-based models in which market and economic variables capture broad sources of risk (Fama & French, 1993).

Market, oil, and freight indices are transformed into logarithmic monthly returns:

$$R_t = \ln\left(Index_t\right) - \ln\left(Index_{t-1}\right)$$

This transformation ensures that all explanatory variables are expressed in comparable units and reduces issues related to non-stationarity and scale differences in price series.

The global equity market return is measured using the MSCI World Index. Oil price returns capture changes in energy prices and global economic activity, while freight market conditions are proxied by returns on the Baltic Dry Index and the Baltic Dirty Tanker Index. These indices serve as indicators of broader market conditions and shipping industry dynamics rather than directly investable assets.

6. Empirical Analysis

This section presents the empirical results based on the methodology described in Section 5.

6.1 Descriptive Statistics and Preliminary Analysis

This section provides an overview of the dataset and presents descriptive statistics for the variables used in the empirical analysis. The purpose of this preliminary analysis is to examine the statistical properties of the variables, assess their variability, and identify potential issues, such as extreme observations or multicollinearity, prior to estimating the regression models.

The sample comprises nine publicly listed shipping companies and covers the period from January 2006 to December 2024, at a monthly frequency. After merging all data series and excluding observations with missing values, the regression dataset contains 1,720 firm-month observations across 227 monthly periods.

The panel structure provides both cross-sectional variation across firms and time-series variation over the sample period, which is crucial for identifying the relationship between geopolitical risk and firm valuation. All return series are measured monthly. Monthly data are commonly used in empirical finance because they strike a balance between capturing meaningful changes in asset prices and reducing the short-term noise often present in daily data (Campbell, Lo, & MacKinlay, 1997). This frequency is particularly appropriate for shipping markets, where adjustments in freight rates, trade volumes, and investor expectations often occur over medium-term horizons rather than on a daily basis.

Table 6.1 reports descriptive statistics for the dependent variable and the explanatory variables used in the regression analysis, including measures of central tendency and dispersion.

Variable	Mean	Std. Dev.	Min	Max	Observation
Excess return	0.015287	0.275172	-0.485079	8.534332	1720
GPR	98.715726	28.522549	58.420769	318.954926	2052
Market_ret	0.004573	0.046188	-0.211271	0.119175	2043
Oil_ret	0.000543	0.104756	-0.798244	0.335115	2043
BDI_ret	-0.003242	0.287843	-1.329792	1.272410	2043
BDTI_ret	-0.002692	0.183224	-0.710186	0.667420	2043

Table 6.1: Summary Statistic

The table reports descriptive statistics for the variables used in the regression analysis.

Excess Returns of Shipping Companies

The dependent variable in the analysis is the monthly excess return of shipping companies, defined as the difference between the stock return and the risk-free rate. The summary statistics show that excess returns display significant variability over the sample period. The mean excess return is positive but relatively small, while the standard deviation is considerably larger, highlighting the well-known volatility of shipping stocks.

This volatility aligns with the economic traits of the shipping industry. Shipping markets are highly cyclical and react strongly to fluctuations in global trade, commodity demand, and freight rates (Stopford M., 2009). As a result, shipping company valuations often experience large swings due to changes in economic conditions, capacity utilization, and expectations about future demand. The presence of both negative and large positive monthly returns in the sample reflects this cyclical behaviour.

At the same time, extreme observations were carefully reviewed during data preparation to ensure that the reported statistics reflect genuine market movements rather than data errors. This step is crucial in financial datasets, where incorrect price adjustments or recording errors can lead to implausible return values that distort statistical analysis.

Geopolitical Risk

The geopolitical risk index shows significant fluctuations over the sample period, with values shifting from relatively calm periods to periods of increased global tension. This fluctuation is crucial for understanding the potential impact of geopolitical events on financial markets. The index measures how often newspaper coverage related to geopolitical issues occurs. Tensions, conflicts, and international crises, have been widely used in empirical studies examining the economic and financial consequences of geopolitical uncertainty (Caldara & Iacoviello, 2022).

The index distribution indicates that geopolitical risk features occasional spikes rather than continuous fluctuations, reflecting the episodic nature of major geopolitical events. Such events may influence investor sentiment, trade flows, and expectations about future economic activity, all of which can impact the valuation of shipping companies.

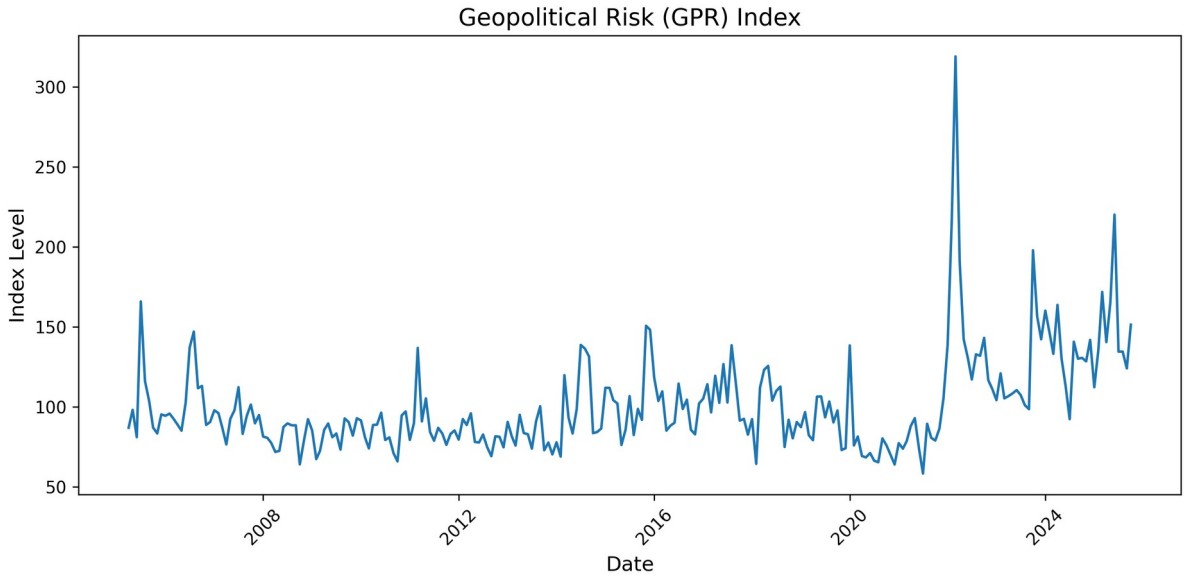

Figure Error: Reference source not found.2: Geopolitical Risk Index: Source (Caldara & Iacoviello 2022)

Market and Commodity Variables

Besides geopolitical risk, the analysis also considers several control variables that capture broader macroeconomic and industry-related factors. These include global equity market returns, oil price returns, and freight rate indices.

The global equity market returns show moderate variability and act as an proxy of overall financial market conditions. Since shipping companies are publicly traded, their valuations are affected not only by industry-specific factors but also by overall market sentiment and global economic cycles. Therefore, a positive relationship between shipping returns and global equity markets is anticipated.

Oil price returns display higher volatility compared to global equity returns, indicative of the energy markets' responsiveness to macroeconomic developments, supply disruptions, and geopolitical tensions. Oil prices are integral to the shipping industry, as fuel expenses constitute a substantial part of operational costs, and they remain closely correlated with global economic activity and trade volumes.

Freight market conditions are assessed through the utilization of returns on the Baltic Dry Index (BDI) and the Baltic Dirty Tanker Index (BDTI). These indices accurately represent shipping demand and freight rate fluctuations within the bulk and tanker sectors, respectively. The

descriptive statistics indicate considerable variability in freight rate returns, aligning with the well-documented volatility inherent to shipping markets and the pronounced impact of global trade cycles (Kavussanos & Visvikis, 2006).

Preliminary Correlation Analysis

A preliminary correlation analysis is performed to evaluate the data structure and the relationships between variables. This step offers an initial understanding of the linear associations between the dependent variable and the explanatory variables, as well as among the regressors themselves.

	Excess Return	GPR	Market	Oil	BDI	BDTI
Excess Return	1,000					
GPR	-0,019	1,000				
Market	0,173	-0,049	1,000			
Oil	0,126	-0,041	0,494	1,000		
BDI	0,080	0,023	0,107	0,171	1,000	
BDTI	0,027	0,085	-0,026	-0,085	0,069	1,000

Table 6.3: Correlation coefficients for all variables included in the analysis

The correlation matrix indicates that the overall correlations among variables are moderate, with no pairwise correlation approaching levels that typically cause multicollinearity issues. The most significant correlation is between global market returns and oil price returns, emphasizing the strong link between commodity markets and global economic conditions. This relationship is well supported by the existing literature and is not a concern for econometric analysis given the size of the coefficient. The strongest correlation observed is between global market returns and oil price returns, reflecting the close connection between commodity markets and global economic conditions. This relationship is well documented in the literature and does not pose an econometric concern given the magnitude of the coefficient.

Excess returns exhibit a positive but relatively weak correlation with global market returns and oil prices, indicating that shipping company performance is partly affected by broader macroeconomic and financial market conditions. Conversely, the correlations between excess returns and freight rate indices are weaker, highlighting the importance of firm-specific characteristics, contractual structures, and market segmentation within the shipping industry.

Geopolitical risk shows low correlations with both excess returns and the control variables. This suggests that the geopolitical risk index captures a unique source of variation rather than just reflecting overall market or commodity trends. The low correlation supports its use as an independent explanatory variable and reduces concerns that its estimated effect may be driven by overlap with other macroeconomic factors.

6.2 Baseline regression results

This section reports the results of the baseline panel regression analysing the link between geopolitical risk and shipping company excess stock returns. The model uses firm fixed effects and clusters standard errors at the firm level to account for unobserved heterogeneity and correlations within firms over time.

	Coefficient	Std. Error	T-stat	P-Value
GPR	-0.0002	0.0001	-1.1267	0.2600
Market_ret	0.8633	0.0949	9.0978	0.0000
Oil_ret	0.1278	0.0377	3,3874	0.0007
BDI_ret	0.0565	0.0265	2.1355	0.0329
BDTI_ret	0.0575	0.0425	2,1355	0.1761

Table 6.4: Estimation Results

The estimated coefficient for geopolitical risk (GPR) is negative ($\beta = -0.0002$), implying that higher geopolitical risk generally leads to lower excess returns. However, this coefficient isn't statistically significant at standard levels ($p = 0.260$), suggesting that geopolitical risk has little direct impact on the excess returns of shipping companies in the baseline model.

In contrast, global market returns show a strong and highly significant positive relationship with shipping stock returns. The estimated coefficient ($\beta = 0.8633$, $p < 0.01$) suggests that movements in the broader equity market account for a substantial share of the variation in shipping company performance. This aligns with the empirical finance literature, which indicates that firm returns are heavily influenced by systematic market factors.

Movements in the broader equity market explain a substantial share of the variation in shipping company performance. This finding is consistent with the empirical finance literature, which shows that firm returns are strongly influenced by systematic market factors.

Oil price returns are also positively and significantly related to shipping company excess returns ($\beta = 0.1278$, $p < 0.01$). This relationship likely reflects the close link between energy markets, global trade activity, and shipping demand. Periods of rising oil prices often align with stronger global economic conditions, which can increase shipping volumes and freight demand.

Freight market conditions, proxied by the Baltic Dry Index (BDI), also have a positive and statistically significant effect ($\beta = 0.0565$, $p = 0.0329$). This result is economically intuitive, as higher freight rates directly improve shipping company revenues and profitability, which is reflected in stock returns.

The Baltic Dirty Tanker Index (BDTI) displays a positive but statistically insignificant coefficient ($\beta = 0.0575$, $p = 0.1761$), suggesting that tanker freight rate movements may have a weaker or more heterogeneous impact across firms in the sample.

Overall, the regression results indicate that shipping company excess returns are primarily driven by market-wide and industry-specific economic conditions rather than geopolitical risk alone. The R-squared within value of 0.0375 suggests that, while the model explains a modest portion of return variation, a substantial share of stock return movements remains influenced by firm-specific factors and idiosyncratic shocks, which is typical in empirical studies of individual stock returns.

6.3 Robustness check

To evaluate the robustness of the baseline results, an alternative model is estimated where geopolitical risk is measured by the monthly change in the geopolitical risk index (ΔGPR) rather than its level. This approach tests whether short-term fluctuations in geopolitical risk, rather than its absolute level, affect shipping company excess returns.

The alternative model is estimated using the same panel structure, firm fixed effects, and clustered standard errors as the baseline specification. All control variables, including global market returns, oil price returns, and freight rate indices, remain unchanged to ensure comparability across models.

	Coefficient	Std. Error	T-stat	P-Value
GPR	-0.000084	0.0001	-0.8035	0.4218
Market_ret	0.8702***	0.0936	9,2982	0.0000
Oil_ret	0.1277***	0.0377	3,3841	0.0007
BDI_ret	0.0560**	0.0265	2.1101	0.0350
BDTI_ret	0.0566	0.0432	1,3109	0.1901

Table 6.5: Robustness check - alternative GPR

Notes:

*** $p < 0.01$

**$p < 0.05$

Observations: 1720

R^2 (within): 0.0372

The results in Table 6.4 show that the main findings of the baseline regression mostly stay the same when geopolitical risk is measured by first differences. The coefficient on ΔGPR is negative but not statistically significant, indicating that short-term fluctuations in geopolitical risk do not have a detectable effect on firm-level excess returns in the shipping industry.

In contrast, the coefficients for the control variables stay consistent in both size and significance. Global market returns persistently show a strong, positive, and highly significant link with shipping company excess returns, highlighting the role of wider macroeconomic factors in influencing firm performance. Additionally, oil price returns and freight market indicators continue to be positively associated with excess returns, with the Baltic Dry Index maintaining statistical significance at standard levels.

Overall, the similarity between the baseline and robustness specifications shows that the empirical results are not affected by how geopolitical risk is measured. This supports the reliability of the main findings and indicates that the lack of a statistically significant link between geopolitical risk and excess returns is not driven by the specific form of the explanatory variable.

Taken together, the robustness analysis strengthens confidence in the empirical findings and indicates that the results are stable across alternative model specifications.

6.4 Discussion of Results

The empirical analysis offers several insights into the connection between geopolitical risk, macroeconomic conditions, and the performance of publicly listed shipping companies. This section explores the main findings in relation to the theoretical framework and prior research.

A primary goal of the study is to examine whether geopolitical risk affects shipping company excess returns. The regression results show that the coefficient on the geopolitical risk index is negative but not statistically significant across all model specifications. This suggests that, during the sample period, changes in geopolitical risk do not systematically explain firm-level excess returns in the shipping industry.

One possible explanation for this finding relates to the nature of the shipping industry. While geopolitical events may disrupt trade routes, alter demand patterns, or influence freight rates, these effects are often uneven across regions, vessel types, and contract structures. As a result, firm-level stock returns may reflect a combination of opposing effects, making it difficult to identify a clear overall relationship with geopolitical risk. Additionally, financial markets may quickly incorporate expectations about geopolitical developments, reducing the observable impact on monthly returns.

Another explanation is that geopolitical risk may mainly influence shipping markets indirectly through broader macroeconomic and commodity channels. The results support this view, as global market returns and oil price movements show statistically significant relationships with excess returns. The strong and positive coefficient on global market returns indicates that shipping companies remain highly sensitive to overall financial market conditions, aligning with the broader asset pricing literature that highlights the importance of systematic risk factors.

Oil price returns are also positively linked to excess returns for shipping companies. This connection likely mirrors the procyclical pattern of oil demand and global trade activity. During periods of robust economic growth, both energy usage and maritime transport demand typically rise, leading to increased revenues and better investor outlooks for shipping firms.

Freight market indicators also play an important role in explaining firm performance. The Baltic Dry Index shows a positive and statistically significant relationship with excess returns,

suggesting that improvements in freight market conditions are reflected in shipping company valuations. This finding is consistent with the theoretical expectation that freight rates directly affect shipping revenues and profitability, thereby influencing stock prices.

The results from the robustness analysis further support these conclusions. When measuring geopolitical risk using changes instead of levels, the coefficient remains statistically insignificant, while the estimates for the control variables stay consistent. This consistency shows that the main findings are not affected by different variable definitions or model setups, increasing confidence in the empirical results.

At the same time, the relatively low R^2 observed in the regressions suggests that a substantial portion of the variation in firm-level excess returns is driven by factors not captured in the model. This aligns with empirical finance research, where firm-specific traits, operational factors, and market expectations often significantly affect stock returns.

Overall, the findings suggest that while macroeconomic conditions and industry-specific factors are key determinants of shipping company returns, geopolitical risk does not seem to have a direct and statistically significant effect at the firm level within the sample period. Instead, its impact may be felt indirectly through broader economic and market mechanisms.

7. Conclusion

Shipping plays a crucial role in global trade, transporting more than 80 percent of the world's trade volume. In today's increasingly uncertain environment, characterized by geopolitical tensions, trade disruptions, and volatility in energy and commodity markets, the shipping industry is particularly exposed to external shocks. These conditions raise important questions about how geopolitical developments influence the financial performance of shipping companies and how such risks are reflected in stock market valuations.

Given the cyclical nature of shipping markets and the strong dependence on global economic activity, shipping company returns are influenced by a combination of macroeconomic conditions, freight market dynamics, and external geopolitical events. Understanding the relative importance of these factors is essential both for investors seeking to evaluate shipping

equities and for researchers interested in the transmission of geopolitical risk to financial markets.

Therefore, this thesis answers the following research question:

What is the impact of geopolitical risk on the excess returns of publicly listed shipping companies?

To answer this question, the thesis used a panel dataset of nine publicly listed shipping companies spanning from 2006 to 2024. Monthly excess returns were analysed using fixed-effects panel regression models that controlled for global market returns, oil price movements, and freight market indicators. Robustness checks were performed to assess the stability of the results under alternative specifications of the geopolitical risk variable.

The empirical findings show that geopolitical risk does not have a statistically significant direct impact on shipping company excess returns after accounting for market-wide and industry-specific factors. Although the estimated coefficients are generally negative, they remain statistically insignificant across different model specifications. These results suggest that changes in geopolitical risk, as measured by the geopolitical risk index, do not systematically explain firm-level stock performance in the shipping sector during the sample period.

In contrast, broader macroeconomic and industry-specific factors play a much more significant role in explaining returns for shipping companies. Global market returns demonstrate a strong and statistically significant positive correlation with shipping stock performance, indicating that shipping firms are highly responsive to overall financial market conditions and global economic cycles. Oil price returns and freight market indicators also exhibit significant relationships with excess returns, supporting the idea that shipping company valuations are closely connected to trade activity, commodity demand, and freight rate fluctuations.

One possible explanation for the limited direct effect of geopolitical risk is that financial markets are forward-looking and quickly incorporate expectations. Many geopolitical events that impact shipping markets may already be anticipated by investors, meaning their effects are reflected in prices before changes in measured geopolitical risk indices become visible. Another explanation is that geopolitical events often influence shipping companies indirectly through broader economic channels, such as shifts in commodity prices, global trade volumes, or freight

rates. Since these factors are included as control variables in the regression models, the direct effect of geopolitical risk remains limited.

The results also emphasize the importance of firm-level heterogeneity in the shipping industry. Variations in fleet composition, geographic exposure, charter arrangements, and market segments can cause different sensitivities to geopolitical events across firms. Consequently, the overall impact of geopolitical risk on a diversified sample of shipping companies may seem weaker than its effect on individual routes or specific shipping segments.

Despite providing valuable insights, this study has several limitations. The sample is restricted to publicly listed shipping companies with accessible consistent financial data, so it may not fully represent the broader shipping market. Additionally, the geopolitical risk index is a global measure and might not accurately reflect regional or route-specific geopolitical developments that are especially relevant for maritime transport. Lastly, the analysis is performed on a monthly basis, which could smooth out short-term market reactions to sudden geopolitical events.

These limitations suggest several potential avenues for future research. Future studies could explore more detailed measures of geopolitical exposure, analyse individual shipping segments separately, or employ higher-frequency financial data to better capture short-term market reactions. Event-driven approaches that focus on specific geopolitical shocks might also offer further insights into how geopolitical developments influence shipping markets.

In conclusion, this thesis advances the understanding of how geopolitical risk relates to firm valuation in the shipping industry. The findings show that although shipping companies operate in an environment highly affected by geopolitical developments, their stock returns are primarily influenced by global economic conditions and freight market dynamics rather than directly by geopolitical risk. These results imply that the financial-market impact of geopolitical uncertainty in the shipping sector may be more indirect, mediated through broader economic channels, than is often assumed.

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