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SEEKING SHELTER FROM THE WAR: RISK MITIGATION TACTICS FOR TRADE
CREDIT UNDERWRITERS IN TODAY'S HOSTILE GLOBAL TRADE ENVIRONMENT

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ABSTRACT

The recent conflict between the United States and China has put stress on world trade and left business leaders and market participants with difficult decisions to make. Trade credit insurance underwriters have been hit especially hard by the tariffs levied by both sides and the uncertainty that the situation produces. This thesis provides strategies for trade credit insurance underwriters that aim to mitigate the risk associated with writing policies in this trade climate. By comparing research on world trade to the realities of the world trade environment today, it is discovered that political risk is the most important risk factor for trade credit underwriters to consider in the U.S.-China trade conflict. Research from groups such as Eurasia Group and the Economist as well as historical data from Political Risk Services and other sources demonstrate that geopolitical tensions are at unprecedented levels. The Asian region appears to be especially risky at this time. Given this information, trade credit underwriters should consider avoiding the majority of Asian countries and reject business where policy terms cannot be comfortably agreed upon. Further, underwriters must make sure to diversify the countries that the enterprise has exposure to, and vet firms to make sure that those being covered have diversified, resilient supply chains. Lastly, underwriters should contemplate their own heuristics and biases, as well as the heuristics and biases of those who provide them with the information to make decisions.

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Chapter 1

Introduction

For a little over a year now, the trade conflict between the U.S. and China has riddled newspapers and captured the attention of businesses, investors, and end consumers across the world. The world appears to be experiencing a period of particularly high geopolitical tension, and the U.S.-China conflict seems to be largely responsible for this current tense environment across the globe (“Top Risks 2019,” 2019). The tariffs imposed by both the U.S. and China have raised the uncertainty surrounding global economies, leaving businesses contemplating how they will handle the potential increase in risk associated with trade. Trade credit insurance underwriters are a group that are heavily concerned with this heightened trade risk, as the insurance policies that they offer to companies cover potential losses incurred in trading relationships with other companies. It is vital that trade credit insurance providers have underwriters that properly understand the risks present in the market today. Failure to assign an acceptable price to trade credit policies in the current market may result in catastrophic losses for the insurer given the raised risk levels. By analyzing the research around global trade practices alongside the current tactics being utilized in today’s environment, trade credit underwriters can develop an idea regarding the subset of risks that are most important in this setting and bear the most weight when feeding into the overall risk associated with the insurance market. Once the risk is identified, it can then be assessed and underwriters can develop strategies for handling the risks faced. These strategies will prove to be the underwriters’ guide to navigating through these uncertain times and avoiding losses that hurt the profitability of the insurer.

Chapter 2

Understanding the Product: Trade Credit Insurance

Trade credit insurance is a lesser known property and casualty insurance product that is offered primarily by carriers such as Atradius, Coface, and Euler Hermes who specialize in this type of insurance. Paul M. Jones of The World Bank (2010) describes it is a type of insurance used by companies to protect their accounts receivables against loss due to credit risks, such as protracted default, insolvency, and bankruptcy. Jones makes sure to distinguish trade credit insurance from other seemingly similar types of insurance, including credit life or credit disability insurance. The insured obtains this aforementioned product to protect against the risk of loss of income needed to pay debts, unlike trade credit insurance which protects against the loss of income due to a debtor's inability to pay their debts. Due to the global nature of trade, trade credit insurance can also include elements of political risk insurance, which insures against non-payment by foreign buyers caused by the actions of their government. This idea of political risk as part of the equation is an important part of overall risk mitigation.

Trade Credit

Simply put, trade credit insurance protects the supplier of goods against nonpayment for those goods which were purchased with trade credit. But what exactly is trade credit, and how does it work? According to Petersen and Rajan (1997), trade credit is “the single most important source of short-term external finance for firms in the United States.” Jones (2010) defines trade credit as a financing option offered by suppliers to their customers as an alternative to pre-

payment or cash on delivery terms or expensive bank letters of credit. This provides time for the customer to generate income from sales that the goods or services purchased on credit may have helped to create before paying for said product or service. However, banks could also provide financing to customers for the purchase of goods, so there have to be reasons why trade credit exists despite this other option being present.

Petersen and Rajan (1997) identified a multitude of reasons that may explain why trade credit exists. One possible explanation is the ability of suppliers to provide customers with financing options that have a cost advantage. This explanation is supported by Gianetti, Burkhardt, and Ellingsen (2011), who find that the majority of firms in their sample received trade credit at a low cost. There are three reasons why it is possible for suppliers to offer low cost credit. Given the suppliers' more frequent interactions with customers, they are able to obtain more and better information from customers than banks or other financial institutions may be able to. For instance, a customer's size and frequency of orders and ability or lack thereof to take advantage of early-payment benefits provide suppliers with timely insights into the customer's credit conditions. Gianetti et al. (2011) have interesting empirical evidence demonstrating that firms receiving trade credit obtained financing from relatively uninformed banks, which suggests that the extension of trade credit by the supplier facilitates further lending from other institutions. Further, this finding also reinforces the importance of suppliers' information advantage over financial institutions.

Suppliers can also regulate their customers behavior by threatening to cut off future supplies, whereas banks and other financial institutions can only threaten to terminate financing, which may not have much of an effect on their immediate operations. Research conducted by Cuñat in 2007 utilized a model to confirm this advantage that trade credit financing has over that

which comes from financial institutions. Cuñat (2007) also found that the costlier it is for a supplier to lose a customer, the more likely it is that they will help them and that in the beginning of a trade relationship, less trade credit is extended than later on when the relationship develops. This indicates the power that the underlying trade relationship has that other financial institutions are unable to capture. Gianetti et al. (2011) also found evidence demonstrating that when differentiated products are being transacted, switching costs for customers are higher and so they are less willing to default on suppliers, again signaling the importance of that trade relationship.

Additionally, suppliers have an advantage over financial institutions in repossessing and reselling goods in the event of a customer's default because they already have a distribution network that they can leverage to salvage the price of the goods that they did not receive payment for. These three reasons allow trade credit to be offered at a competitive price point.

Trade credit can still be a useful financing option even if it does not have a financing advantage over financial institutions. In this situation, suppliers can use credit to price discriminate. Generally, once banks decide to extend credit, the conditions are not tailored to the specific borrower and industry practice dictates terms. This means that trade credit offered by suppliers' can effectively lower the price for borrowers with poor credit worthiness because it is tailored to the borrower. Typically, lower quality borrowers are credit rationed, meaning that even if they are willing to pay higher interest rates for more funds, the financial institution does not allow it. As a result, this portion of the market is the most price elastic. Not only does price discrimination prove effective, but it also means that this portion of the market can fully express their demand, which proves beneficial to the suppliers who they are demanding the goods and services from. In addition to allowing price discrimination, trade credit also helps to reduce transaction costs associated with paying bills, as customers do not have to pay at each delivery

but can accumulate owed payments. The payment cycle and delivery schedule can then be separated, and so firms can better manage their inventories if their product has seasonality (Petersen and Rajan, 1997).

Trade Credit Insurance Policies

When insuring a seller's accounts receivable, it is vital to get a clear picture of the potential insured's trading relationships, their financial stability, and the overall dynamic of the industries in which they participate. Jones states that in order to do this, insurers collect as much pertinent information on the potential insured as they can. Insurers can perform credit analysis on a listing of the supplier's top 10 to 20 buyers in order to determine the overall financial health of their customer portfolio. Nearly as important as a customer's financial health is the country in which they operate, as that has a major impact on how well the company will perform. Therefore, it is important to have a list of all the countries that the supplier has customers in and, if possible, have that list include each of the companies that operates in the given countries. Lastly, details regarding the supplier's credit management and collection procedures, a report that indicates how quickly the supplier is being repaid – accounts receivable aging – covering the previous 12 month's trading, and three year's history of buyer delinquencies and credit losses will be utilized to gauge how well the supplier collects from their buyers.

After looking at the available information, the insurer makes a decision on whether or not to cover the supplier. Policies are flexible and allow the policyholder to cover the entire portfolio, known as Whole Turnover Cover, or just the key accounts, known as Named Buyer. Whole Turnover Cover is the most common policy type. However, an agreement to insure a

supplier's accounts receivable does not mean that the insurer and insured tuck the policy away for a year and do not modify it. Trade credit is unique in that it will be altered throughout the life of the policy. The list of the largest buyers is very important because each of those buyers is assigned a credit limit, meaning that the buyer can only owe up to that limit and no further. Throughout the life of the policy, underwriters and credit officers will make decisions on whether to increase or decrease those credit limits based on the financial health of the buyer among other circumstances. These limits can even be cancelled entirely, though some policies advertise themselves as having non-cancellable limits, which is more attractive to the insured. Suppliers may also request that the limits be increased, and the insurer must decide whether or not they can take on that increased risk on the policy. With discretionary credit limits, insurers give suppliers the power to add exposure up to the decided discretionary credit limit without needing the approval of the insurer.

In the event that an unforeseeable loss occurs, the policy comes into effect. The supplier will file a claim with evidence of the missed payment by a buyer, and if that buyer does not pay within the waiting period specified on the policy, the insurer will payout a claim to the supplier. If there is a dispute between the supplier and buyer regarding the details of the transaction, the policy will not payout unless the dispute is settled in the supplier's favor.

The Retail Apocalypse is one of the most notable events in recent history that has had a major impact on the claims being paid out by insurers. The Retail Apocalypse refers to the high rate of bankruptcies in the retail industry that have occurred over the past few years. This trend was likened to the bursting of the housing bubble – retailers opened too many stores in the two decades prior and it left them at a major disadvantage when online shopping grew and popularity and decreased foot traffic to those stores (Safdar, 2017). The distress and failures in the retail

industry have increased demand for trade credit insurance, as suppliers attempt to safeguard themselves from an increase in risk of non-payment for goods (Morris, 2017). But even though there has been growth, retail was already being covered by insurers prior to the industry's collapse. While retail was inevitably going to be impacted by the internet and online shopping, the rate at which companies in that industry are failing is incredibly high. Trade credit insurers have since wised up to this trend and been much more stringent in offering coverage for buyers that operate in the retail space, but they continue to be challenged by this trend and claims still occur frequently.

Trade Credit Insurance Benefits

According to Jones (2010), accounts receivables can represent 30% to 40% of a supplier's balance sheet, and one in four supplier insolvencies in the EU are due to late payments from buyers. This makes it apparent that protecting accounts receivables as a supplier is very important in maintaining sufficient liquidity and an overall healthy balance sheet. In obtaining a trade credit insurance policy, suppliers shift non-payment risk onto the insurer. This opens up a variety of opportunities for the supplier. Having trade credit insurance coverage helps to smooth out earnings for suppliers, as revenues will not be influenced by missed payments. As previously described, trade credit insurance is also an important source of liquidity for suppliers. These two factors put the supplier in better standing with lenders, who feel more comfortable providing financing to the supplier with the trade credit insurance policy to back them up. This ability to receive more capital from lenders facilitates continued growth for the supplier's overall operations, potentially leading to greater revenues and profitability. With trade credit insurance,

suppliers also feel more comfortable letting buyers purchase goods and services on credit, meaning that suppliers with trade credit insurance policies can expand their trade relationships and do business with customers that had previously been too risky for them to consider. Similar to Jones' statement, Jin and Luo's (2016) research demonstrated that, in theory, trade credit insurance reduces the downside risk to the banks who may offer financing to the supplier. In addition, Jin and Luo found that trade credit insurance can theoretically improve supply chain performance.

Chapter 3

Free Trade

The Inception of Free Trade Theory

The fathers of free trade, Adam Smith and David Ricardo, introduced the concept to the world around the turn of the 18th century. As is well known, in 1776 Adam Smith's "Wealth of Nations" brought forth the ideas of the division of labor and the "invisible hand" that self-regulates the market. Smith begins "Wealth of Nations" with an example illustrating the effectiveness of the division of labor when manufacturing a pin. He argues that by separating the different tasks in creating a pin based on what each worker has knowledge of, they are able to create a far larger number of pins than if they had each tried to create the whole pin themselves. In doing this, "each individual becomes more expert in his own peculiar branch, more work is done upon the whole, and the quantity of science is considerably increased by it." With this increased productivity, everyone is more well off. Smith's "invisible hand" idea is predicated on the notion that humans act for their own benefit. However, when one acts in his own self-interest, Smith states that "he frequently promotes that of the society more effectually than when he really intends to promote it." That person is "led by an invisible hand to promote an end which was no part of his intention." These were two of Smith's biggest ideas, and they tie in nicely with his other arguments for the specialization of trade between nations and the need for free competition in markets. These ideas were read by David Ricardo, who further developed the concept of free trade.

Adam Smith touched on the idea of absolute advantage in “Wealth of Nations”. He stated that “If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it off them with some part of the produce of our own industry employed in a way in which we have some advantage.” However, it was David Ricardo that communicated comparative advantage to the world through his book “On the Principles of Political Economy and Taxation”. In his book, Ricardo utilized an example involving Portugal and England to demonstrate the gains that can occur from trade with another country. The example is set up as such: England can produce a unit of cloth with 100 men, but needs 120 men to make wine. Portugal requires 90 men to make cloth and 80 men to make wine. Portugal has an absolute advantage over England in both cloth and wine – it can manufacture both of these goods with less labor than England. However, England has a comparative advantage in producing cloth. With 100 men, England can produce 1 cloth or $\frac{5}{6}$ bottle of wine. With 90 men, Portugal can produce 1 cloth or $\frac{9}{8}$ bottle of wine. This per unit opportunity cost metric demonstrates that England can more efficiently manufacture cloth than Portugal because it only gives up $\frac{5}{6}$ a bottle of wine, whereas Portugal would have to give up $\frac{9}{8}$ bottle of wine. The opposite is true for wine, as Portugal can produce it more efficiently than England. Therefore, with England exporting cloth to Portugal and importing wine from Portugal, both countries will benefit as they can buy goods for cheaper than they can make them and generate income with the sale of the goods they produced.

While this is a fairly simple example, it had massive implications for global trade. This theory of comparative advantage is what compels countries to trade with each other, as they stand to gain value from the relationship by taking advantage of the efficiencies that they have in manufacturing certain goods.

Trade Liberalization

With the help of Adam Smith and David Ricardo, the world began to see that trading openly with each other could be beneficial.

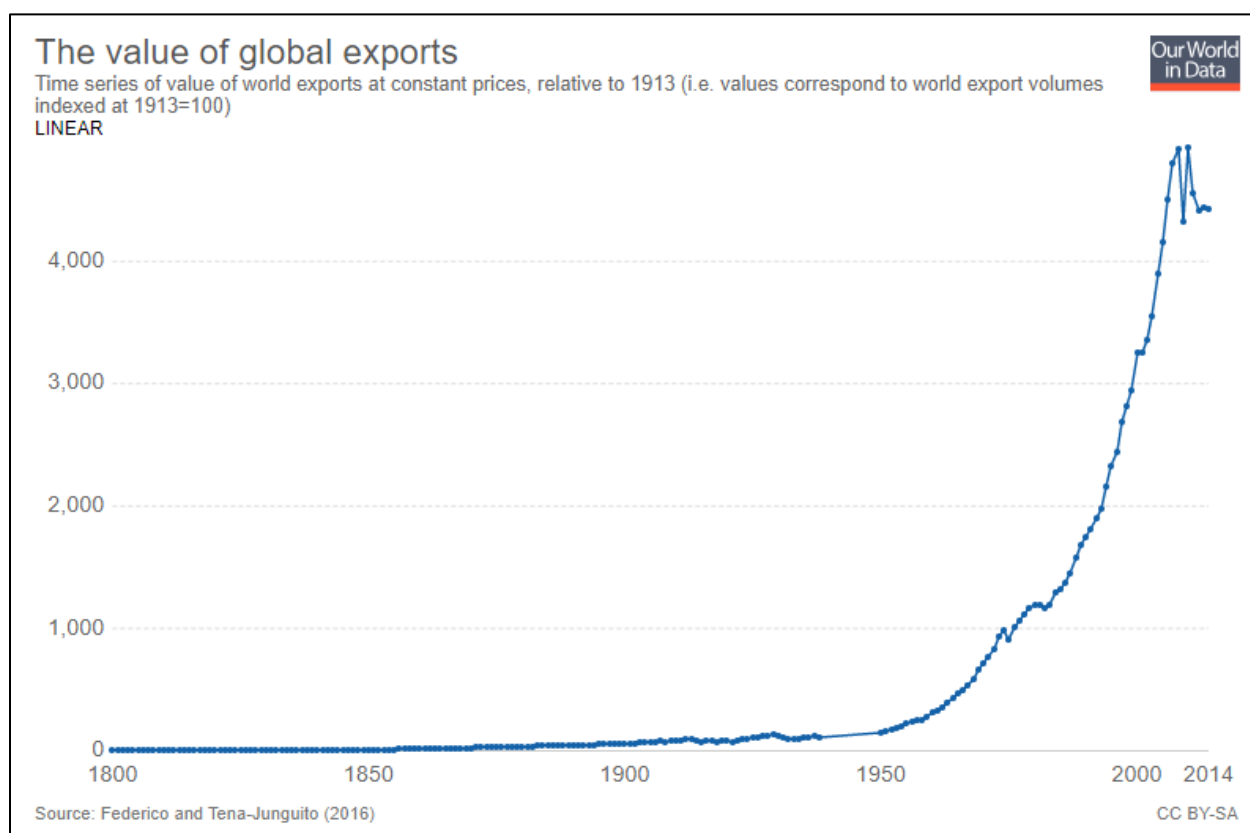


Figure 1: The slow acceptance of free trade ideas and resultant explosion of global trade (Ortiz-Ospina, Beltekian, and Roser, 2018)

The most recent data from The World Bank shows that from 1997 to 2017, global imports as a percentage of GDP increased by about 12.3% (“Imports of goods and services,” n.d.), while the global mean weighted import tariffs fell by 2.83%, suggesting that the doctrine of free trade and the idea of trade liberalization continue to be widely regarded as economically beneficial (“Tariff rate,” n.d.).

Trade liberalization generally occurs in one of three forms: multilateral negotiations, regional free trade agreements, or bilateral free trade agreements. Multilateral negotiations, like those undertaken by the World Trade Organization (WTO), involve most nations across the globe. Regional Free Trade Agreements, such as the North American Free Trade Agreement (NAFTA), are multilateral agreements that involve neighboring countries. Lastly, Bilateral Free Trade Agreements involve two sides, whether it be two individual countries or two groups of countries. These Free Trade Agreements (FTAs) eliminate tariffs, import quotas, and preferences on most (if not all) goods and services traded between the countries involved in the agreement (Zhu, 2013).

Economists have come up with a rather reliable means of tracking the effects that FTAs have on their members. This reliable method has been described as a “workhorse” that has been utilized for over four decades in order to produce an empirical analysis of international trade flows (Baier and Bergstrand, 2006). According to Andersen and van Wincoop, the gravity equation “relates bi- lateral trade flows to GDP, distance, and other factors that affect trade barriers. It has been widely used to infer trade flow effects of institutions such as customs unions, exchange-rate mechanisms, ethnic ties, linguistic identity, and international borders”. With FTAs being struck up around the world in the 1990’s – NAFTA and WTO were two big ones – Baier and Bergstrand set out to utilize the gravity equation to produce evidence of the benefits of FTAs. Through their research, they found empirical evidence that FTAs quintuple trade flows. Additionally, after 10 years, two members of an FTA can expect to see their bilateral trade flows double. This growth is seven times that of a trade environment without an FTA. Other similar studies have investigated value creation from cross-border alliances when multinational enterprises from emerging economies (EMNE) ally with those from developed economies

(DMNE) (Juariskal, Sahaym, Yim, and Liu, 2018), as well as the differences in the ratio of value-added exports to gross exports (VAX Ratio) across different sectors and countries (Johnson and Noguera, 2011). Notably, Juariskal et al. found that “both the risk taking in terms of alliance formation and risk sharing strategy of the EMNEs positively influence shareholders' perceptions and deliver value in the stock market.” The higher the risk associated with the EMNEs in the alliance, the greater the positive effects of the alliance. The level of risk can also be tied back to the cultural distance between the emerging and developed economies. Economies with vast cultural distances have more risk and greater value creation, whereas economies that are rather similar do not enjoy the same opportunities to create value due to the low risk involved. Overall, the empirical study by Juariskal et al. demonstrated that alliances between EMNEs and DMNEs create long-term value for EMNEs.

How We Deviate From Free Trade and Why

There is empirical evidence that trade liberalization is mutually beneficial to members that participate, and most of the world seems to have caught on to this. Yet, there are still many ways in which countries deviate from free trade. Both the U.S.-China Trade Spat and Brexit are current examples of countries that are actively choosing to put measures in place that harm and/or reduce free trade. Harvard Economics Professor N. Gregory Mankiw wrote the following in a 2015 New York Times article: “economists are famous for disagreeing with one another, and indeed, seminars in economics departments are known for their vociferous debate. But economists reach near unanimity on some topics, including international trade.” He later begs the

all-important question, “If economists are so sure about the benefits of free trade, why are the public and their elected representatives often skeptical?”

While free trade is one of the concepts most widely supported by economists, it has been brought into question in the past. Paul Krugman, a Nobel Peace Prize winner in Economic Sciences for his contributions to New Trade Theory, wrote an article in 1987 that examined the merits of free trade during a time when International Trade Theory was rapidly changing. The theory was shifting as new economic models emphasized increasing returns and imperfect competition. These alterations to the models suggested that government intervention via import restrictions and export subsidies could help industries compete on production costs and protect the right to externalities, resulting in excess returns being captured by domestic rather than foreign firms. Due to factors including the inability to accurately model oligopolies and the effects that taking government measures may have as they ripple through other sectors of the economy, Krugman concludes that free trade, while not perfect, is the policy that makes the most sense.

In Krugman’s aforementioned 1987 paper “Is Free Trade Passé?” he cites retaliation and trade war as a by product of government intervention put in place that benefits one’s own self-interest while harming other countries. The lack of cooperation and decision to strive to be better off than another country creates a cycle of retaliation that is harmful to competing countries. In an article published seven years later in 1994, Krugman calls this sense of competition “a dangerous obsession.” He argues that countries have no reason to be competing against each other like corporations, utilizing Coke and Pepsi as examples. The two are bitter rivals, and success for one of them means a loss for the other. Additionally, Coke employees will likely only buy Coke and vice versa for Pepsi. Countries are different in that

while they do sell products that compete with each other, each country is a major market and supplier for the others. If one country's economy is faltering, that hurts demand for goods made in another country's economy. This makes international trade a mutually beneficial activity rather than a zero-sum game where there is a winner and a loser.

Given that international trade is mutually beneficial, it is clearly harmful to the global economy to engage in competitive behavior where each country tries to promote their own self-interest at the expense of other nations. Yet, people are attracted to the thrill of competition, and framing global trade and economics as being a big competition allows them to view decisions and situations involving the economy in a more favorable light. As a result, the destructive narrative continues.

In viewing the global trade landscape through the lens of competition, there are inherently winners and losers – those who are climbing the ranks of world power and those whose clout and influence are shrinking. Over the past few decades, the U.S. and China have emerged as major rivals. There has been concern over China's growth and whether the U.S. will be able to keep pace or be eclipsed by China as the world's foremost superpower. However, the "Declinists" fail to recognize that GDP is not the best indicator of a country's true power. According to Beckley (2011), wealth, innovation, and military capabilities are the most vital resources in international politics, and the U.S. is superior to China in each of those categories. Beckley fears that Declinists will rashly push for protectionist policies in the interest of the United States' national security. In an attempt to protect the U.S., protectionist policies would ironically end up being a detriment to the country, as Beckley's research suggests it benefits immensely from the free flow of goods, services, and people around the globe.

To circle back to Mankiw's question, the public and their elected officials seem to be driven to disregard economists' opinions and stray from free trade because of political factors. The world's countries feel a sense of competition, and nationalism is highly prevalent as is evidenced by the trade argument between the U.S. and China and the Brexit Movement. The claim made by Bryan Caplan in *Myth of the Rational Voter: Why Democracies Choose Bad Policies* is that the perceptions and opinions of the policy makers and their constituents often drift off course from what is theoretically sound, which causes policy to do the same (Caplan, 2008).

Recently, tariffs have been one of the most popular measures taken to try to increase competitiveness in the global marketplace. A tariff is a tax on an imported good. By placing a tax on certain imported goods, demand for them will be depressed due to the fact that the tax increases the price that consumers need to pay for it. In the U.S., tariffs can be imposed by Presidents if they feel national security is threatened and industries need to be protected from imports that may erode the market share of domestic firms due to the lower prices that they can offer. Members of the WTO have agreed to keep tariffs against other countries at a certain limit. However, if this agreement is violated, the WTO allows the country that had the tariff levied against them to retaliate and impose tariffs of their own. When tariffs are imposed, domestic firms whose goods compete with imports subject to the tariffs benefit by receiving greater demand from consumers that would normally import cheaper foreign goods. But while a few firms in specific industries benefit, the many consumers that buy goods from those industries are hurt by the increased cost of the goods (Grennes, 2017). Companies also find themselves in a predicament. If companies buy raw materials or intermediate goods affected by tariffs in the manufacturing of their product, they must make a decision to reduce profits by way of absorbing

the increased costs and reducing their margins or passing the price increase onto consumers and suffering a decline in revenues due to falling demand. Worth noting is that in the nascence of the United States of America, states were allowed to impose tariffs against each other. However, this proved so harmful to interstate commerce, that it was addressed in the creation of the U.S. Constitution via the Commerce Clause, which forbade states to levy tariffs against each other (Grennes, 2017).

Chapter 4

Current Trade Environment

Not long after Donald Trump's election victory in November 2016, his administration began investigating whether to impose tariffs. Though the trade war did not explode into the public eye until 2018, the research on steel and aluminum tariffs started in early 2017. About a year after the investigation began, steel and aluminum tariffs were levied on imports from most countries in March 2018. Mexico, Canada, and the EU were exempted originally, but later chosen to be included in June 2018. Just a few months prior in January 2018, the Trump administration had also announced blanket tariffs on imported washing machines and solar panels. By the end of March, the combined value of the imposed and proposed tariffs by the U.S. had reached \$107 billion. Sixty billion dollars of that total was made up of tariffs threatened against China for intellectual-property theft (Mauldin, Serkez, Bentley, 2019).

China offers foreign companies the opportunity to access their market of 1.4 billion people while also making use of their low-cost workforce. However, the Chinese expect these foreign companies to offer something to them in return – their intellectual-property (IP). According to the American Chamber of Commerce in Shanghai, 20% of its members feel that they were pressured to hand over IP. Over 40% in the aerospace and chemicals industries said that they felt “notable pressure” (Davis and Wei, 2018). This is not to say that joint ventures between American and Chinese companies do not help both sides. General Electric Co. and Advanced Micro Devices, Inc. have both reported positive experiences in their dealings with their Chinese partners. Additionally, Chinese Research and Development expenditures,

innovation rankings, and payments for IP have all increased over the past two years, suggesting that the Chinese are making genuine strides of their own to develop technology. However, Huntsman Corp. and foreign auto-makers found evidence that the Chinese may be stealing their IP under the guise of audits and inspections. DuPont revealed IP to its Chinese partner in 2006 via a license, and then rescinded the license and filed an arbitration case in China after suspicion that the partner utilized that IP to make their own products similar to DuPont's. This prompted the National Development and Reform's Commission anti-trust division to investigate DuPont. The investigators fixated on DuPont's lack of willingness to share IP as anti-trust behavior even though DuPont was working on a merger with large competitor Dow Chemical Co. at the time (Davis and Wei, 2018). Such instances as described by Hunstman Corp. and DuPont combined with a clear potential motive – the “Made in China 2025” initiative, which seeks to make China self-sufficient in a variety of sectors – led Trump and U.S. Trade Representative Robert Lighthizer to examine China's practices and requirements for foreign companies in joint ventures (Maudlin, 2017). That probe resulted in the aforementioned \$60 million tariff threat that Trump made in March 2018. This issue of improper IP transfer is not only viewed as being responsible for that threat, but for much of the trade war as a whole. The Trump Administration has made it a point to increase America's competitiveness in the global market and push for changes that curtail China's predatory activities (Davis, 2018).

With all the background build up to this trade war, the level of retaliatory activity shot up with Trump directly addressing the major issue at hand. About a week after the Trump Administration proposed the tariffs against China as punishment for IP theft, the Chinese struck back, threatening tariffs on pork and other key American products in China. Just a few days later, Trump's camp responded with another \$100 billion in potential tariffs. Two months later in June,

Trump requested that U.S. officials identify \$200 billion in Chinese goods that could be subject to tariffs (Mauldin et al., 2019). To date, there are about \$250 billion and \$110 billion in tariffs on imports from China and the U.S., respectively. China has not threatened any further tariffs. However, the U.S. has \$267 billion in tariffs that they are considering (“A quick guide to the U.S. – China trade war,” 2019). This discrepancy in remaining “ammo” is likely due to the fact that, as of year-end 2018, China imports about \$540 billion in goods to the U.S., whereas, the U.S. only imports about \$121 billion in goods (“Top Trading Partners,” 2019).

Over the last twelve months, China has not been the only trade relationship that the Trump Administration has addressed. The U.S. government has picked fights with Canada, Mexico, and the EU as well. While there was some back and forth between the U.S., Canada, and Mexico, the three countries signed a pact to replace the North American Free Trade Agreement (NAFTA) with the United States-Canada-Mexico Agreement (USMCA). The deal was restructured in ways that will benefit the U.S., with the intent of moving auto manufacturing back into the U.S. and Canada rather than having it outsourced to Mexico and Asian countries. Protections for those investing in foreign countries have also been reduced to discourage outsourcing (Schlesinger and Davis, 2018). Although the three countries have come to an agreement, the partisan divide in Congress is proving to be a hurdle in the way of the deal going into effect (Mauldin and Salama, 2019). The U.S. was able to strike a deal with the EU in July stating that the sides would participate in trade negotiations and hold off on further tariff escalation. Aside from the steel and aluminum tariffs, the U.S. has not enacted any tariffs on EU imports, although they have considered increasing tariffs on European autos (Peker and Hannon, 2019). The EU reacted to these U.S. decisions by placing tariffs on \$3.2 billion of goods closely tied to the American identity, such as motorcycles and bourbon (Mauldin et al., 2019). Talks

between the two sides have produced little progress. Additionally, Trump must make a decision by mid-May regarding whether or not to impose auto tariffs on the EU, and the EU parliament also has elections around the same time. The conflicting interests between the two sides could come to a head and raise tensions as this deadline approaches (Peker, 2019).

The conflicts with the EU, Mexico, and Canada were initiated as a result of the feeling that the United States' trade relationships with these countries were unfair given the trade deficits with each of them. The trade deficits with the EU, Mexico and Canada as of year-end 2018 are roughly \$158 billion, \$82 billion, and \$20 billion, respectively (Peker and Hannon, 2019; "Top Trading Partners," 2019). The three economies also represent the U.S.'s top trading partners aside from China. Though the Trump Administration is unhappy with the negative trade balances with each of the three economies, these conflicts are not as significant as that with China given that they are the U.S.'s largest trading partner and are responsible for a far larger trade deficit of \$419 billion ("Top Trading Partners," 2019). The aforementioned issue of IP theft also plays an important role in the heightened significance of this particular dispute. On March 14, 2019, it was stated that China and the U.S. were moving towards an agreement with hopes of successfully completing negotiations by March 21, 2019, which is when Chinese President Xi Jinping will embark on a trip to European countries for meetings (Davis and Zumbrun, 2019). As of April 4, 2019, a deal had still not been reached and the new target for an agreement to be reached was the end of April, though a summit between the two countries has still not been announced and U.S. Trade Representative Robert Lighthizer has said that there are still many key issues that need to be resolved (Davis, Leary, and Salama, 2019). While negotiations that result in a new agreement may appear fruitful, it is important to examine the deal for what has truly been gained – has the trade relationship strengthened beyond the pre-trade-conflict-state, or did

the agreement simply deescalate the trade conflict and restore the prior state of trade? For instance, a newly proposed foreign investment law in China has taken steps to address forced technology transfer by threatening criminal prosecution for such action. While U.S. trade officials appear pleased with this development, a law professor at University of International Business and Economics in Beijing has pointed out that there is already a law in place in China that prohibits the sharing of trade secrets (Wei and Deng, 2019). Robert Lightizer has also stated that the U.S. and China have agreed not to devalue their currencies to gain a trade advantage, but artificial currency devaluation is already part of the International Monetary Fund (IMF) rules (Davis and Zumbrun, 2019). President Trump has expressed that he is “in no rush” to sign a deal and will hold out to get what the U.S. demands (Wei and Deng, 2019). While this suggests that a deal would not be struck without real progress being made, it is still important to keep a wary eye on what the agreement entails when and if it is reached.

Chapter 5

Political Risk

As evidenced by the current trade environment, political risk a key factor to examine when analyzing a company in a given country or a country's economy as a whole. The Trump administration initiated the trade conflict with each country due to the trade deficit, and the conflict with China had an additional catalyst with the issue of IP theft. Ending IP theft has political ties in the sense that having U.S. tech secrets and information in the hands of other countries could be a threat to national security. However, even motives that seem to be economic rather than political still have political ties. While shrinking the deficit and keeping Chinese companies from copying American competitive technological advantages appear to be economic rather than political motives, President Trump has stated that such practices are unfair and that the U.S. needs to be more competitive in the global market.

As Paul Krugman proposes in his aforementioned article, the unfounded obsession with competition and desire to be better off than other countries create an adverse chain reaction of retaliation, which is markedly similar to what has happened with the current trade war. With political motivations playing a significant role in shaping world trade, understanding political risk is vital to any business operating in the global market.

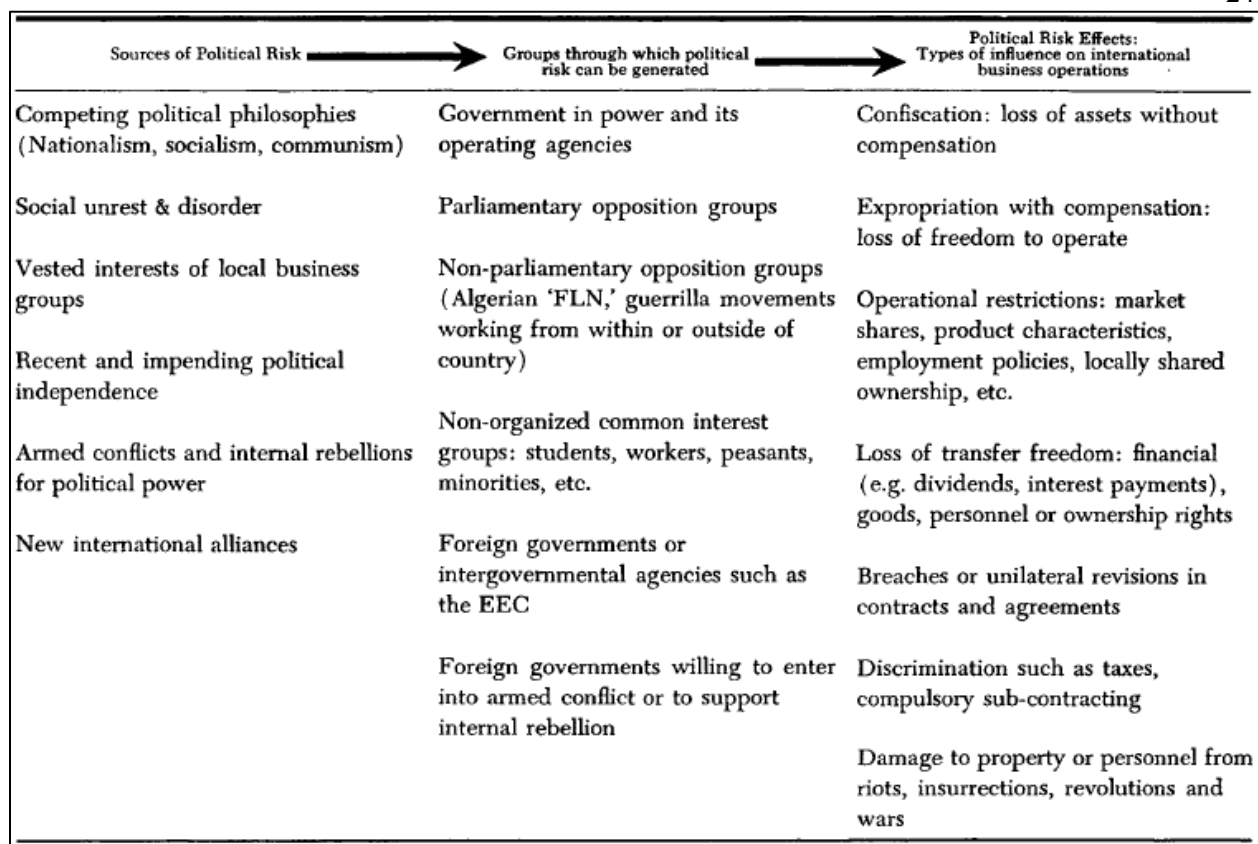


Figure 2: Framework for understanding political risk (Robock, 1971)

Up until 1979, political risk was understood by many as the undesirable consequences in international business that occur as a result of government intervention. Other camps viewed political risk as the political climate or environment within which business is conducted (Kobrin, 1979). These are very general, broad definitions that can easily cause confusion. Stephen Kobrin collected all of the pertinent literature on political risk up to 1979 and attempted to clarify the definition of political risk. Through reviewing the literature, he determined that political risk is the risk associated with the decisions made by politicians in the interest of governmental power that create an environment or trigger events that impact business operations and a company's cash flows in a manner that is not to be expected. This more thorough and comprehensive

definition of political risk is significantly important, as it provided the true launching pad from which the in-depth study of political risk could take off.

Political Risk Quantification

As Kobrin hoped for and suggested in “Political Risk: A Review and Consideration,” there has since been a greater emphasis on obtaining more data and conducting systematic studies and empirical analyses that take the definition of political risk and unlock the knowledge and intuition needed to better understand the risk and how it can be reduced. One of the methods by which political risk has been quantified and made less subjective is through political risk spreads. Political risk spreads use political risk ratings from the International Country Risk Guide (ICRG) in concert with other economic measures in order to isolate the political risk element involved in sovereign spreads. These sovereign spreads represent the difference between the yield on a bond issued by a country in U.S. dollars and a U.S. Treasury Bond with similar maturity and measure the probability of sovereign default among other things. Inherently, the quantification of political risk makes it a less subjective measure. Additionally, it means that governments and businesses can calculate potential returns and risk while accurately accounting for political risk (Bekaert, Harvey, Lundblad, and Siegel, 2014). Data on political risk insurance premiums has also been leveraged in order to conduct empirical analysis on the affect that political institutions have on political risk. By examining the premiums, it was discovered that both democracy and a system in which constraints were placed on politicians reduces expropriation and breach of contract risks. However, only politically constrained politicians produced a decrease in transfer risk (Jensen, 2005). This is interesting because it ties in nicely

with Bryan Caplan's (2008) idea that "the popular misconceptions, irrational beliefs, and personal biases held by ordinary voters" is what stands in the way of optimal economic policy. By placing constraints on politicians, the power of the people to make poor economic decisions would be checked.

Nevertheless, political risk has been called a "soft science" (Howell and Chaddick, 1994). Political Risk Services (PRS), is a firm that provides political risk forecasts to clients. These projections are based on the Coplin-O'Leary System, which is a methodology created by William D. Coplin and Michael K. O'Leary in 1979. This methodology requires experts to identify the three most likely regime scenarios in the country and assign probabilities to them for an 18-month and five-year time period. The expert then adjusts 17 different variables in each of those three scenarios based on their current/base level and their analysis regarding the future. After giving each variable a numerical rating based on the provided scale, the ratings are summed the numerical sum is transferred to a letter grade assessing transfer risk, investment risk, and export risk (Political Risk Services' Methodology, n.d.). While this method does result in a quantification of political risk, the numbers generated by the experts are subjective, which is why political risk is sometimes referred to as a "soft science" – the data used in generating conclusions is not a reading from a machine or mechanism but rather a creation based on human intuition and knowledge.

A 1994 study related loss data from 1987-1992 to the projections made by PRS, The Economist, and Business Environment Risk Intelligence (BERI) in 1986. By scrounging together as much loss data as possible via Overseas Private Investment Corporation (OPIC), a government agency that provides companies with political risk insurance, and a variety of other sources, the researchers hoped to create a wholistic depiction of losses that could then be used to

accurately judge the reliability of the risk projections made by the three aforementioned firms. Researchers Howell and Chaddick were unable to find a significant correlation between political risk related losses and the projections made by each of the three firms, suggesting that the theoretical basis of the projection methods being used were not suitable. While the projection methods utilized were not flawless, it is worth noting that PRS demonstrated that they were the most reliable of the three firms and were regarded as “highly reliable” (Howell and Chaddick, 1994). Research into follow-up studies and revisions to methodologies yield little to no relevant results, signaling that the results of Howell and Chaddick’s 1994 study may still be worth considering today.

Another political risk measure that has been introduced more recently is the Economic Policy Uncertainty Index. Respected information providers FRED, Bloomberg, and Reuters offer the index for the use of market participants. This index tracks U.S. economic policy uncertainty by identifying how frequently newspapers mention certain key terms such as “uncertainty”, “economy”, and “legislation” or “Federal Reserve”. When tested on past events, the index has shown strong increases around times such as 9/11 and the 2011 debt ceiling conflict. It has shown such increases in events as far back as the Gold Standard Act of 1900 and the Great Depression as well (Baker, Bloom, and Davis, 2016). Although this is not a complex quantitative system, it still provides meaningful insight into United States political risk. A similar Economic Uncertainty Policy Index has also been recently created for the global economy. Indices for other countries and regions including China, Mexico, Canada, and Europe have also been created since the original index was created in 2012 (“Economic Policy Uncertainty Index,” 2018).

Political Risk Treatment

Measuring risk is just one step in managing political risk. Once the political risk has been assessed, action must be taken to handle it. Partially a step in both assessing political risk and in treating it, asking the right questions about a country's politics generates the start of a resiliency plan. A question such as "How might one predict what campaign rhetoric will be enacted and translated to new policy? What could surprise us, either positively or negatively?" is one that Deloitte suggests considering at the start of building or revising a contingency plan (Blau, Denhart, and Saha, 2016). Marsh advises that companies keep a close eye on the countries in which they have employees, supply chain ties, and credit risks. The political environment in a country has a strong influence on the well-being of each of those three concerns, and so companies must not only monitor the political conditions but also have an action plan that is ready to be deployed in order to minimize losses and business disruption (Freely, 2016). Like Marsh, AXA advises that firms put systems in place and create plans that help safeguard their assets. However, AXA emphasizes the interconnectedness of global politics in their discussion on political risk, noting that a country does not need to be politically unstable itself to feel the effects of another country's political turmoil across the world. Given that political events can ripple across the globe in unexpected ways, AXA also recommends diversifying the geographic locations in which operations are conducted (Plessis, 2017). On a more psychological note, research has demonstrated that a manager's perception and risk preferences play a role in the degree to which political risk is avoided (Giambona, Graham, and Harvey, 2016). Bearing this finding in mind, it is important to account for any heuristics and biases that could influence overall risk assessment and treatment process.

Part of the idea of diversification of operations is diversifying the supply chain. Supply chains should be organized such that disruptions can be minimized or avoided altogether – they should be resistant. In the event that a disruption occurs, that supply chain should be resilient, meaning that it is able to return to functionality as fast as possible. Given that avoiding disruption completely is highly unlikely, firms need to have plans in place to handle disruption. Ideally, firms would be both fairly resistant and resilient, but if they are much better at one than the other that can work. For instance, a firm may not be very resistant and have a lot of disruptions as a result, but if they are good at recovering quickly from those disruptions it does not impact operations very much (Melnyk, Closs, Griffis, Zobel, and Macdonald, 2014). One factor that helps firms to be more resilient is redundancy, meaning that there are resources in reserve to be used in the event of a disruption (Sheffi and Rice, 2005). Nissan had redundancy in their supply chain with their alternative suppliers, which allowed them to be more resilient than Toyota, who stayed with their existing suppliers. As a result, Nissan was able to regain lost market share faster than Toyota (Melnyk et al, 2014).

The previously discussed risk treatment strategies are rather general and could be implemented by most if not all companies. Because the overall goal of this research is to produce strategies for trade credit underwriters, the risk treatment methods of financial institutions such as insurance companies must be reviewed in greater detail. It should be noted that financial institutions are highly regulated. A 2012 study found that banking industry participants and close observers ranked political interference as the fifth-largest risk facing the industry. In 2010, this was rated as the top risk in the industry, and it only dropped to fifth in 2012 due to the fact that political interference was not a risk on the horizon but rather a part of everyday life in banking (Bradford, 2013). When pondering the questions that Deloitte recommends in preparing a risk

treatment plan, it is vital that insurance companies, which are just as heavily regulated as banks, consider the massive influence that government has on their industry. In a more concrete example of how an insurance company might treat the political risks it faces, OPIC reviews its claims history in depth, revisiting scenarios in which claims were paid, claims were denied, and arbitration was necessary among other situations. Ideally, underwriters are fully aware of all the ways in which the policy they wrote led to a claim being paid out and how they protected themselves against a loss via policy wording in past situations. While it is challenging to implement this in practice, the lessons learned through prior policies stand to improve underwriters' ability to manipulate policy wording in order to avoid losses while still providing coverage to challenging potential insureds (Moran and West, 2005).

Chapter 6

Applying Political Risk Management Concepts to Trade Credit Insurance Underwriting

This chapter will follow a structure similar to that of the chapter on political risk. Initially, the risks facing trade credit insurance underwriters will be identified and assessed. This will be followed by a list of strategies for these underwriters to exercise. To clarify the factors that may come into play during the process of underwriting a policy, underwriters do not price insurance entirely on their own. Actuaries create the models that allow underwriters to calculate the premium, or rate, that a potential insured would pay for coverage. These models are built into a web tool or application for underwriters to use that simplifies the process of calculating premiums. Underwriters are in contact with brokers, who help facilitate the deal between the insurance provider and the potential insured. There is competition from other insurance providers to gain the business from the potential client, and so the underwriter must take into account that the price generated by the rater may not satisfy the potential client's preferences. This is where the art of underwriting comes in. When calculating the premium with the rater, underwriters input values into the model to determine pricing. Some of these values, such as figures from the financial statements, are not up to interpretation and cannot be altered. However, more subjective input values, such as political risk rating, can be modified based on the underwriter's research on the topic and intuition. The underwriter may identify a range of values within which he or she believes the political risk rating must fall. In doing so, this generates a range of prices that he or she can pull from to offer to the potential insured. The hope is that the determined price range will put the insurance provider in a strong position to win the business of the potential insured. If

the potential insured requests a price that is too low for the underwriter to accept given the risk exposure, the underwriter will likely pull out of contention for the client's business to avoid adding too much risk to the portfolio of policies. The following sections on today's risks faced by firms in the global marketplace are similar to those that a trade credit underwriter might analyze and consider when determining the price range for a prospective policy.

Global Risks

The Eurasia Group began their yearly top risks report by claiming that the 2019 geopolitical environment is the most dangerous in decades. They follow that statement up by identifying all of the most notable geopolitical dynamics – the EU, the WTO, and the U.S.-China relationship are examples – and noting that they are all trending negatively, with most trending in a way that hasn't been seen since World War II (Top Risks, 2019). The outlook on trade in the global economy is not optimistic either. In the Global Risks Report 2019, nearly 90% of respondents in the World Economic Forum's Global Risk Perceptions Survey (GPRS) felt that there would be more economic conflict between major world powers and less trade agreements. Eight-five percent believed that there would be more political conflict between major world powers. These are the top three short-term risks of 2019 as judged by the respondents, and they all are directly or very closely tied to political risk and global trade. A factor believed to be fueling this growth in political risk is income inequality within countries that feeds distrust amongst citizens in societal institutions. This distrust has led to a push back against global companies. The report also questions the political health of many countries given the global rise in populism – 72% of respondents felt that the risks associated with populist agendas would

increase in 2019 – and deep partisan divides across the globe that hurt the ability of governments to be effective. With governments feeling as though they are losing control of their constituents, they look to exert more control over the economy. As a result, almost one-fourth of the world's largest firms are now state owned. This is the highest percentage in decades. Alongside the rise in populist sentiment, politicians are increasingly insisting on putting their country first. As a result, multilateralism is weakening, making it harder for countries to work together and resolve issues (“Global Risks Report,” 2019). This idea of putting the good of the country before the good of the region or world is evidenced in the Trump tweets mentioned earlier. Again, this all ties back to Paul Krugman's thesis that competitiveness is a dangerous obsession.

The global trade and political risks faced in 2019 are very similar to those faced in 2018. Six of the ten top risks of 2018 identified by the Economist Intelligence Unit (EIU) dealt directly with trade and politics. From conflicts between Asian nations to countries withdrawing from the Euro Zone, there was great concern expressed about global politics. The report from the EIU emphasizes the fact that while the global economy has been rather strong over the past few years, there is a great deal of risk in the system (“EIU Top 10 Global Risks 2018,” 2018). Eurasia Group's report echoes this, stating that amid all of the economic and financial success in the world, there is something that feels off. They argue that the world's political landscape is to blame for that feeling, and that the problems facing governments are not simple. Many of the risks that Eurasia Group identified in 2018 are identical to those mentioned a year later in the World Economic Forum's Global Risk Report. Over those two years, the increasing competition between countries, most notably in researching for technological superiority, has created what they describe as “Protectionism 2.0” as countries want to put themselves first and want to protect the technological advancements they have made. Further, Eurasia Group highlighted the

weakening of institutions as a major global risk to watch in 2018 that persisted into 2019. Aon stated in their Political Risk Maps 2018 report that they had noticed an increase in demand for political risk coverage, and that 11 countries had their political risk rating increased, while only two had their ratings decreased. It is clear based on these reports from some of the world's foremost organizations in economics, politics, and risk management that risks stemming from global politics and trade have been at the forefront of every business leaders' mind over the past two years.

U.S. and China Risks

As two of the world's most powerful countries, the U.S. and China have contributed significantly to cultivating the environment that has led to the global concerns about trade and politics. In each of the reports from the World Economic Forum, EIU, Eurasia Group, and Aon, the U.S. and China are discussed frequently. Of the six risks that dealt with political risk and trade in the EIU's 2018 Top 10 Risks to the Global Economy, four of those risks were concerned with the U.S. and China. The EIU's 2019 Top 10 Risks to the Global Economy yielded a similar result, with the top three risks being directly linked to the U.S. and China and the emerging markets that they impact. The apparent increase in risk across the globe because of the Trump administration's approach to trade relations is further demonstrated by the Economics Policy Uncertainty of Japan and the U.S. moving in close tandem since Trump's election and his withdraw from the Trans-Pacific Partnership. With regard to individual firms, the tariffs do not seem to have spooked many away from staying the course with their planned capital expenditures. Only about 20% of survey respondents in the Business Uncertainty Survey

commissioned by the Atlanta Fed said that they were re-assessing their capital expenditure plans. These most recently available figures are from July 2018, and considering the increased trade tensions and ongoing dispute, it is likely that the percentage of respondents could be higher now. However, with the overall U.S. economy still performing well, most businesses are not reeling in their investment plans just yet (Davis, 2018). Since Trump's election in 2016, the U.S. economy's annual growth has increased each year, currently at nearly 3% ("Annual real GDP growth of U.S.," 2019). While China's annual growth has been falling steadily since 2011 when it was 9.5%, they have still been growing at a rapid pace above 6% since Trump's election ("China real GDP growth," 2019). Additionally, The IMF did not cut their projections for the U.S and China's real GDP growth in 2019," with the U.S. at 2.5% and China at 6.4% (Zumbrun, 2019).

While current economic data do not give an alarming initial impression of global markets, this only tells part of the story. China's top economic official reduced the target growth rate amid an effort to achieve growth that does not require major government stimulus, as the national debt has grown to a fairly high level and they are hesitant to continue lending ("China Slows The Tempo," 2019). On the U.S. front, concerns regarding interest rate hikes and fiscal risk have dominated the conversation along with trade as market participants speculate on a potential recession in the next few years (Bachman and Majumdar, 2019). While Bachman and Majumdar believe that trade talks between the two sides are close to a positive conclusion, Eurasia Group, the EIU and the World Economic Forum all have a differing opinion. The way these organizations see it, the U.S. and China trade conflict is much deeper than trade inequalities or even IP theft. The trade relationship is just a symptom of the underlying major power struggle between the two largest countries in the world as they vie for who will have the

most influence in world affairs. Eurasia Group felt strongly enough about China's growing power and strong political model that they listed their potential growing global influence among non-Western countries as the top risk of 2018. Their third greatest risk was the global tech cold war, which, as discussed earlier with the IP theft, is underway between the U.S. and China and has massive implications for global power dynamics. With this in mind, the EIU believes that a meaningful, mutually-beneficial solution between both sides will not be reached in the short-term, though a major trade war will be averted (Trade War Brewing, 2018). Eurasia Group's Top Risks 2019 report also notes that an agreement in the near future is unlikely, as the issue that the U.S. wants resolved is central to China's economy. Further, Eurasia Group believes that the fundamental relationship between the U.S. and China has been broken. While both sides have always been skeptical of each other, they have kept relations amicable to serve their greater interests. However, the U.S. has now decided to take an openly confrontational approach in dealing with China (Top Risks 2019, 2019). The World Economic Forum already views power as shifting from the West to Asia, with China creating their own trade dispute resolution mechanisms and international courts for commercial disputes in the past few years. There has been controversy surrounding these resolution methods, which when combined with the growing competitive nature of the world could possibly complicate a system that is crucial to the success of international commerce (The Global Risks Report, 2019).

With the world's two largest economies quarreling, smaller interconnected economies have also been affected. The EIU lists an emerging markets crisis as being the second-greatest risk in 2019, and one of the main factors that could lead to the crisis is the pressure brought on by the trade conflict between the U.S. and China ("EIU Top 10 Global Risks 2019," 2019). Though China and the U.S. did not have their 2019 growth forecasts cut by the IMF between

October and January, the overall world economy had its real GDP growth target reduced from 3.7% to 3.5%. Emerging markets saw their growth expectation tacked down to 4.5% from 4.7%. The U.S. and China did see .2% decreases in growth projection since July 2018, but the global and emerging markets economies still had it worse, with a .4% decrease in their anticipated growth (Zumbrun, 2019). The emerging markets are inherently tied up in the overall performance of the global economy, not necessarily because they dictate how the economy will perform, but because they are often more dependent on exporting goods. In Aon's Political Risk Maps 2018 report, they listed China as being one of the most resilient countries in the world to the risk of supply chain disruption, as more Asian countries have shifted to trading with the Chinese rather than Americans. Since 2000, Asian countries have cut their exports to America in half to 12% while nearly doubling their exports to China, which now make up 23% of their total exports. However, these countries simply switched the side of the dispute that they were standing on – their economies are still at risk of faltering in this conflict. Singapore, Malaysia, and South Korea are the most at-risk countries whose economic performance correlates with that of China. Indonesia, Japan, and New Zealand have some exposure in this situation as well, but they correlate more with the U.S. Not only are these companies rather dependent on the economic success of the U.S. and China, but some are also highly sensitive to the tariffs. Countries that are especially sensitive to the levied tariffs import raw materials and components in order to make a finished product that can then be exported. Tariffs are inflationary, and with the price of certain affected goods being pushed up, demand for said goods is likely to fall. The countries that combine materials for export often do not have a strong domestic economy, which leaves them crippled in the event that demand for their exports falls dramatically (Douglas, 2019). Nevertheless, the tariffs also create an opportunity in the market for some countries, as some are

able to supply the same goods at a cheaper price than the U.S. or China can with the tariffs that are imposed against them.

Assessment of Risks

The following graph compares the Economic Policy Uncertainties of the U.S., China, and the World as a whole from January 1997 to February 2019. These graphs represent the Economic Policy Uncertainty Index for each respective entity, with a higher index value signifying greater economic policy uncertainty. All of these indexes have been shown to spike around times that would merit economic uncertainty, such as the indexes jumping at the time of the 9/11 attack.

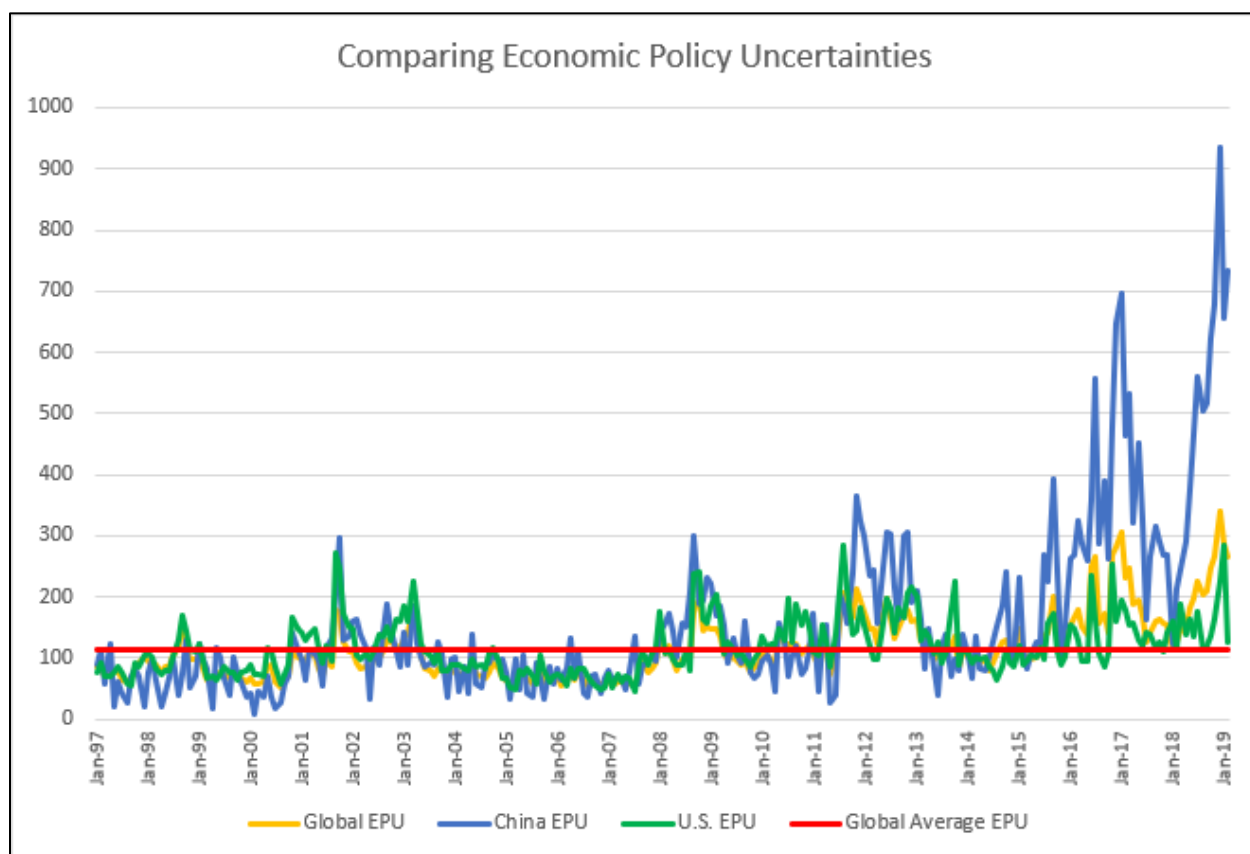


Figure 3: A comparison of U.S., China, and World Economic Policy Uncertainty Indexes

While the aforementioned historical increase around 9/11 may look relatively small, that is because of the unprecedented amount of economic policy uncertainty in China in the last year. The Global Average Economic Policy Uncertainty over this time period is about 115, and the U.S. and Global Indexes have never exceeded 350 points. Just last year, China's economic policy uncertainty index value stood at 935. China has not even come close to reaching that mark at any other time in the past two decades. The U.S. and Global uncertainties, while not as high as China's, are still currently above the global average over the past two decades.

Due to greater availability of risk ratings for a variety of measures, the data utilized in this section will not be coming from PRS's Coplin O'Leary Rating System, but will instead come from the ICRG. This is another methodology from PRS that has been used in previous research (Bekaert et al, 2014). The ICRG's rating methodology is similar to the Coplin O'Leary Method in that many specific variables are subjectively graded and feed into a broader overall rating. In the ICRG methodology, individual variables are graded and produce an Economic, Political, and Financial Risk Rating. These three ratings are then combined to create the Composite Risk Rating. Ratings are on a scale of 0 to 100, with 100 being the least risky and 0 being the riskiest ("International Country Risk Guide Methodology," n.d.). The following figures display Political Risk Ratings and Composite Risk Ratings for the U.S. and China from January 1985 until March 2019.

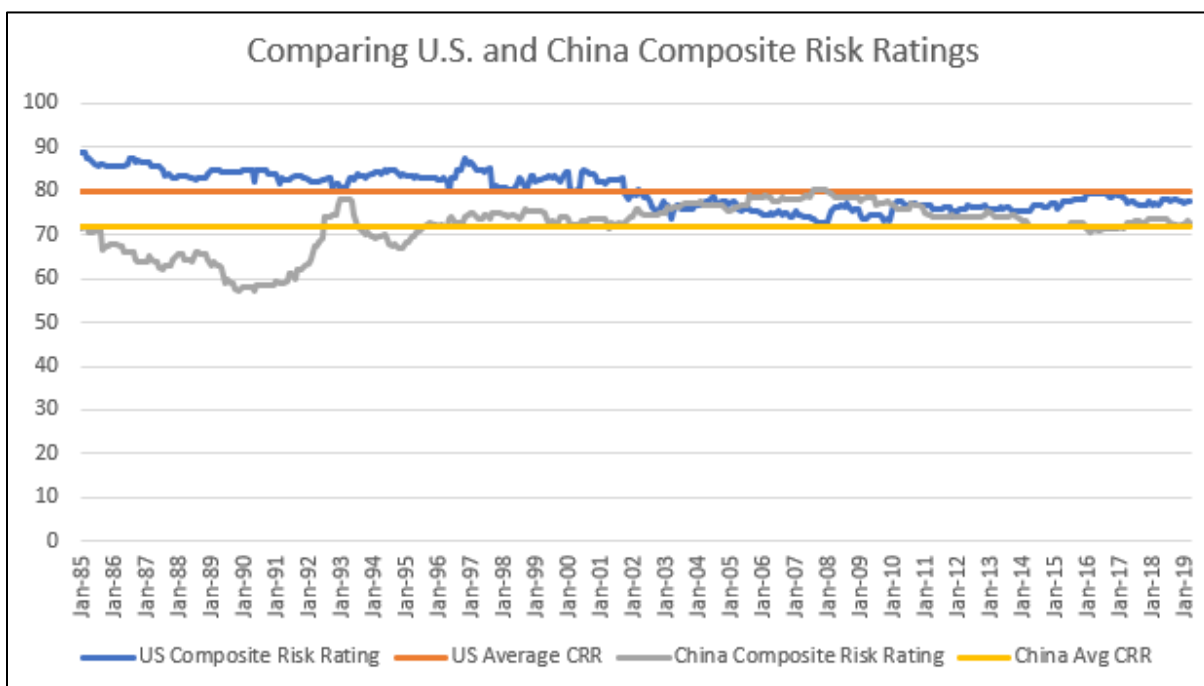


Figure 4: A comparison of Composite Risk Ratings for China and the U.S.

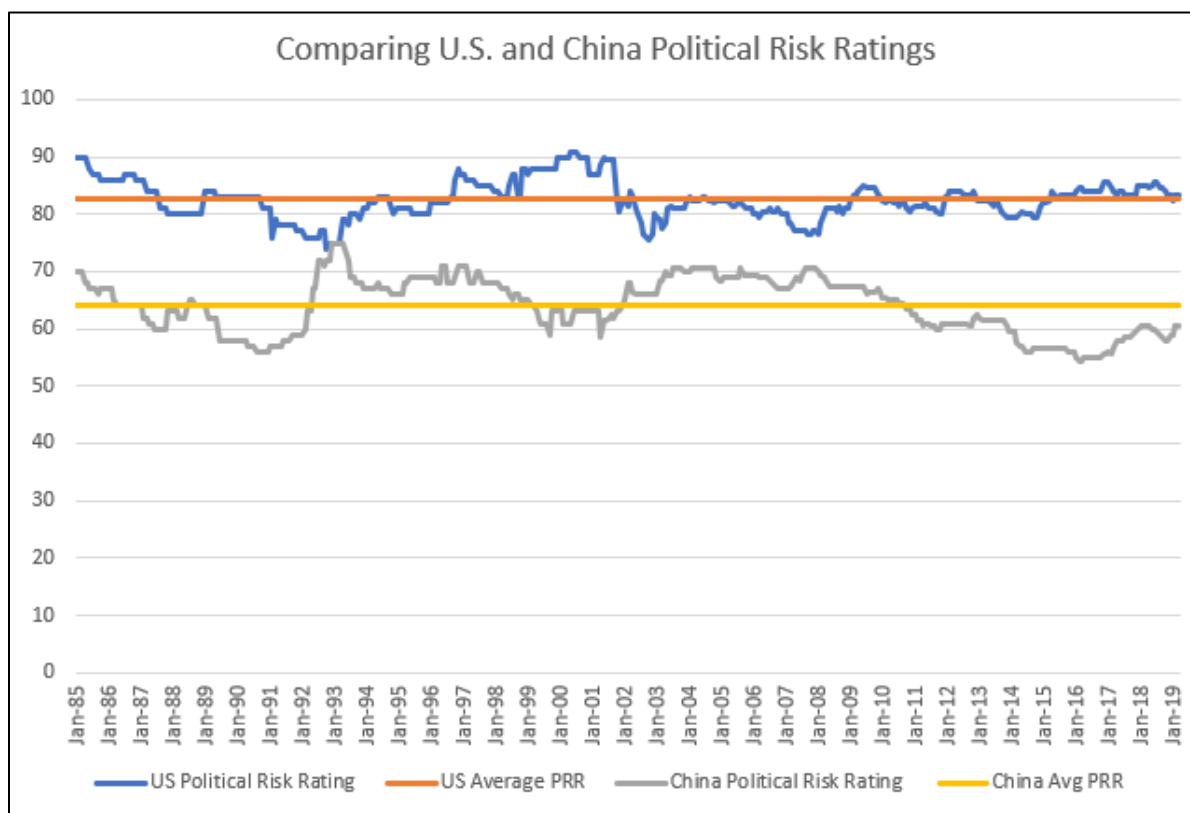


Figure 5: A comparison of Political Risk Ratings for China and the U.S.

As would be expected in this time of high tension between the two countries, neither have very good ratings when compared to their historical averages. The U.S. has an average Political Risk Rating and a slightly below average Composite Risk Rating, while China has a below average Political Risk Rating and average Composite Risk Rating. There is a much greater discrepancy in historical averages and current levels for the U.S. and China's Political Risk Ratings than Composite Risk Ratings. Additionally, the U.S.'s current Composite Risk Rating and Political Risk Rating only differ by about 5 rating points, with the Composite Risk Rating being higher. On the other hand, China's Composite Risk Rating exceeds their Political Risk Rating by nearly 11.5 ratings points. This suggests that China's Economic and Financial Risk Ratings that are considered in the Composite Risk Rating may be strong. A comparison of China's average risk ratings also shows the Composite Risk Rating as being 8 points higher than the political risk rating, which may mean that historically China has been economically and financially stronger than they have been politically stable. It should be noted that China's Political Risk Rating is historically poor, and is currently below the level that it was at during the Tiananmen Square protest in June 1989. China also had its lowest recorded Political Risk Rating in February and March 2016, with a score of 54.5.

The health of the U.S. and China's political and economic systems not only affects them individually, but also influence the economies of other smaller nations that trade with the nations. With the tariffs levied by the U.S. on China, countries such as Mexico, the Czech Republic, Thailand, Korea, and Singapore are atop the list of those that have potential market share to gain on imports that were subject to tariffs. On the flip side, Mexico, Korea, Brazil, and the Czech Republic have the chance to pounce on the market for goods affected by Chinese tariffs on U.S. goods (Wernau and Iosebashvili, 2018). East Asian countries make up four out of

the seven countries in the world that are most exposed to supply chain disruptions brought on by a global trade conflict, with each having over 60% of their exports linked to global supply chains. These countries, listed from riskiest to least risky on that list of country's most exposed to a global trade conflict, include Taiwan, South Korea, Singapore, and Malaysia (Douglas, 2018). Further, Asian countries that have been identified by the Economist Intelligence Unit as being disrupted by the U.S.-China trade conflict in the automotive, information and communications technology, and readymade garments industries include Japan, South Korea, Singapore, and Taiwan. Conversely, the countries of Thailand, Malaysia, and Vietnam have been chosen as countries that should see a strong benefit from the conflict ("Asia's Winners in Trade War," 2018).

Risk Mitigation Strategies

With events such as Trump's election and Brexit driving global risk levels higher over the past few years, Zurich Insurance saw demand in their trade credit and political risk insurance business unit increase by 14% in 2016, with continued growth of 11% in the first quarter of 2017. Further, a survey done by Berne Union and International Credit Insurance & Surety Association found that 61 percent of respondents saw an increase in demand for trade credit insurance (Neghaiwi and Cohn, 2017). Companies increasingly want cover, and trade credit underwriters are going to be faced with tough decisions regarding whether to accept the risks. There are countries that could potentially gain from this conflict, and the firms in those countries that want cover should not be feared. However, for firms requesting coverage in countries that

pose fairly significant downside risk, there are actions that can be taken in order to keep the risk of the portfolio at an acceptable level.

Avoidance

Based on the expert reports about the biggest risks facing the world today and the historical comparison of risk ratings, it is clear that the current risks associated with global trade are at extraordinary levels, particularly in Asia. The product being offered is called trade credit insurance, and the current conflict between the U.S. and China directly affects global trade. Additionally, rising populist and nationalist sentiment around the world fuels the heightened risk in global trade. Therefore, if underwriters cannot manipulate acceptable contractual terms, the policy should not be provided. Whether it be the premium, terms of cancellation, or a certain firm from a named buyer policy, the underwriter should feel comfortable and confident with the risk level being accepted. Trade credit policies are short-lived, and this conflict should be avoided while it is still at its peak. If business is lost to a competitor, there is a good chance that the terms of the policy were not favorable to the insurer. As a result, the policy may not be profitable for the insurer and they would need to raise the premium in subsequent years in an attempt to recover the incurred losses. This means that it may be easier to win business in the future while other firms tighten their policies. Countries identified as being at risk for supply chain disruption should be avoided, and Asian countries in general should be heavily scrutinized.

Loss Control through Diversification

Underwriters can utilize diversification in two ways in order to control losses that may be incurred during this time of global turmoil. The insurer's loss exposure can be reduced by amply diversifying the policy portfolio. As previously mentioned, firms in countries that are clearly at risk should be avoided. But even countries with more favorable outlooks should be monitored so as to keep their concentration in the portfolio in check. This can be achieved by tracking aggregate exposures throughout the entire firm to ensure that policies are not too high in a given country or region. Aggregate credit limits for particular countries and firms should be set by those with extensive experience in credit management. By diversifying exposure to different countries across the firm, underwriters can reduce the likelihood of potentially catastrophic losses. As has been observed with Asia, the economies of the surrounding countries are heavily impacted by China's economy and trade policies. Therefore, it is also vitally important to monitor exposures to entire regions and to diversify accordingly.

Policyholders can also realize loss control by diversifying their supply chain. By having a framework in place that allows for resistance and/or resiliency in the supply chain, individual firms can reduce the likelihood of disruption to trade. Such frameworks include sourcing from multiple companies that are located in different countries, or choosing a single supplier that has their own operations in multiple countries. Underwriters should consider how well diversified a firm's supply chain is when constructing a policy. Firms that do not have a strong supply chain with diversified operations should be given a higher premium, especially stringent policy terms, or avoided altogether. Such firms pose a much greater risk of incurring losses in the policy period given the global trade uncertainties.

Considering Heuristics and Biases

Given that cognition impacts decision making around risks, analyzing a thought-process and rationale can help to avoid the unintended assumption of risk. In conducting such an analysis, the heuristics and biases that one might have should be examined. A heuristic is a mental shortcut that aids an individual in problem solving, and a bias is the result of a mental shortcut failing and leading to a false conclusion (Cutts, n.d.). The following examples of heuristics and biases come from former Georgia State Professor of Decision Sciences Thomas Whalen:

Framing – choosing to perceive a problem in a certain way. Ex: If one chose to view today's global trade conflict as being fueled by economic rather than political motivations, that would impact the way in which he or she acts on that risk.

Anchoring and Adjustment – Beginning one's thought-process at a certain point and only thinking about adjustments from that original point. Ex: An economist provides an underwriter with a political risk rating and the underwriter only considers their personal political risk rating as being so many basis points higher or lower than the one that the economist provided.

Availability – If a piece of supporting evidence is more readily available in one's mind and in research, other data holds less weight. Ex: Reading articles and seeing in the news that state the U.S.-China conflict is overblown and believing that to be true because the information was more readily available than hundreds of historical data points proving the contrary that would need to be extensively analyzed.

Confirmation – Seeking out information that allows one to confirm a decision that he or she was already leaning towards. Ex: If one believes that the trade conflict is coming to an end soon, he

or she would only look for information that discusses President Xi and President Trump reaching an agreement soon.

There are other heuristics and biases that individuals may have to deal with, but the above list of examples is most pertinent to what an underwriter would deal with when constructing a policy. Underwriters should not only consider which of these mental shortcuts they rely on to problem-solve and how it impacts their decision making, but they should also do the same for other members of their organization, such as the economists that provide the political risk ratings and the credit officers that set the aggregate credit limits. Doing so helps to uncover risks that may not have been originally accounted for and can lead to a better overall assessment of risk.

Chapter 7

Conclusion

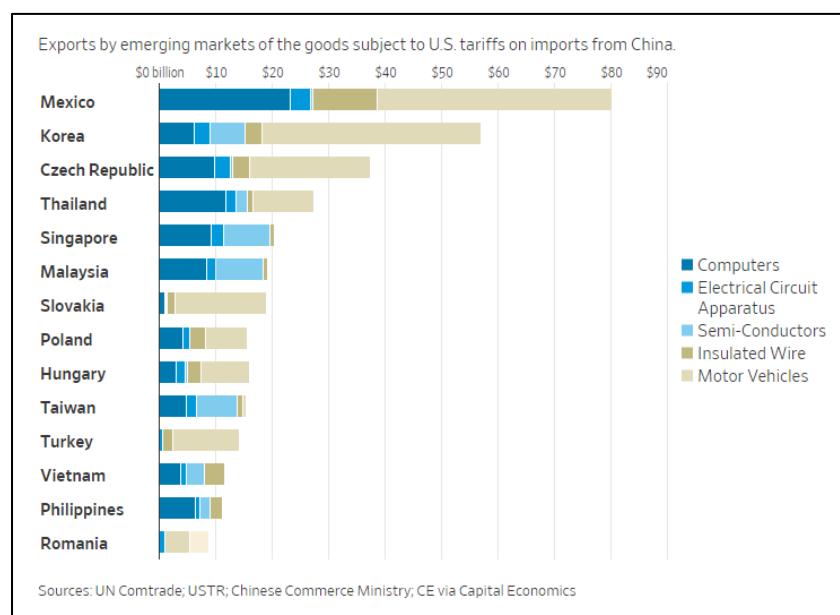
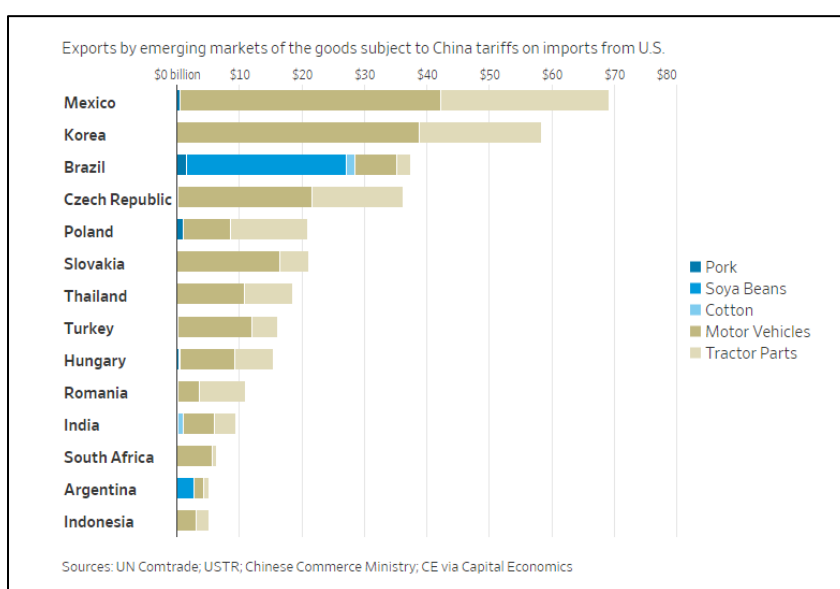
By studying past research that was conducted on global trade ideals and practices and comparing those findings to the trade environment that exists in 2019, it became clear that political risk has a massive impact on the state of global trade today and the modern risks that are present in the trading relationships between countries. Therefore, political risk should be the focus of trade credit underwriters as they seek to properly assess risk and build profitable policies. In identifying and assessing the leading political risks that countries around the world face today, the research from the world's foremost risk management firms and data from trusted indexes measuring political risk suggested that the world is currently experiencing a time of historically high political risk and that the Asian region was especially risky. In order to adapt to this complex risk climate, underwriters should exercise avoidance in the majority of the Asian region. Policies terms should not be loosened in order to gain business during this time of amplified risk. The vetting process for underwriters should also include a review of the prospective insureds' supply chain diversification, as well as the diversification of the insurer's own policy portfolio. Additionally, an analysis of the heuristics and biases that may hinder proper risk assessment on the behalf of the underwriter and insurer as a whole. By tapping these strategies, trade credit underwriters should expect to see greater profitability in their business unit. Future research on this topic might include a study involving the Economic Policy Uncertainty Index to see how the media influences the public's perception of political risk.

Given that many market participants rely on the media to inform them on global politics and international business developments, findings in this area could have wide-ranging implications.

Appendix A

New markets for emerging economies due to the trade war

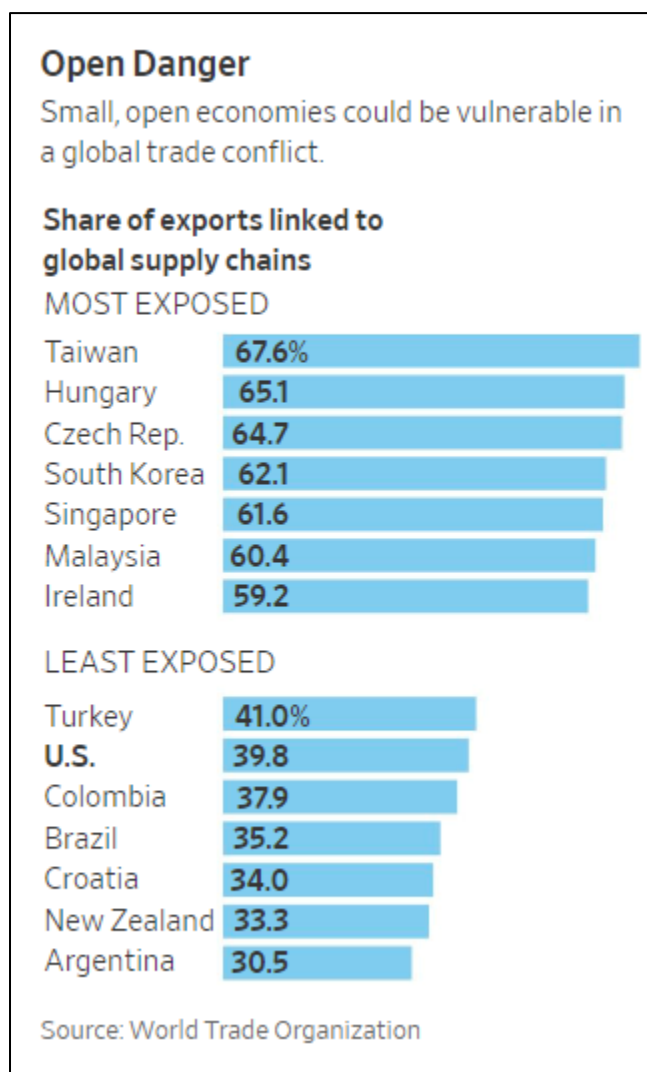
The following charts are from the Wall Street Journal (Wernau and Iosebashvili, 2018).



Appendix B

Global Trade Conflict Exposures











This chart from the Wall Street Journal shows which small economies are most reliant on global trade as intermediaries in the supply chain and, therefore, most exposed to the risks that come with a trade war (Douglas, 2018).





















Appendix C

Asia's Winners and Losers in the Trade Conflict

The winners and losers amongst East Asian emerging markets as determined by the Economist Intelligence Unit in light of the trade war that has caused supply chain disruption (“Asia’s Winners in Trade War,” 2018).

Winners and losers					
Automotive					
Strong benefits		Mild benefits		Disruption	
Thailand		India		Japan	
Malaysia		Indonesia		South Korea	
		Philippines		Taiwan	
		Vietnam		Singapore	

Winners and losers					
Information and communications technology					
Strong benefits		Mild benefits		Disruption	
Malaysia		India		Philippines	
Vietnam		Indonesia		Japan	
		Thailand		Singapore	
				South Korea	
				Taiwan	

Winners and losers					
Readymade garments					
Strong benefits		Mild benefits		Disruption	
Bangladesh		Sri Lanka		Indonesia	
Vietnam		Pakistan		Cambodia	
India				Myanmar	

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