

AN EVALUATION OF INSURANCE REQUIREMENTS ACROSS THE PHARMACEUTICAL SUPPLY CHAIN

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Pharmaceutical Management

by

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Under the Supervision and Guidance of

Dr. Rahul Sharma-

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PRUDENT INSURANCE BROKERS PVT. LTD.

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Priyanka Himanshu Pramanick** has successfully completed her internship with **Prudent Insurance Brokers Pvt. Ltd.** from **12th March 2025 to 30th May 2025**.

During her internship, Priyanka was assigned to our esteemed **Commercial Lines Team**, where she demonstrated exceptional skills and a strong understanding of Commercial Lines processes. Her dedication, professionalism, and ability to contribute meaningfully to the department were truly commendable.

We extend our heartfelt congratulations to Priyanka for her hard work and commitment throughout the internship. We are confident that she will continue to excel in all her future endeavours.

We wish her all the very best for a successful and fulfilling career ahead.

For Prudent Insurance Brokers Pvt. Ltd.

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CERTIFICATE

This is to certify that dissertation titled “An Evaluation of Insurance Requirements Across the Pharmaceutical Supply Chain” is a record of the research work undertaken by **Priyanka Pramanick** in partial fulfillment of the requirements for the award of the degree of MBA Pharmaceutical Management from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.



Mr. Rahul Sharma
Assistant Professor



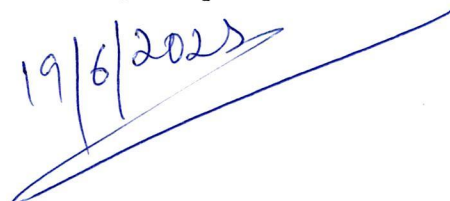
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Date:



19/6/2025

DECLARATION BY STUDENT

I hereby declare that this dissertation titled **An Evaluation of Insurance Requirements Across the Pharmaceutical Supply Chain** is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



Priyanka Pramanick

19/06/2025

ABSTRACT

Title:

An Evaluation of Insurance Requirements Across the Pharmaceutical Supply Chain

Author Name:

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Keywords:

Pharmaceutical Supply Chain, Marine Cargo Insurance, Institute Cargo Clauses (ICC), Risk Mitigation, Cold Chain, Regulatory Compliance, Product Recall Insurance, SMEs

Background:

The pharmaceutical supply chain is characterized by stringent regulations, high-value goods, and diverse operational risks—ranging from temperature excursions to theft, contamination, and regulatory non-compliance. These risks demand structured insurance solutions for operational continuity and patient safety.

Objective:

To evaluate the insurance requirements and strategic risk mitigation practices necessary across various stages of the pharmaceutical supply chain, and to identify key challenges and gaps in current insurance implementations.

Methodology:

This study employs a qualitative approach, combining literature review and practical insights gathered during a 3-month internship at Prudent Insurance Brokers Pvt. Ltd. It includes observation of insurance advisory processes, informal interviews with industry professionals, and review of regulatory documents and global insurance standards like Incoterms® 2020 and ICC clauses.

Results/Findings:

The research highlights a layered insurance framework across the supply chain, with marine cargo insurance (especially ICC-A) as the most adopted policy for pharmaceutical logistics. Large companies use end-to-end risk assessments and specialized policies, whereas SMEs rely on limited coverage, exposing them to substantial risk.

Product recall and cyber liability insurances were identified as underutilized yet essential in today's digital and regulated environment. Misunderstandings regarding risk transfer in contracts and low awareness of insurance applicability emerged as recurring challenges.

Conclusions:

Insurance in the pharmaceutical sector is not merely a financial backup but a strategic necessity. A robust insurance portfolio—aligned with supply chain operations and regulatory requirements—can enhance resilience, reduce financial exposure, and uphold product integrity. Comprehensive insurance adoption, especially among SMEs, and greater integration of specialized clauses are crucial for supply chain security and sustainability.

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The exposure and opportunity I received at Prudent Insurance Brokers, Mumbai was a wonderful stroke of luck. The presence of such cooperative staff and all the faculties made my journey full of knowledge and fun.

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TABLE FOR ABBREVIATIONS

Sr. No.	Abbreviation	Meaning
01	API	Active Pharmaceutical Ingredient
02	GMP	Good Manufacturing Practice
03	FDA	Food and Drug Administration
04	EMA	European Medicines Agency
05	CDSCO	Central Drugs Standard Control Organization
06	GPS	Global Positioning System
07	COVID -19	Coronavirus Disease 2019
08	EXW	Ex Works
09	FCA	Free Carrier
10	FAS	Free Alongside Ship
11	FOB	Free on Board
12	CFR	Cost & Freight
13	CIF	Cost, Insurance & Freight
14	CPT	Cost Paid To
15	CIP	Carriage & Insurance Paid To
16	DPU	Delivered at Place Unloaded
17	DAP	Delivered at Place
18	DDP	Delivered Duty Paid
19	ICC	Institute Cargo Clauses
20	INCOTERMS®	International Commercial Terms
21	GDP	Good Distribution Practice
22	SME	Small and Medium-sized Enterprises
23	IFFC	Institute Frozen Food Clauses
24	ULIPs	Unit Linked Insurance Plans
25	OPD	Outpatient Department
26	D&O	Directors and Officers (Liability Insurance)
27	NDA	New Drug Application
28	IRDAI	Insurance Regulatory and Development Authority of India
29	SRCC	Strikes, Riots, and Civil Commotion
30	ITC	Inland Transit Clause

CHAPTER 1: INTRODUCTION

1.1 Overview of pharmaceutical supply chain

The pharmaceutical supply chain is a complex and highly regulated ecosystem designed to ensure the safe, timely, and effective delivery of medicinal products from manufacturers to end consumers. This supply chain has various interconnected stages ranging from raw material sourcing and production to warehousing, distribution, and dispensing to patients. Each segment involves unique operational challenges and risks and demands rigorous standards in quality assurance, regulatory compliance, and risk management.

The process begins with active pharmaceutical ingredient (API) and excipient procurement. These raw materials sourced from multiple geographies, introduces risks related to transportation, customs clearance, political instability, and supply disruptions. The APIs are then transported to manufacturing facilities, where formulation into final dosage forms such as tablets, injectables, or syrups takes place under stringent Good Manufacturing Practices (GMP). Here, even minor lapses in handling, contamination control, or temperature management can compromise product integrity, resulting in substantial financial and reputational losses. The manufacturing phase also involves regulatory oversight from agencies such as the FDA (U.S.), EMA (Europe), and CDSCO (India), requiring rigorous documentation and compliance.

Pharmaceutical products are stored in warehouses before being dispatched through a distribution network. This phase includes cold chain management for temperature-sensitive products such as vaccines, insulin, and monoclonal antibodies. These warehouses serve as critical nodes in the supply chain, where any deviation in temperature, humidity, or handling procedures can render entire batches unfit for consumption. Furthermore, theft, fire, flood, and contamination represent substantial risks, thus making robust insurance coverage a necessity.

The logistics and transportation segment represents another critical phase in the pharmaceutical supply chain. Products may be transported by road, air, or sea, often across international borders. During transit, pharmaceuticals are vulnerable to a range of risks, including theft, counterfeit substitution, delays due to customs clearance, accidents, and exposure to temperature excursions. Temperature excursions during transit, even for a short period, can result in product degradation, especially for biologics and injectables. From an insurance perspective, marine cargo insurance, inland transit insurance, and cold chain liability insurance become vital instruments for risk transfer and financial protection.

In distribution and retail process includes additional complexity due to diverse storage conditions, varying levels of infrastructure, and the need for last-mile delivery, especially in rural or geographically challenging regions. Inaccurate demand forecasting or inventory mismanagement can result in stockouts or overstocking, both of which have implications for public health and financial efficiency. Insurance mechanisms such as product liability insurance, errors and omissions coverage, and stock throughput policies are instrumental in mitigating the risks at this stage.

The regulatory compliance and documentation play a critical role in the pharmaceutical supply chain. Each phase requires detailed record-keeping and audit trails to ensure accountability and compliance with national and international regulatory frameworks. Regulatory failures or non-compliance can result in product recalls, legal liability, and sanctions. This makes recall insurance an important aspect of the insurance portfolio for pharmaceutical companies. Recall insurance covers the financial losses and costs associated with product withdrawal from the market, public notifications, disposal, and legal defense.

1.2 Pharmaceutical Logistics and Risk Exposure

Pharmaceutical logistics includes inbound logistics (procurement of raw materials), intra-facility logistics (movement within manufacturing plants), outbound logistics (transportation to distribution centers), and last-mile delivery to the point of care. The prominent risks in pharmaceutical logistics is temperature excursion of biologics, vaccines, and insulin, must be stored and transported within strict temperature ranges (commonly 2°C to 8°C). Any deviation can compromise product efficacy, requiring recalls and liability coverage.

Another major risk is in-transit theft or pilferage. Pharmaceuticals are highly valuable and targeted by criminal syndicates. Theft can occur during road transport, at warehouses, or even at customs clearance points. Stolen products not only cause direct financial losses but also pose a public health risk if sold in black markets. Transit insurance, marine cargo insurance, and stock throughput policies help cover such losses, while tamper-evident packaging and GPS tracking deter and trace thefts.

Damage during transportation is also a significant concern. Improper handling, vibration during transit, and poor packaging can result in breakage, contamination, or spoilage. These risks are particularly relevant for injectable drugs, glass ampoules, and liquid formulations. This makes goods-in-transit insurance crucial, especially for international shipments where multiple handling points increase exposure.

Regulatory non-compliance can also pose risks in logistics. Failure to meet documentation, labelling, or transportation standards may result in shipment seizures, customs delays, and legal penalties. These are most common in cross-border logistics, where country-specific regulations must be meticulously followed. To cover associated financial risks, companies may obtain contingent liability insurance or regulatory breach insurance.

Natural disasters and force majeure events such as floods, earthquakes, or pandemics can severely disrupt logistics networks. The COVID-19 pandemic, for example, highlighted vulnerabilities in supply chains due to lockdowns, labour shortages, and transportation bans. Such disruptions may result in expiry of time-sensitive products or spoilage due to delayed movement. Business interruption insurance, including extensions for supply chain disruption, helps mitigate financial impacts.

Table no 1: Pharmaceutical Logistics Risk Exposure and Insurance Mapping

Logistics Stage	Risk Exposure	Impact
Inbound Logistics	Supplier delay, transport damage	Production delays, raw material spoilage
Cold Chain Transportation	Temperature excursions	Product degradation, recalls, financial losses
Transit (Domestic/International)	Theft, pilferage	Revenue loss, legal liability, patient safety risks
Warehousing	Fire, flood, pest infestation	Bulk inventory loss, contamination
Regulatory Transit	Non-compliance, customs hold-ups	Fines, shipment delays, legal complications
Last-mile Delivery	Delays, product mishandling	Patient dissatisfaction, brand damage
Natural Disasters	Disruption of entire supply route	Supply chain halt, expiry of stock
Digital Logistics Systems	Cyber-attacks, data loss	Operational shutdown, loss of tracking and compliance

Last-mile delivery issues like route unpredictability, traffic delays, infrastructure deficits (especially in rural areas), and package mismanagement are common. While the financial value of losses may be lower in this stage compared to upstream logistics, the reputational impact is significant. Poor last-mile performance can erode trust among patients and healthcare providers. Logistics service provider liability insurance is often used here to cover claims arising from delivery delays or losses.

As supply chains become more digitized with tracking, automated documentation, and inventory control systems, the risk of data breaches, ransomware attacks, and operational disruptions increases. Such risks can impact not only physical logistics but also regulatory compliance and traceability. Cyber liability insurance is becoming a necessity, especially for logistics firms and pharmaceutical companies managing cloud-based operations.

1.3 Role of Insurance in Pharmaceutical Risk Mitigation

The pharmaceutical industry operates within a highly regulated and risk-sensitive environment. Every stage of the pharmaceutical supply chain from manufacturing and warehousing to transportation and distribution carries potential risks.

Insurance, particularly marine cargo insurance, plays a vital role in mitigating such risks by providing financial protection and ensuring continuity of operations in the event of unforeseen losses.

Importance of Marine Insurance in the Pharmaceutical Supply Chain

Marine insurance refers to the coverage provided for goods transported across seas and other modes (air, land, inland waterways), and is crucial for international pharmaceutical logistics. Pharmaceuticals are prone to risks such as:

- **Temperature fluctuations** leading to product spoilage.
- **Delay in transit** causing expiry or rejection at destination.
- **Theft and pilferage**, especially of controlled substances or high-value drugs.
- **Physical damage** during loading, unloading, or due to natural calamities.

The **International Chamber of Commerce (ICC)** is a globally recognized organization that plays a pivotal role in setting international trade rules and standards. Established in 1919, the ICC represents businesses worldwide and works to promote open markets, responsible business conduct, and global trade.

Table no 2: Comparison of Institute Cargo Clauses (A, B, and C) – Risk Coverage Matrix

Description of Risk	ICC A	ICC B	ICC C
Fire or explosion	✓	✓	✓
Stranding, grounding, capsized	✓	✓	✓
Overturning or derailment	✓	✓	✓
Collision or contact of vessel with external object	✓	✓	✓
Discharge at port of distress	✓	✓	✓
Earthquake, volcanic eruption or lightning	✓	✓	✗
General Average	✓	✓	✓
Jettison	✓	✓	✓
Washing overboard	✓	✓	✗
Entry of sea, lake, river water	✓	✓	✗
Rainwater damage	✓	✗	✗
Total loss of any package lost/dropped overboard	✓	✓	✗
General average and salvage charges	✓	✓	✓
Theft, pilferage and non-delivery	✓	✗	✗
Piracy	✓	✓	✗
Rough handling	✓	✗	✗
Contamination	✓	✗	✗
War/Strikes risk forwarding charges	✓	✗	✗

1. ICC (A) – All Risks

- This is the most comprehensive type of coverage.
- Covers “all risks” of loss or damage to cargo except for specifically excluded events.
- Ideal for pharmaceutical shipments due to high value and sensitivity.
- Exclusions include war, strike, insolvency, inherent vice, and unseaworthiness.

2. ICC (B) – Named Perils

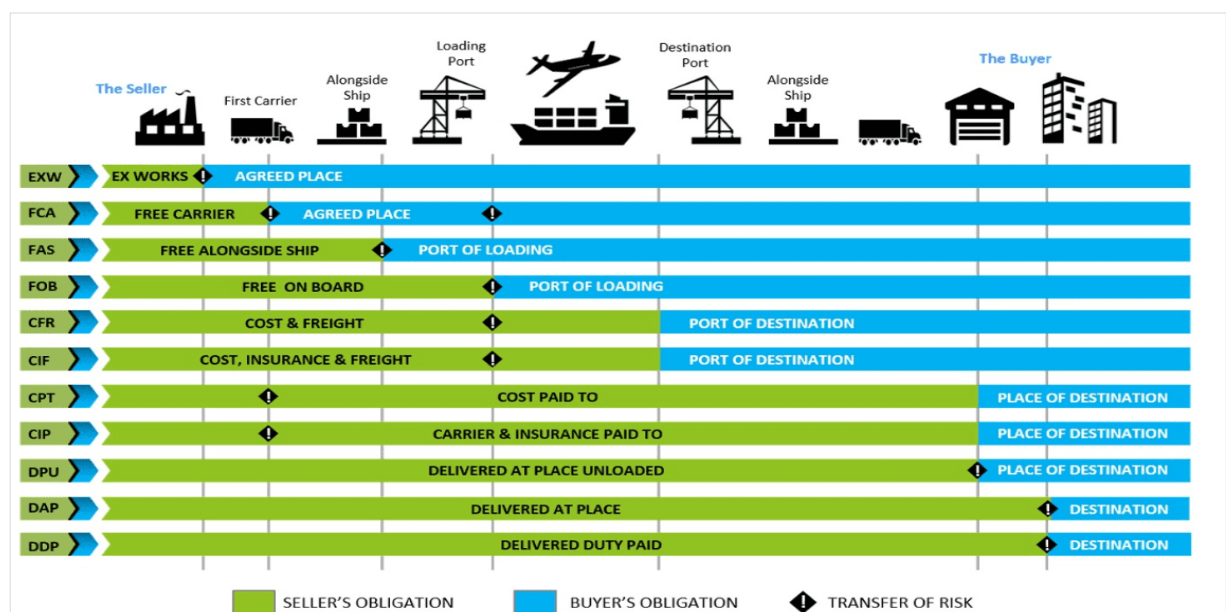
- Offers a middle level of protection.
- Covers risks like fire, lightning, explosion, vessel grounding, collision, discharge at a port of distress, earthquake, etc.
- Not suitable for delicate pharmaceuticals unless paired with additional clauses.

3. ICC (C) – Basic Coverage

- Covers the least number of perils.
- Typically used for bulk, low-value commodities.
- Inadequate for pharmaceuticals unless highly cost-restricted and low-risk cargo

INCOTERMS® were first introduced by the ICC in 1936 and are updated periodically to reflect changes in international trade practices. The most recent version, **INCOTERMS® 2020**, includes 11 terms, each designated by a three-letter abbreviation such as EXW (Ex Works), FOB (Free on Board), CIF (Cost, Insurance and Freight), and DDP (Delivered Duty Paid). These terms cover key aspects of a transaction, including the point of delivery, who is responsible for transportation and insurance, and who bears the risk of loss or damage during transit.

Fig 1: INCOTERMS® 2020 – Seller vs Buyer Obligations and Risk Transfer



The use of Incoterms helps prevent misunderstandings and disputes by clearly outlining each party's obligations in a sales contract. For example, under FOB, the seller delivers the goods on board a vessel nominated by the buyer, and the risk transfers to the buyer once the goods are on board. Incoterms are not laws but are incorporated into contracts by mutual agreement. They are widely accepted across the globe and are instrumental in facilitating smooth and efficient international trade.

Table no 3: INCOTERMS® 2020 – Insurance Responsibility and Risk Transfer

INCOTERM®	Full Form	Insurance Responsibility	Point of Risk Transfer
EXW	Ex Works	Buyer	At seller's premises
FCA	Free Carrier	Buyer	At agreed place
FAS	Free Alongside Ship	Buyer	At port of loading
FOB	Free on Board	Buyer	On board at port of loading
CFR	Cost & Freight	Buyer	On board at port of loading
CIF	Cost, Insurance & Freight	Seller (minimum coverage)	On board at port of loading
CPT	Cost Paid To	Buyer	To first carrier
CIP	Carriage & Insurance Paid	Seller	To first carrier
DPU	Delivered at Place Unloaded	Seller	At named place
DAP	Delivered at Place	Seller	At named place
DDP	Delivered Duty Paid	Seller	At named destination

The **Institute Frozen Food Clauses (IFFC)** are specialized insurance clauses designed to cover risks associated with the storage and transportation of temperature-sensitive goods, particularly frozen foods. In the pharmaceutical supply chain, where many products such as vaccines, biologics, and certain injectable medications require strict temperature control, these clauses are highly relevant. Although originally developed for frozen food, the principles of IFFC are often adapted to insure cold chain pharmaceutical products. These clauses provide coverage for loss or damage caused by breakdown or malfunction of refrigeration equipment, prolonged power failure, or accidental deviation from specified temperature ranges, which could compromise product efficacy and safety.

The IFFC typically requires that temperature loggers, data records, and proper packaging standards be maintained to validate any claim. Additionally, coverage may include protection during transit, at storage facilities, and while goods are being transferred between different modes of transport. For pharmaceutical companies, incorporating IFFC-type coverage within their marine cargo or transit insurance policies helps manage risks related to temperature excursions and ensures compliance with global Good Distribution Practices (GDP). This not only safeguards high-value pharmaceutical inventory but also supports patient safety by ensuring product integrity throughout the supply chain.

1.4 Objective and significance of research

Purpose of the Research

The primary purpose of this research is to evaluate the insurance requirements and risk mitigation strategies essential to the pharmaceutical supply chain. As the supply chain in this industry becomes increasingly complex, globalized, and regulated, it is exposed to a variety of operational, environmental, and compliance-related risks. These include damage during transit, temperature excursions, contamination, theft, and regulatory non-compliance. This study aims to identify the critical insurance products—such as marine cargo insurance, transit coverage, and liability insurance—and assess how they are implemented to protect the pharmaceutical value chain from raw material procurement to final product delivery.

Problem Statement

Despite the high value and sensitive nature of pharmaceutical products, many organizations struggle with inadequate or fragmented insurance coverage across various supply chain stages.

There is often a lack of clarity regarding the applicability of specific insurance policies (e.g., marine cargo, Institute Cargo Clauses, product liability), and many companies fail to align risk exposure with appropriate insurance solutions. This leads to financial vulnerabilities, especially in cases of supply chain disruptions, cold chain failures, or cross-border transportation risks. Additionally, due to limited awareness or standardized practices, smaller pharma companies often remain underinsured or non-compliant with global best practices.

Importance of the Problem

Insurance serves as a critical risk management tool in the pharmaceutical supply chain, offering financial protection and operational continuity. Understanding and evaluating insurance requirements not only safeguards company assets and reputation but also ensures patient safety by minimizing the risk of compromised drug products. In the context of rising regulatory scrutiny, global distribution, and increasing dependence on third-party logistics providers, an informed and structured insurance strategy is vital for supply chain resilience and overall business sustainability.

Aims and Objectives of the Study

Aim:

To evaluate and analyze the insurance requirements and strategies essential for risk management across the pharmaceutical supply chain.

Objectives:

- To identify key risks and vulnerabilities within the pharmaceutical supply chain.
- To explore various insurance products applicable to different stages of the supply chain (e.g., marine, cargo, product liability, cold chain insurance).
- To examine how insurance coverage is integrated into the logistics and regulatory frameworks of pharmaceutical companies.
- To assess the awareness and adoption of Institute Cargo Clauses (ICC A/B/C) and other international insurance standards in the sector.
- To identify gaps, challenges, and best practices in designing comprehensive insurance strategies for pharmaceutical supply chains.

Identified gaps:

- Lack of comprehensive research on the specific insurance needs at each stage of the pharmaceutical supply chain (procurement, storage, transit, distribution).
- Insufficient understanding of how insurance clauses (e.g., ICC A/B/C, IFFC) are applied in pharmaceutical logistics.
- Limited studies on the awareness and preparedness of pharmaceutical companies, especially SMEs, regarding insurance planning.
- Absence of a standardized framework for evaluating insurance coverage across international and domestic pharmaceutical distribution networks.

1.5 Organization profile**Company Overview:**

Prudent Insurance Brokers Pvt. Ltd., established in 2005, is one of India's leading composite insurance brokers, licensed by the Insurance Regulatory and Development Authority of India (IRDAI). Headquartered in Mumbai, the company operates nationally with branch offices in major cities. It specializes in providing expert insurance and risk management solutions tailored to corporate, SME, and individual clients. With an experienced team of professionals, Prudent ensures that clients receive unbiased advice, optimal coverage, and efficient claims support across all types of insurance.

Vision:

To be the most trusted and customer-centric insurance broking company in India, delivering risk solutions with integrity, innovation, and excellence.

Mission:

To offer strategic insurance consulting and broking services that protect businesses and individuals, while simplifying risk management with technology-enabled solutions.

Services provided:

The services are primarily divided into four broad verticals: Commercial Lines Insurance, Employee Benefits, Retail Insurance, and Reinsurance & Risk Advisory.

1. Commercial Lines Insurance:

Prudent's Commercial Insurance vertical is designed to mitigate risks faced by businesses across industries, including manufacturing, pharmaceuticals, logistics, healthcare, infrastructure, and more. This includes:

- **Property and Engineering Insurance:** Covers damage to assets such as buildings, plants, machinery, and equipment due to fire, natural calamities, or accidental breakdowns. Engineering policies also cater to risks during project construction or erection phases.
- **Marine Cargo Insurance:** Offers protection against loss or damage to goods in transit via sea, air, rail, or road. Prudent is particularly adept at handling specialized clauses such as the Institute Frozen Food Clause (IFFC), critical for the pharmaceutical cold chain.
- **Liability Insurance:** Includes Product Liability, Commercial General Liability, and Directors & Officers (D&O) Liability Insurance to shield businesses from third-party legal claims and management risks.
- **Business Interruption Insurance:** Compensates for income loss due to a disruption in operations following insured damage, helping companies maintain cash flow during downtimes.
- **Cyber Risk Insurance:** As cyber threats grow, this coverage helps businesses manage losses from data breaches, ransomware, or cyber extortion.

2. Employee Benefits:

Prudent provides strategic design, placement, and administration of employee benefit programs, crucial for talent attraction and retention. Services include:

- **Group Health Insurance:** Customizable plans that cover hospitalization, maternity, and OPD expenses for employees and their dependents.
- **Group Term Life Insurance:** Financial protection for the families of employees in the event of untimely demise.
- **Group Personal Accident Insurance:** Covers accidental death, disability, and medical costs arising from workplace or non-workplace incidents.
- **Gratuity Fund Management:** Helps in setting up and managing gratuity trusts in line with Indian regulations.

- **Wellness Programs:** Includes preventive health check-ups, mental wellness, and health advisory services integrated with insurance plans.

3. **Retail Insurance:**

For individual clients, Prudent offers customized insurance products to protect against personal risks:

- **Health Insurance:** Comprehensive plans including indemnity-based and fixed-benefit policies, with options for cashless hospitalization and critical illness coverage.
- **Motor Insurance:** Covers damage to vehicles and third-party liability for both private and commercial vehicles.
- **Life Insurance:** Term plans, ULIPs, and endowment policies to ensure long-term financial security.
- **Travel Insurance:** Protection against medical emergencies, baggage loss, and trip cancellations during domestic or international travel.
- **Home Insurance:** Covers structural and content damage due to natural disasters, theft, or fire.

4. **Reinsurance & Risk Advisory:**

Prudent also serves insurers and large clients with:

- **Treaty and Facultative Reinsurance:** Risk-sharing arrangements that support primary insurers in managing large or catastrophic exposures.
- **Risk Surveys & Audits:** Site inspections and risk assessments to identify vulnerabilities and recommend mitigation strategies.
- **Claims Management:** End-to-end support in filing, documentation, and negotiation to ensure swift and fair claim settlements.
- **Policy Benchmarking & Review:** Ensures clients receive the best coverage terms at competitive rates by comparing market offerings.

CHAPTER 2: LITERATURE REVIEW

Sr. No.	Author	Title of study	Key takeaways	Source
01	Karpova D, Yurieva T, Leonid Khuzhamatov, lyudmila Tsvetkova	Methodology of assessing risks to sustainable supply chain of an insurance company	A stakeholder-based methodology to assess risks in insurance supply chains using ranked financial indicators. It highlights the role of balanced resource exchange and stakeholder satisfaction in maintaining financial stability. This framework is relevant for evaluating insurance needs across pharmaceutical supply chains, where risk assessment, regulatory compliance, and stakeholder alignment are critical.	Karpova D, Yurieva T, Leonid Khuzhamatov, lyudmila Tsvetkova. “Methodology of assessing risks to sustainable supply chain of an insurance company”. Journal of Supply Chain Management”. 2019 Aug 3;(275):292.
02	Shetty AD, Shetty A, Shetty J, Shenoy S, Sreedhar D, Nayak S.	Pharma Insurance: A Mechanism for Risk Mitigation	Insurance mitigates risks in the pharmaceutical supply chain by addressing issues like mishandling, pilferage, and inadequate storage or transit conditions. The study identifies a gap in coverage among intermediaries, emphasizing the need for comprehensive insurance	Shetty AD, Shetty A, Shetty J, Shenoy S, Sreedhar D, Nayak S. “Pharma Insurance: A Mechanism for Risk

			policies to protect against operational and financial losses, ensuring uninterrupted and compliant drug distribution across various supply chain tiers.	Mitigation”. Research Journal of Pharmacy and Technology. 2021 May 26;2659–64.
03	Jaberidoost M, Nikfar S, Abdollahiasl A, Dinarvand R.	Pharmaceutic al supply chain risks: a systematic review	The systematic review categorizes 50 risks in the pharmaceutical supply chain across seven major areas: supply and suppliers, organization and strategy, finance, logistics, market, politics, and regulation. Supply and supplier-related risks (40%) are most prevalent. These insights emphasize the need for comprehensive insurance strategies to cover internal process failures and external disruptions in the pharmaceutical supply chain.	Jaberidoost M, Nikfar S, Abdollahiasl A, Dinarvand R. “Pharmaceutic al supply chain risks: a systematic review”. DARU Journal of Pharmaceutical Sciences. 2013 Dec;21(1).
04	Wang M, Jie F	Managing supply chain uncertainty and risk in the pharmaceutic al industry.	Framework for managing uncertainty and risk in the pharmaceutical supply chain, emphasizing the importance of supply chain integration capability as an effective risk management tool. It identifies key types of supply chain risks and uncertainties	Wang M, Jie F. Managing supply chain uncertainty and risk in the pharmaceutical industry. Health Services

			specific to pharmaceuticals and explores how integration can mitigate these challenges. The framework aims to support strategic decision-making for long-term success and contributes to the limited research on pharmaceutical supply chain risk management, with potential applicability to other sectors.	Management Research. 2019 Jun 18;33(3).
05	Esmaeillou Y, Masoudi Asl I, Tabibi SJ, Cheraghali A	Factors affecting the management of pharmaceutical supply chain in Iran.	Key factors impacting pharmaceutical supply chain management in Iran, highlighting risks related to regulation, logistics, and finance. Based on expert input and factor analysis, it emphasizes the importance of insurance coverage to manage these risks and strengthen supply chain resilience amid economic and regulatory uncertainties.	Esmaeillou Y, Masoudi Asl I, Tabibi SJ, Cheraghali A. "Factors affecting the management of pharmaceutical supply chain in Iran". Galen Med J. 2019;8: e1693.
06	Van Niekerk S, Niemann W, Kotzé T, Mocke K	Supply chain security orientation in the pharmaceutical industry	Security orientation in South Africa's pharmaceutical supply chain, identifying key risks like theft, counterfeiting, and regulatory gaps. It highlights the need for robust insurance strategies and coordinated risk management to address vulnerabilities.	Van Niekerk S, Niemann W, Kotzé T, Mocke K. "Supply chain security orientation in the pharmaceutical

			Proactive security practices and stakeholder collaboration are essential to ensure supply chain integrity and resilience.	industry”. South Afr Bus Rev. 2017;21(1):1–25.)
07	Lee J, Seung-Lin H.	Study of Marine Cargo Insurance under the Incoterms 2020 CIP Term.	Addresses the complexities of managing pharmaceutical supply chains amid evolving global trade dynamics. It underscores the necessity for comprehensive insurance strategies to mitigate risks associated with regulatory compliance, cross-border trade, and supply chain disruptions. The discussion highlights how geopolitical tensions and stringent customs regulations can impact the pharmaceutical industry's operational resilience, emphasizing the role of insurance in safeguarding against potential liabilities and ensuring continuity in the supply chain.	Lee J, Seung-Lin H. Article: “Study of Marine Cargo Insurance under the Incoterms 2020 CIP Term”. Global Trade and Customs Journal [Internet]. 2024 Apr;19(4).
08	Vanegas J, Baena J, López D.	Interrelations between logistics, trade, and law in the	The risk allocation, responsibilities, liabilities in trade agreements, insurance considerations in global supply chains, which is crucial for managing risks	Vanegas J, Baena J, López D. “Interrelations between logistics, trade,

		Incoterms® context	associated with the transportation and delivery of goods. This insight is pertinent when evaluating insurance requirements across pharmaceutical supply chains, as it underscores the need for precise contractual terms to mitigate potential disruptions and financial losses	and law in the Incoterms® context”: A bibliometric analysis of academic literature. Scientific Journal of Maritime Research – Pomorstvo. 2024 Jun 28;38(1).
09	Aberidoost M, Nikfar S, Abdollahiasl A, Dinarvand R.	Pharmaceutical supply chain: A systematic review.	Pharmaceutical supply chain is highly complex, involving stringent regulations, sensitive cargo, and multiple risk factors. This complexity necessitates robust insurance coverage to manage disruptions, quality failures, or regulatory breaches. Insurance ensures financial protection and continuity, particularly as supply chains globalize and face increased geopolitical, cyber, and logistical uncertainties.	Aberidoost M, Nikfar S, Abdollahiasl A, Dinarvand R. Pharmaceutical supply chain: A systematic review. ScienceDirect; [cited 2025 May 25].
10	Goswami A, Alok Baveja, Ding X,	An integrated framework for modelling pharmaceutical	Identification and mitigation of disruptions such as criminal activities, natural disasters, and human errors.	Goswami A, Alok Baveja, Ding X, Melamed B,

	Melamed B, Roberts F.	al supply chains with disruptions and risk mitigation.	By mapping supply chains and overlaying potential disruptions, the research highlights the necessity for comprehensive risk management strategies, including tailored insurance solutions, to enhance resilience and ensure continuity in pharmaceutical operations.	Roberts F.” An integrated framework for modelling pharmaceutical supply chains with disruptions and risk mitigation”. Annals of Operations Research. 2024 Dec 7;
11	Kamath J, Kamath K, Azaruddin M, Subrahmanyam EVS, Shabharaya AR.	Evaluation of different types of risks in pharmaceutic al supply- chain	Four primary risks in pharmaceutical supply chains—regulatory, inventory, counterfeit, and financial. Using the Analytical Hierarchy Process (AHP), they prioritize these risks and propose mitigation strategies. While the study doesn't directly address insurance, it underscores the need for comprehensive risk management frameworks, where insurance plays a crucial role in mitigating financial and operational risks.	Kamath J, Kamath K, Azaruddin M, Subrahmanya m EVS, Shabharaya AR. Evaluation of different types of risks in pharmaceutical supply-chain. Am J PharmTech Res. 2012;2(4):281 –9.

CHAPTER 3: METHODOLOGY

3.1 Aim

To evaluate and analyze the insurance requirements and strategies essential for risk management across the pharmaceutical supply chain.

3.1 Research objectives

- To identify key risks and vulnerabilities within the pharmaceutical supply chain.
- To explore various insurance products applicable to different stages of the supply chain (e.g., marine, cargo, product liability, cold chain insurance).
- To examine how insurance coverage is integrated into the logistics and regulatory frameworks of pharmaceutical companies.
- To assess the awareness and adoption of Institute Cargo Clauses (ICC A/B/C) and other international insurance standards in the sector.
- To identify gaps, challenges, and best practices in designing comprehensive insurance strategies for pharmaceutical supply chains.

3.2 Research questions

1. What are the critical insurance requirements at different stages of the pharmaceutical supply chain (manufacturing, storage, distribution, export/import)?
2. How do pharmaceutical companies assess risk and select appropriate insurance products to mitigate supply chain disruptions?
3. What challenges do stakeholders face in aligning insurance policies with regulatory compliance and operational risk across the supply chain?

1.3 Material and method

- **Study design** – This study adopts a qualitative approach through an in-depth review of relevant literature, regulatory documents, industry whitepapers, and company reports, along with field observations to evaluate insurance requirements in the pharmaceutical supply chain.
- **Study setting** – The study includes practical insights obtained from the internship experience at Prudent Insurance Brokers, focusing on insurance practices within pharmaceutical operations including domestic and international supply chains.

- **Duration of study** – The study covers observation of 3 months (12th March 2025 – 31st May 2025)

- **Data collection procedure** –

The data collected is qualitative in nature and is based on:

1. Observational insights during internship activities related to insurance advisory for pharmaceutical clients.
2. Informal interactions with industry professionals to understand risk management strategies.
3. Review of secondary data from open-access reports, government notifications, and insurance regulatory guidelines (such as those from IRDAI and INCOTERMS-based export-import documentation).
4. The types of insurance policies (e.g., marine cargo, product liability, warehouse insurance) applied at various points in the supply chain.
5. Risk assessment practices and underwriting processes.
6. Compliance with national and international insurance requirements for pharma goods.

- **Data analysis plan** – The primary software tools used for analysis belonged to the Microsoft Office Suite, which included:

For Analysis – M.S. Excel, M.S. Word, M.S. PowerPoint

1. Understanding the workflow and integration of medical and marketing teams in content development
2. Discussions were conducted to explore how evidence-based data is translated into promotional campaigns while adhering to compliance guidelines
3. Identifying challenges faced in ensuring scientific integrity without compromising commercial goals

For Communication - M.S. Teams, M.S. Outlook

Used for scheduling expert interviews, communicating with marketing and medical affairs stakeholders, and coordinating review processes

- **Ethical Consideration**

In conducting this study on the insurance requirements across the pharmaceutical supply chain, strict adherence to ethical guidelines was maintained to ensure the integrity of the research and the protection of all stakeholders involved.

The primary ethical consideration pertained to the handling of sensitive and potentially confidential information accessed during the internship at *Prudent Insurance Brokers*. Any internal documents or discussions were used solely to enhance understanding of insurance strategies and compliance frameworks within the pharmaceutical context. Access to non-public data was granted under strict confidentiality terms and governed by Non-Disclosure Agreements (NDAs), which clearly defined the responsibilities of the researcher and the organization in safeguarding proprietary information.

No audio or video recordings were made during the data collection process. Instead, written notes were taken with the full awareness and consent of individuals involved, ensuring their privacy and upholding trust. All identifying information was anonymized, and data was reported in a non-attributable, aggregated format to prevent any disclosure of client-specific or organization-specific details.

Participation in the study was entirely voluntary. Prior to engaging in any discussion, individuals were informed about the scope, objectives, and academic nature of the research. They retained the right to withdraw from the study at any stage without any negative consequences. No form of coercion or undue influence was applied during any stage of the data collection process.

The research adhered to principles of honesty, transparency, and respect for intellectual property. Internal insights were used strictly within the boundaries permitted by the host organization. Every effort was made to avoid conflicts of interest, and the findings were presented objectively to reflect an unbiased understanding of insurance practices within the pharmaceutical supply chain.

By following these ethical protocols, the study maintained high standards of academic and professional integrity, honored the trust placed by the collaborating organization, and ensured the reliability and ethical soundness of its findings.

CHAPTER 4: RESULTS

The findings of this study reveal a complex and layered understanding of how insurance functions as a crucial risk management tool within the pharmaceutical supply chain. Drawing from qualitative data obtained during the internship at Prudent Insurance Brokers and supported by secondary research, the study highlights that each stage of the supply chain procurement, manufacturing, warehousing, transportation, distribution, presents unique risks that demand tailored insurance solutions. The pharmaceutical industry, owing to its strict regulatory compliance and the high value of its products, remains highly vulnerable to operational, environmental, and logistical disruptions.

Table 4: Insurance Mapping Across the Pharmaceutical Supply Chain

Supply Chain Stage	Primary Risks	Insurance Coverage
Raw Material Procurement	Supplier delay, customs issues, contamination	Marine Cargo Insurance (ICC-A), Contingent Liability
Manufacturing	Equipment breakdown, contamination, human error	Property Insurance, Product Recall Insurance
Warehousing	Fire, flood, temperature fluctuation, pest infestation	Stock Throughput, Property Insurance
Cold Chain Logistics	Temperature excursion, delay, equipment failure	Cold Chain Liability, IFFC Clauses, Marine Insurance (A)
International Transit	Theft, delay, damage, regulatory hold-ups	Marine Cargo Insurance, Transit Insurance, ICC Clauses
Last-mile Delivery	Mishandling, misrouting, patient dissatisfaction	Logistics Provider Liability Insurance
Digital Systems & Monitoring	Cyber-attacks, data corruption	Cyber Liability Insurance

Pharmaceutical companies demonstrated a high level of insurance integration within their operations. They often employed specialized brokers to craft multi-layered policies addressing each node of the supply chain. These companies were not only well-versed in the use of Incoterms® and ICC clauses but also ensured that risk responsibilities were clearly defined in contracts with logistics providers and suppliers.

By contrast, SMEs often lacked structured risk assessment processes and relied on basic transit insurance, exposing themselves to significant financial risk in the event of product spoilage, theft, or regulatory non-compliance.

The study found that marine cargo insurance continues to be the most widely used insurance type in pharmaceutical logistics. Among the different Institute Cargo Clauses, ICC-A was found to be the most suitable for pharmaceutical shipments due to its all-risk nature. The cost of premiums often discouraged smaller firms from adopting ICC-A, leading them to opt for limited coverage under ICC-B or ICC-C, which only protect against named perils. Experts interviewed during the study emphasized the need to sensitize smaller firms about the long-term benefits of comprehensive insurance over minimal short-term cost savings.

Another key insight was the growing importance of product recall insurance. With increasing regulatory scrutiny from bodies like the CDSCO, FDA, and EMA, product recalls have become more frequent. Insurance against recalls helps companies mitigate the financial damage of such actions, including the cost of logistics, legal fees, customer communication, and product disposal. Notably, only a few firms had a robust recall plan integrated with their insurance strategy highlighting a clear area for improvement.

Pharmaceutical companies face risks such as manufacturing delays, raw material quality issues, and human error. These often lead to production losses or compliance lapses. While such operational risks are typically covered under property insurance and business interruption policies, the study found that not all organizations fully utilized these policies. Some depended heavily on third-party logistics providers and assumed incorrectly that the risk responsibility transferred entirely to them. This lack of clarity in risk transfer was a recurring challenge, often leading to disputes during claims processing.

The internship at Prudent Insurance Brokers provided access to real case discussions where clients dealt with claim settlements, risk audits, and coverage optimization. These observations reinforced that insurance is not just a financial instrument but a strategic asset when aligned with operational risk management. Risk assessment frameworks that include detailed supply chain mapping, equipment redundancy plans, and quality controls tend to receive better policy terms and smoother claim settlements.

CHAPTER 5: CONCLUSION

This study aimed to evaluate the insurance requirements essential for risk management across this intricate network by examining real-world practices, stakeholder perspectives, and policy frameworks. Through detailed observation and engagement during an internship at Prudent Insurance Brokers Pvt. Ltd., supported by secondary literature and industry reports, this research provides a comprehensive understanding of how insurance serves as both a protective mechanism and a strategic tool for continuity and resilience in pharmaceutical operations.

A significant insight revealed during the study is the disparity in insurance adoption between large pharmaceutical companies and SMEs. While large organizations typically employ professional brokers, conduct regular risk audits, and maintain end-to-end coverage for goods in transit, storage, and final delivery, SMEs often depend on basic insurance products that may not adequately address the critical risks they face.

The integration of insurance with regulatory compliance also emerged as a core theme throughout the research. Regulatory authorities such as CDSCO, EMA, and the FDA require strict documentation, audit trails, and adherence to storage and transit standards. Failure to comply not only attracts financial penalties but also erodes public trust and can lead to recall situations. Recall insurance, though not widely adopted, was recognized as a highly valuable policy for mitigating reputational damage and operational costs associated with product withdrawals. Companies that proactively integrate such specialized coverages are better equipped to maintain operational integrity in high-stress scenarios.

The insurance policy effectiveness depends greatly on the alignment between the insured party and the insurer. Clarity in the definition of covered risks, clear contractual obligations, timely premium payments, and strong documentation practices are critical for successful claim resolution. The research found that many pharmaceutical companies, especially those with global operations, benefit from hiring risk advisory services or consulting brokers to tailor insurance portfolios according to their geographic, operational, and regulatory exposure. This strategic planning enhances their ability to manage force majeure events such as natural disasters or geopolitical disruptions.

The evaluation of insurance requirements across the pharmaceutical supply chain reveals that insurance is not a mere administrative formality but a strategic necessity. When correctly implemented, insurance policies help protect high-value pharmaceutical goods, maintain

compliance, and ensure business continuity during disruptions. The pharmaceutical industry must approach insurance as an integrated component of its operational design one that aligns with logistics, quality control, and regulatory frameworks. Stakeholders across the value chain including manufacturers, logistics providers, insurers, and regulators must collaborate to build an ecosystem where risk is collectively managed and minimized. The future of pharmaceutical supply chain insurance lies in greater digital integration, adaptive policy structures, and inclusive practices that make comprehensive coverage accessible and affordable for organizations of all sizes. This study not only highlights the critical role of insurance but also provides a roadmap for companies seeking to enhance their supply chain resilience through strategic risk management.

CHAPTER 6: DISCUSSION

The pharmaceutical supply chain is an intricate network involving several high-risk activities, ranging from raw material procurement to last-mile delivery of medicinal products. Given the sensitive nature of pharmaceutical goods and the strict regulatory environment, insurance plays a vital role in managing risks and ensuring business continuity. The discussion explores the criticality of insurance coverage across each stage of the pharmaceutical supply chain, the evolving landscape of global trade, and the importance of regulatory compliance and digital transformation in insurance strategies.

The pharmaceutical industry operates in a highly regulated and sensitive environment where product quality, timeliness, and compliance are paramount. From the procurement of active pharmaceutical ingredients (APIs) to final distribution, each stage is susceptible to distinct risks such as temperature excursions, theft, contamination, and transport damage. Insurance, therefore, emerges not as an optional safeguard but as a strategic necessity to manage operational disruptions, financial losses, and reputational damage.

In the early stages of the supply chain, particularly during inbound logistics and manufacturing, raw materials are transported across borders, often through multimodal means involving sea, air, and land. The inherent risks in this stage include supplier delays, geopolitical disruptions, and customs complications. Marine cargo insurance and inland transit insurance provide financial compensation for losses arising from damage, delay, or loss of cargo. Policies incorporating Institute Cargo Clauses (ICC) A, B, or C allow for tailored coverage based on cargo sensitivity and shipment routes. For high-value, temperature-sensitive goods such as vaccines and biologics, ICC (A) is most suitable as it offers “all-risks” coverage.

Manufacturing facilities also face significant risks including equipment failure, fire, or contamination. Property and engineering insurance help protect against infrastructural damages, while business interruption insurance covers the loss of income during operational halts. For pharmaceutical companies, any deviation from Good Manufacturing Practices (GMP) due to such disruptions may lead to regulatory non-compliance, which could be mitigated through regulatory liability or recall insurance.

Warehousing introduces another layer of risk, particularly when dealing with cold chain storage. Deviations in temperature or humidity can lead to spoilage of entire batches. Stock throughput insurance is critical at this stage as it covers goods through the storage and transportation cycle. Furthermore, warehouse insurance can address damages arising from fire, flooding, or theft. The application of the Institute Frozen Food Clause (IFFC), although originally tailored for food items, is increasingly relevant in pharmaceuticals, especially for vaccines and insulin that require strict temperature maintenance.

Transportation remains one of the most vulnerable stages of the supply chain. Pharmaceuticals in transit are exposed to theft, pilferage, temperature excursions, and even counterfeit risks. In particular, last-mile delivery poses challenges related to mishandling, delays, or delivery failures. Transit insurance, combined with GPS tracking and tamper-evident packaging, not only covers losses but also enhances supply chain transparency. Logistics service provider liability insurance is often applied to cover mishandling or delivery-related claims, especially when using third-party vendors.

Cross-border logistics adds a layer of complexity due to differing regulatory requirements, documentation standards, and customs procedures. Non-compliance can result in seizure of goods, delays, or legal penalties. In such cases, contingent liability insurance and regulatory breach insurance prove useful. A clear understanding of INCOTERMS®, particularly those involving insurance obligations such as CIF (Cost, Insurance, and Freight) and CIP (Carriage and Insurance Paid), is essential for pharmaceutical companies engaged in international trade. These terms help define risk responsibilities and ensure that appropriate insurance policies are in place.

With the increasing adoption of digital logistics systems, another emerging area of concern is cyber risk. Companies are increasingly relying on cloud platforms for inventory management, shipment tracking, and documentation. Any cyberattack could lead to data breaches, operational disruption, or loss of regulatory records. Hence, cyber liability insurance is gaining prominence across pharmaceutical companies and logistics partners alike.

One of the major findings from this study is the fragmented nature of insurance adoption, especially among small and medium pharmaceutical enterprises (SMEs). Many lack a holistic insurance strategy that spans the entire supply chain, often due to limited awareness or cost concerns. This gap makes them vulnerable to catastrophic losses that could otherwise be covered with relatively modest investments in tailored insurance solutions. There is a

need for greater awareness about available insurance products and regulatory expectations, especially concerning temperature-sensitive products and international shipments.

Moreover, regulatory agencies across countries are becoming stricter about product recalls, labelling, and documentation. In this context, recall insurance, product liability insurance, and errors & omissions coverage provide a safety net against legal liabilities and financial damages. A single recall event can cost millions and damage public trust in the brand. Hence, proactive insurance planning is not just a financial decision but a strategic move to uphold brand integrity.

Insurance intermediaries such as Prudent Insurance Brokers Pvt. Ltd. play a crucial role in advising pharmaceutical companies on coverage strategies, policy customizations, and claims management. Their expertise in commercial lines insurance, especially for cold chain transportation and reinsurance, ensures that pharmaceutical supply chains are equipped with the necessary risk mitigation tools. Through services such as risk audits, claims assistance, and benchmarking, brokers help companies optimize coverage and reduce vulnerability.

In conclusion, a well-structured insurance framework is indispensable for ensuring pharmaceutical supply chain resilience. With increasing global dependencies, evolving regulatory frameworks, and rising cyber and climate-related threats, the need for comprehensive, customizable, and forward-looking insurance strategies has never been more urgent. Companies must not only invest in appropriate policies but also stay updated on international standards such as ICC clauses and INCOTERMS® to ensure seamless, compliant, and secure supply chain operations.

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CHAPTER 8: ANNEXURE

• ANNEXURE – A

8.1 IRDAI Guidelines for Marine Insurance

Marine insurance is a critical component of supply chain risk management, especially for pharmaceutical, manufacturing, and import-export businesses that rely heavily on the safe transit of goods across domestic and international routes. The Insurance Regulatory and Development Authority of India (IRDAI) provides comprehensive regulatory oversight for marine insurance products in India, ensuring that insurance contracts remain fair, standardized, and transparent for all stakeholders involved. The most widely adopted form of marine insurance for supply chain logistics is the Marine Open Policy, structured around globally recognized frameworks like the Institute Cargo Clauses (ICC A, B, and C), Inland Transit Clauses (ITC A and B), Institute War Clauses, and Strikes, Riots, and Civil Commotion (SRCC) Clauses.

Marine insurance policies typically begin with the selection of clause type. Institute Cargo Clause (A) offers “All Risks” coverage, making it the most comprehensive form. It includes protection against loss or damage to goods arising from fire, explosion, natural disasters, vessel sinking or grounding, accidents during loading and unloading, collision, and theft, among others. ICC (B) and ICC (C) are more limited in scope, offering named peril coverages only. These are generally used when the risk is lower or more predictable. The Inland Transit Clauses (ITC A and B) mirror the ICC structure but are applicable specifically to domestic movement of goods via road or rail. To further tailor the coverage to specific needs, businesses can opt for add-on clauses such as FOB (Free on Board), Repacking Clauses, Seal Intact Clauses, Concealed Damage, and Institute Replacement Clauses. Each of these provides additional protection in specialized scenarios, ensuring a more robust and adaptable risk management strategy.

IRDAI mandates clear policy wordings to eliminate ambiguity in claims and coverage. The typical policy wording includes sections on the risks covered, exclusions, duration of coverage, claims procedures, and responsibilities of the assured. Under the “Transit Clause,” coverage begins from the time the goods leave the warehouse or storage location at the origin and continues through the ordinary course of transit until they reach the consignee's warehouse or a designated final storage location. Coverage typically terminates after 60 days from the goods’ discharge at the final port (or 30 days in air transit). If the transit is interrupted, diverted, or extended due to reasons beyond the control of the assured, coverage

may be continued upon prompt notification to the insurer and the payment of an additional premium.

The policy inclusions under ICC (A) or ITC (A) extend to a wide variety of events and circumstances. These include fire, explosion, overturning of vehicles, collision with external objects, derailment, earthquake, volcanic eruption, lightning, and damage caused during loading and unloading. Other important inclusions are theft, pilferage, non-delivery of goods, and even coverage during transshipment or forced unloading. When extended to cover SRCC and War Clauses, the policy includes protection against loss due to strikes, terrorism, riots, political instability, and hostile acts from belligerent powers. Additionally, insurers may reimburse expenses for salvage operations, forwarding charges incurred due to disrupted transit, and the cost of repairing or reconditioning damaged goods.

However, IRDAI guidelines also outline specific exclusions that are standard across most marine insurance policies. These exclusions are essential to avoid moral hazard and ensure that only genuine, unavoidable risks are covered. Among the primary exclusions are losses caused by willful misconduct or negligence of the insured, ordinary wear and tear, loss in weight or volume due to evaporation, and damages resulting from inherent vice in the goods themselves. Improper or insufficient packing is also excluded, as is delay—regardless of whether the delay results from a covered peril. Financial defaults or insolvency of the carrier, unseaworthiness of vessels (if known to the insured), and losses due to nuclear incidents or radioactive contamination are also not covered. Unless separately endorsed, claims arising out of war, civil war, rebellion, and strikes are excluded. Thus, businesses must ensure these risks are included through add-on clauses if their logistics operations are vulnerable to such scenarios.

IRDAI requires insurers to clearly mention the claims process and the insured's duties in the policy documentation. The insured must have an insurable interest in the goods at the time of loss and must act with reasonable dispatch to mitigate the loss and preserve recovery rights against third parties, such as carriers or freight operators. Constructive total loss is admitted only when the cost of recovery or repair exceeds the cargo's insured value. The policy also includes a "Reasonable Dispatch Clause," requiring the assured to act promptly in all circumstances within their control. Measures taken by the assured or insurer to mitigate losses do not amount to waiver or acceptance of claim but are recognized as part of risk minimization under the policy's "Duty of Assured" clause.

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