

## Section I GENERAL PROVISIONS ON THE ORGANIZATION OF CARRIAGE OF GOODS

### **Topic 4. Basis of the transport forwarding**

1. The meaning and the history of the transport forwarding
2. Intermodal transportation in the aspect of transport forwarding
3. The Supply and Demand for Transportation
4. Transport forwarding documentation

#### **1. The meaning and the history of the transport forwarding**

When a business decides to export their products they soon realize that they have to deal with the numerous barriers that have to be overcome to ship the product to the end customer. In many cases a business will look to a specialist, called a freight forwarder, who can manage these obstacles.

A **freight forwarder, forwarder, or forwarding agent**, also known as a **non-vessel operating common carrier (NVOCC)**, is a person or company that organizes shipments for individuals or corporations to get goods from the manufacturer or producer to a market, customer or final point of distribution. Forwarders contract with a carrier or often multiple carriers to move the goods. A forwarder does not move the goods but acts as an expert in the logistics network. These carriers can use a variety of shipping modes, including ships, airplanes, trucks, and railroads, and often multiple modes for a single shipment. For example, the freight forwarder may arrange to have cargo moved from a plant to an airport by truck, flown to the destination city, then moved from the airport to a customer's building by another truck.

**International freight forwarders** typically handle international shipments. International freight forwarders have additional expertise in preparing and processing customs and other documentation and performing activities pertaining to international shipments.

Information typically reviewed by a freight forwarder includes the commercial invoice, shipper's export declaration, bill of lading and other

documents required by the carrier or country of export, import, and/or transshipment. Much of this information is now processed in a paperless environment.

The FIATA shorthand description of the freight forwarder as the 'Architect of Transport' illustrates the commercial position of the forwarder relative to its client. In Europe, some forwarders specialize in 'niche' areas such as rail-freight, and collection and deliveries around a large port.

The services of a freight forwarder can vary between different companies but the main function of the freight forwarder is to act as an intermediary between the client who is hiring them and various transportation services that are involved in getting the product overseas to the customer.

Depending on the final destination and the nature of the items shipped, there may be many transportation companies involved in the movement of the items from the supplier to the customer. The freight forwarder may have to deal with many export and import issues that could be involved in the movement of the goods.

The freight forwarder is hired to get the product to the customer by a specific date and in an undamaged state. The freight forwarder will provide the client insurance services to make sure that if the items do arrive damaged, they will be reimbursed and not liable for the damages.

Companies looking to export items can use freight forwarders to not only save time and effort but to ensure that the goods arrive at the customer's site on time and without incident. A freight forwarder can provide the exporter with all the necessary documentation as well as liaise with the transportation companies required to get the items to the customer.

### **Packaging**

A freight forwarder should provide assistance to the customer on how to package their products for export. Packaging that would normally be used for shipping within the US may not be sufficient for extended transportation where the

items may be either loaded in a container or loaded and unloaded several times along the route.

The item may be allowed to be stored in environments where extreme temperatures or weather may be experienced. If an item is to be shipped via air then the freight forwarder may suggest packaging that is lighter than normal to keep shipping costs to a minimum.

### **Labeling**

Freight forwarders will assist their customers in providing the correct labeling they require for their items.

The correct label will be required to show the precise items in the shipping container, any hazardous items, country of origin, correct weight in pounds and kilograms, port of entry details, and any details that are required in the language of the destination country.

### **The history of the transport forwarding**

One of the earliest freight forwarders was Thomas Meadows and Company Limited of London, England, established in 1836. According to "Understanding the Freight Business," written and published by the executive staff of Thomas Meadows and Company in 1972, the advent of reliable rail transport and steamships created demand for the fledgling freight forwarding industry. Trade developed between Europe and North America, creating additional demand. The first international freight forwarders were innkeepers in London who held and re-forwarded the personal effects of their hotel guests.

The original function of the forwarder was to arrange for carriage by contracting with various carriers. Forwarder responsibilities included advice on documentation and customs requirements in the country of destination. His correspondent agent overseas looked after his customers' goods and kept him informed about matters that would affect movement of goods.

In modern times the forwarder accepts the same responsibilities. It operates either as a domestic carrier or otherwise with a corresponding agent overseas or

with his own branch-office. In a single transaction, the forwarder may be acting as a carrier (principal) or as an agent for his customer or both.

Lloyd's Loading List is the freight forwarding industry's journal of record, first published 160 years ago as a UK export directory. Today it provides details of forwarders, NVOCCs and shipping lines/agents who serve over 10,000 ports globally.

## **2. Intermodal transportation in the aspect of transport forwarding**

The Nature of Intermodalism History as well as competition between modes has tended to produce a transport system that was segmented and un-integrated. Each mode, particularly the carriers that operated them, has sought to exploit its own advantages in terms of cost, service, reliability and safety. Carriers try to retain business and increase revenue by maximizing the line-haul under their control. All the modes saw the other modes as competitors, and were viewed with a level of suspicion and mistrust. The lack of integration between the modes was also accentuated by public policy that has frequently barred companies from owning firms in other modes (as in the United States before deregulation), or has placed a mode under direct state monopoly control (as in Europe). Modalism was also favored because of the difficulties of transferring goods from one mode to another, thereby incurring additional terminal costs and delays, mainly because the load unit needs to be changed, which is common for bulk transportation. Since the 1960s major efforts have been made to integrate separate transport systems through intermodalism, which took place in several stages, first with the setting of maritime networks which then better connected with inland networks. From a functional and operational perspective, two components are involved in intermodalism:

**Intermodal transportation.** The movements of passengers or freight from one mode of transport to another, commonly taking place at a terminal specifically designed for such a purpose. In North America, the term intermodal is also used to refer to containerized rail transportation. Therefore, intermodal transportation in the literal sense refers to an exchange of passengers or freight between two

transportation modes, but the term has become more commonly used to strictly related to container transportation.

***Transmodal transportation.*** The movements of passengers or freight within the same mode of transport. Although "pure" transmodal transportation rarely exists and an intermodal operation is often required (e.g. ship to dockside to ship), the purpose is to insure continuity within the same modal network.

What initially began as improving the productivity of shipping evolved into an integrated supply chain management system across modes and the development of intermodal transportation networks.

**Intermodal transportation network.** A logistically linked system using two or more transport modes with a single rate. Modes are having common handling characteristics, permitting freight (or people) to be transferred between modes during a movement between an origin and a destination. For freight, it also implies that the cargo does not need to be handled, just the load unit such as a pallet or a container.

This involves the use of at least two different modes in a trip from an origin to a destination through an intermodal transport chain, which permit the integration of several transportation networks. Intermodality enhances the economic performance of a transport chain by using modes in the most productive manner. Thus, the line-haul economies of rail may be exploited for long distances, with the efficiencies of trucks providing flexible local pick up and deliveries. The key is that the entire trip is seen as a whole, rather than as a series of legs, each marked by an individual operation with separate sets of documentation and rates. This is organized around the followings conditions:

1. The nature and quantity of the transported cargo. Intermodal transportation is usually suitable for intermediate and finished goods in load units of less than 25 tons.

2. The sequence of transportation modes being used. Intermodal transportation is organized as a sequence of modes, often known as an intermodal transport chain. The dominant modes supporting intermodalism are trucking, rail,

barges and maritime. Air transportation usually only require intermodalism (trucking) for its "first and last miles" and not used in combination with other modes. Additionally, load units used by air transportation are not readily convertible with other modes.

3. The origins and destinations. Distances play an important role as the longer the distance, the more likely an intermodal transport chain will be used. Distances above 500 km (longer than one day of trucking) usually require intermodal transportation.

4. The value of the cargo. Suitable for intermediate cargo values. Low and high value shipments are usually less suitable for intermodal transportation. High value shipments will tend to use the most direct options (such as air cargo) while low value shipments are usually point to point and relying on one mode such as rail or maritime.

5. The frequency of shipments. Intermodalism functions well when cargo flows need to be continuous and in similar quantities.

#### Forms of Intermodalism

Intermodalism originated in maritime transportation, with the development of the container in the late 1960's and has since spread to integrate other modes. It is not surprising that the maritime sector should have been the first mode to pursue containerization. It was the mode most constrained by the time taken to load and unload the vessels. A conventional break bulk cargo ship could spend as much time in a port as it did at sea. Containerization permits the mechanized handling of cargoes of diverse types and dimensions that are placed into boxes of standard sizes. In this way goods that might have taken days to be loaded or unloaded from a ship can now be handled in a matter of minutes. The emergence of intermodalism has been brought about in part by technology and requires management units for freight such as containers, swap bodies, pallets or semi-trailers. In the past, pallets were a common management unit, but their relatively small size and lack of protective frame made their intermodal handling labor intensive and prone to damage or theft. Better techniques and management units for transferring freight

from one mode to another have facilitated intermodal transfers. Early examples include piggyback (TOFC: Trailers On Flat Cars), where truck trailers are placed on rail cars, and LASH (lighter aboard ship), where river barges are placed directly on board sea-going ships. A unique form of intermodal unit has been developed in the rail industry, particularly in the US where there is sufficient volume. Roadrailer is essentially a road trailer that can also roll on rail tracks. It is unlike the TOFC (piggyback) system that requires the trailer be lifted on to rail flat car. Here the rail bogies may be part of the trailer unit, or be attached in the railway yard. The road unit becomes a rail car, and vice-versa. While handling technology has influenced the development of intermodalism, another important factor has been changes in public policy. Deregulation in the United States in the early 1980s liberated firms from government control. Companies were no longer prohibited from owning across modes, which developed a strong impetus towards intermodal cooperation. Shipping lines in particular began to offer integrated rail and road services to customers. The advantages of each mode could be exploited in a seamless system, which created multiplying effects. Customers could purchase the service to ship their products from door to door, without having to concern themselves of modal barriers. The most important feature of intermodalism is the provision of a service with one ticket (for passengers) or one bill of lading (for freight). With one bill of lading clients can obtain one through rate, despite the transfer of goods from one mode to another. This has necessitated a revolution in organization and information control. At the heart of modern intermodalism are data handling, processing and distribution systems that are essential to ensure the safe, reliable and cost effective control of freight and passenger movements being transported by several modes.

**Electronic Data Interchange (EDI)** is an evolving technology that is helping companies and government agencies (customs documentation) cope with an increasingly complex global transport system. Intermodal transport is transforming a growing share of the medium and long-haul freight flows across the globe where large integrated transport carriers provide door to door services, such

as the high degree of integration between maritime and rail transport in North America. In Europe rail intermodal services are becoming well-established between the major ports, such as Rotterdam, and southern Germany, and between Hamburg and Eastern Europe. Rail shuttles are also making their appearance in China. While rail intermodal transport has been relatively slow to develop in Europe, there are extensive interconnections between barge services and ocean shipping, particularly on the Rhine. Barge shipping offers a low cost solution to inland distribution where navigable waterways penetrate to interior markets. The limits of intermodality are imposed by factors of space, time, form, pattern of the network, the number of nodes and linkages, and the type and characteristic of the vehicles and terminals.

### **3. The Supply and Demand for Transportation**

Each transport mode shares the common goal of fulfilling a derived transport demand, and each transport mode thus fills the purpose of supporting mobility. Transportation is a service that must be utilized immediately since unlike the resources it often carries, the transport service itself cannot be stored. Mobility must occur over transport infrastructures having a fixed capacity, providing a transport supply. In several instances, transport demand is answered in the simplest means possible, notably by walking. However, in some cases elaborate and expensive infrastructures and modes are required to provide mobility, such as for international air transportation. Transportation is a market composed of suppliers of transport services and users of these services. Well-functioning transport markets should allow transport supply to meet transport demand so that transport needs for mobility are satisfied. An economic system including numerous activities located in different areas generates movements that must be supported by the transport system. Without movements infrastructures would be useless and without infrastructures movements could not occur, or would not occur in a cost efficient manner. This interdependency can be considered according to two concepts, which are transport supply and demand:



**Transport supply.** The capacity of transportation infrastructures and modes, generally over a geographically defined transport system and for a specific period of time. Supply is expressed in terms of infrastructures (capacity), services (frequency) and networks (coverage). Capacity is often assessed in static and dynamic terms where static capacity represents the amount of space available for transport (e.g. terminal surface) and dynamic capacity are the improvement that can be made through better technology and management. The number of passengers, volume (for liquids or containerized traffic), or mass (for freight) that can be transported per unit of time and space is commonly used to quantify transport supply.

**Transport demand.** Transport needs, even if those needs are satisfied, fully, partially or not at all. Similar to transport supply, it is expressed in terms of number of people, volume, or tons per unit of time and space.

The supply side of the transport market can be divided into two categories:

- **Third-party transportation.** Transport companies offer transport services to users who require such services, often on open markets. Transport users pay for the services delivered according to the terms of the agreed contract. Examples include third-party trucking companies, container shipping lines, railway operators and bus companies. Competitiveness is a key advantage of third-party transportation as providers strive to offer better and lower cost services for their customers. There is also the risk of fluctuating prices due to changing market conditions and that transport capacity may not be available when a customer requires it. Third-party transportation companies comes in a variety of sizes depending of the characteristics of the transportation markets they service. There are large scale global third-party transportation companies such as maritime shipping lines and third-party logistics providers (UPS, Fedex, DHL), was well as small operations such as trucking and local delivery companies.

- **Own account transportation.** The transport user deploys his own transport means to move freight or to travel (e.g. motorists using private cars or large industrial companies owning a fleet of trucks or rail wagons). The transport

user has a direct access to a known capacity, but at the risk of a lower level of asset utilization (e.g. empty movements or idle equipment). There is no specific relation between firm size and the use of own account transportation since such arrangement is used by small local firms having their own delivery vehicles as well as large corporations such as mining and wood companies.

Transport demand is generated by the economy, which is composed persons, institutions and industries and which generates movements of people and freight. A distinction can be made between consumptive and productive transport needs. Productive transport needs have a clear economic focus. For example, the transport of semi-finished products from one production site to the final production or assembly site creates added value in the production process by benefiting from the locational advantages of each of the production sites. Consumptive transport needs generate less visible added value. For example, a road trip does not really add value in a pure economic sense, but generates subjective utility and satisfaction to the users. A discussion on the functioning of transport markets is particularly relevant where it concerns the fulfillment of productive transport needs, but the consumptive dimension of transport must also be considered. The location of resources, factories, distribution centers and markets is obviously related to freight movements. Transport demand can vary under two circumstances that are often concomitant; the quantity of passengers or freight increases or the distance over which these passengers or freight are carried increases. Geographical considerations and transport costs account for significant variations in the composition of freight transport demand between countries. For the movements of passengers, the location of residential, commercial and industrial areas tells a lot about the generation and attraction of movements.

### ***Supply and Demand Functions***

Transport supply and demand have a **reciprocal but asymmetric** relation. While a realized transport demand cannot take place without a corresponding level of transport supply, a transport supply can exist without a corresponding transport demand. This is common in infrastructure projects that are designed with a

capacity fulfilling an expected demand level, which may or may not materialize, or may take several years to do so. Scheduled transport services, such as public transit or airlines, are offering a transport supply that runs even if the demand is insufficient. Infrastructures also tend to be designed at a capacity level higher than the expected base scenario in case that demand turns out to be higher than anticipated. In other cases, the demand does not materialize, often due to improper planning or unexpected socioeconomic changes. Transport demand that is met by a supply of transport services generates traffic (trucks, trains, ships, airplanes, buses, bicycles, etc.) on the corresponding transport infrastructure networks. The traffic capacity is generally larger than the actual transport demand since the average utilization degree of vehicles rarely reaches 100 percent. For instance, empty hauls of trucks, an underutilized container ship capacity sailing on a shipping route characterized by imbalanced container flows, an underutilized off-peak bus service and the one person per car situation in commuter traffic. There is a simple statistical way to measure transport supply and demand for passengers or freight:

The **passenger-km** (or passenger-mile) is a common measure expressing the realized passenger transport demand as it compares a transported quantity of passengers with a distance over which it gets carried. The ton-km (or ton-mile) is a common measure expressing the realized freight transport demand. Although both the passenger-km and ton-km are most commonly used to measure realized demand, the measure can equally apply for transport supply.

For instance, the transport supply of a Boeing 777-200ER flight between New York and London would be 314 passengers (in a 3 classes configuration) over 5,500 kilometers (with a transit time of about 6 hours depending on the direction). This implies a transport supply of 1,727,000 passenger-kms. In reality, there could be a demand of 340 passengers for that flight, or of 1,870,000 passenger-km, even if the actual capacity would be of 314 passengers. In this case the realized demand would be 314 passengers over 5,500 kilometers out of a potential demand of 340 passengers, implying a system where demand is at 108% of capacity. When the potential demand is much higher than the realized demand, fares are usually

increasing until there is a better match. Higher prices may lessen the potential demand while it may at the same time be an incentive to add additional capacity. There are several factors impacting the capacity of transport infrastructure, from the physical characteristics of the network, how it is funded, operated and maintained to the presence of bottlenecks. Transport supply can be simplified by a set of functions representing what are the main variables influencing the capacity of transport systems. These variables are different for each mode. For road, rail and telecommunications, transport supply is often dependent on the capacity of the routes and vehicles (modal supply) while for air and maritime transportation transport supply is strongly influenced by the capacity of the terminals (intermodal supply).

- **Modal supply.** The supply of one mode influences the supply of others, such for roads where different modes compete for the same infrastructure, especially in congested areas. For instance, transport supply for cars and trucks is inversely proportional since they share the same road infrastructure.

- **Intermodal supply.** Transport supply is also dependent of the transshipment capacity of intermodal infrastructures. For instance, the maximum number flights per day between New York and Chicago cannot be superior to the daily capacity of the airports of New York and Chicago, even though the New York - Chicago air corridor has potentially a very high capacity.

Transport demand tends to be expressed at specific times that are related to economic and social activity patterns. In many cases, transport demand is stable and recurrent, which allows a good approximation in planning services. In other cases, transport demand is unstable and uncertain, which makes it difficult to offer an adequate level of service. For instance, commuting is a recurring and predictable pattern of movements, while emergency response vehicles such as ambulances are dealing with an unpredictable demand that can be expressed as a probability. Transport demand functions vary according to the nature of what is to be transported:

- **Passengers.** For the road and air transport of passengers, demand is a function of demographic attributes of the population such as income, age, standard of living, race and sex, as well as modal preferences.
- **Freight.** For freight transportation, the demand is function of the nature and the importance of economic activities (GDP, commercial surface, number of tons of ore extracted, etc.) and of modal preferences. Freight transportation demand is more complex to evaluate than passengers.
- **Information.** For telecommunications, the demand can be a function of several criteria including the population (telephone calls) and the volume of financial activities (stock exchange). The standard of living and education levels are also factors to be considered.

### ***Supply / Demand Relationships***

Relationships between transport supply and demand continually change, but they are mutually interrelated. From a conventional economic perspective, transport supply and demand interact until an equilibrium is reached between the quantity of transportation the market is willing to use at a given price and the quantity being supplied for that price level. Price changes not only affect the level of transport demand, but can also lead to shifts of demand to other routes, alternative transport modes and or other time periods. In the medium or long term structural changes in the pricing of transport can affect location decisions of individuals and businesses. However, several considerations are specific to the transport sector which make supply / demand relationships more complex:

- **Entry costs.** These are the costs incurred to operate at least one vehicle in a transport system. In some sectors, notably maritime, rail and air transportation, entry costs are very high, while in others such as trucking, they are very low. High entry costs imply that transport companies will consider seriously the additional demand before adding new capacity or new infrastructures (or venturing in a new service). In a situation of low entry costs the number of companies is fluctuating with the demand. When entry costs are high, the emergence of a new player is uncommon while dropping out is often a dramatic

event linked to a large bankruptcy. Consequently, transport activities with high entry costs tend to be oligopolistic while transport activities with low entry costs tend to have many competitors.

- **Public sector.** Few other sectors of the economy have seen such a high level of public involvement than transportation, which creates many disruptions in conventional price mechanisms. The provision of transport infrastructures, especially roads, was massively funded by governments, namely for the sake of national accessibility and regional equity. Transit systems are also heavily subsidized to provide accessibility to urban populations and more specifically to the poorest segment judged to be deprived in mobility. As a consequence, transport costs are often considered as partially subsidized. Government control (and direct ownership) was also significant for several modes, such as rail and air transportation in a number of countries. The recent years have however been characterized by privatization and deregulation.

- **Elasticity.** The notion of price elasticity is at the core of transport demand and refers to the variation of demand in response to a variation of cost. For example, an elasticity of -0.5 for vehicle use with respect to vehicle operating costs means that an increase of 1% in operating costs would imply a 0.5% reduction in vehicle mileage or trips. Variations of transport costs have different consequences for different modes, but transport demand has a tendency to be inelastic. While commuting tends to be inelastic in terms of costs, it is elastic in terms of time. For economic sectors where freight costs are a small component of the total production costs, variations in transport costs have limited consequences on the demand. For air transportation, especially the tourism sector, price variations have significant impacts on the demand. There are thus differences among the obtained price elasticities, which raises questions about the transferability of the results to other locations and or other time periods. Hence, each case is characterized by a specific local environment in terms of modal choice options, budget/income of the transport user, spatial planning, price levels, etc. All these factors combined can

make the behavior of transport users somewhat different across regions and settings.

The price elasticity of transport demand can influence the strategic behavior of economic actors. For instance, container shipping lines are faced with a highly inelastic demand due to the combined effect of a lack of close substitutes and the small impact of freight rates on total costs. The only alternative transport mode in the intercontinental transport of high value goods is air freight, but this market segment has a much lower cargo carrying capacity and prices are much higher. For most shipments the total freight price only accounts for a very small portion of the shipment's total value; usually less than 5%. As container lines cannot influence the size of the final market, they try to increase their short run market share by reducing prices. As such, shipping lines may reduce freight rates without substantially affecting the underlying demand for container freight. The only additional demand can come from low value products which will only be shipped overseas if freight rates are very low (e.g. the market for waste paper and metal scrap). These temporary markets tend to disappear once the freight rate is above a threshold level no longer allowing a profit on trading these products overseas. The fairly inelastic nature of demand for shipping services constitutes the core problem for the poor financial performance of container shipping lines. Shipping lines have developed an intense concentration on costs and on negotiated long-term contracts with large shippers in view of securing cargo. As transport demand is a derived demand from individuals, groups and industries it can be desegregated into series of partial demands fulfilled by the adaptation and evolution of transport techniques, vehicles and infrastructures to changing needs. Moreover, the growing complexity of economies and societies linked with technological changes force the transport industry to constant changes. This leads to growing congestion, a reduction in transport safety, a degradation of transport infrastructures and concerns about environmental impacts.

### **Transportation Yield Management**

Transport demand tends to be variable in time and space whereas transport supply is fixed. When demand is lower than supply, transit times are stable and predictable, since the infrastructures are able to support their load. When transport demand exceeds supply for a period in time, there is congestion with significant increases in transit times and higher levels of unpredictability. A growth of the transport demand increases the load factor of a transport network until transport supply is reached. Speed and transit times drop afterwards. The same journey can thus have different durations according to the time of the day. Conventionally, congestion tended to have limited impacts on the fare structure as many transport operators were state owned or highly regulated. With deregulation, transport companies were able to establish a level of service reflecting market forces, as well as being able to expand, or rationalize, their capacity. Subsidies were removed, implying that the fare structure would be the dominant source of income to provide for operating and capital costs of the transport service. A common issue is that while the transport supply is relatively well known, often a scheduled service, the transport demand remains predictable, but subject to volatility. Many transport providers, particularly airline companies, have responded to the complexity of predicting transport demand with yield management approaches.

**Transportation yield management** is the process of managing the usage price of a transport asset, such as the fare paid by users, in view of continuous changes in the demand. The goal of such an approach is to maximize profit in the context where the transport supply is fixed.

Yield management leans on three conditions:

- **A fixed transport capacity** implying that transport demand is the only function that can effectively vary. For instance, the capacity of a scheduled flight or of a containership is fixed (known value) and cannot be readily changed without serious impacts on the quality of service. An exception to this rule concerns on demand taxi services where peak hours often lead to surges in fares, inciting additional drivers to become available during that time period.



- **Unused transport capacity loses all of its utility**, implying that transport suppliers cannot store for another time the services that have not been used. Once an aircraft or a ship has departed, its transport capacity is lost for the concerned airport or port. Any unused capacity is therefore a loss of potential revenue.

- Transport users are **willing to pay different rates for the same capacity or service**, implying that they value transportation differently based upon their priorities and time preferences. For instance, a business traveler needing to attend a meeting values differently the same airplane seat than a tourist would. The former would be willing to pay a high price to secure a seat on a specific flight while the latter tends to seek discounted values and would be unwilling to bid above a certain price threshold. Also, time dependent users of cargo services (e.g. electronics) are willing to pay more for the same capacity than those who are less time dependent.

Under such circumstances, transport operators may constantly change their rates to reflect the temporal and spatial fluctuations in the demand. For instance, in the United States, domestic airfares are readjusted on average 92 times on a specific flight between the time seats are made available and when the flight is scheduled to depart.

#### **4. Transport forwarding documentation**

Documentation is important for the shipment of an item overseas. There are a number of documents that the freight forwarder needs to prepare for the shipment that requires specialist knowledge.

- **Bill of Lading (BOL)** – The BOL is a contract between the owner of the goods and the carrier. There are two types of BOL; firstly a straight bill of lading which is nonnegotiable and secondly, a negotiable or shipper's order bill of lading. The negotiable BOL can be bought, sold, or traded while the goods are in transit. The customer will usually need an original as proof of ownership to take possession of the goods.

- Commercial Invoice – The invoice is the bill for the goods from the seller to the buyer. It can be used to determine the true value of goods when assessing the amount of customs duty.
- Certificate of Origin (COO) – The COO is a signed statement which identifies the origin of the export item.
- Inspection Certificate – This document may be required by the customer to certify the goods have been inspected or tested and the quality of the goods is acceptable.
- Export License – This license is a government document that authorizes the export of goods in specific quantities to a specific destination.
- Shipper's Export Declaration (SED) – The SED is used for export statistics. It is prepared via the US Postal Service (USPS) when the shipment is greater than \$500.
- Export Packing List – This is a detailed packing list that itemizes each item in the shipment, what type of packaging container was used, gross weight, and package measurements.

When items are transported either domestically or internationally the delivery must be accompanied by the relevant documentation. The amount of documentation varies depending if the shipment is within the US or to another country. As far as interstate transportation of goods in the US, there are three documents that are of greatest importance; the bill of lading, freight bill, and the Free On Board (FOB) terms of sale.

### **Bill of Lading**

The bill of lading is the most important document that is used in transporting goods. The legal definition of a bill of lading is a contract for the carriage of goods and a document of title to them. It provides any and all information that the carrier will need to transport the items. It contains the shipment origin and the contract terms for the transportation and is required by a carrier before the shipment is taken.

The bill of lading should include the name and address of the consignor and consignee, and often it will have the routing instructions for the carrier. It will contain a description of the goods to be transported, the quantity for each of the commodities, and the commodity class and rate.

The bill of lading will contain the terms of the contract for the movement of goods by a common carrier. This is the contract between the shipper and the carrier to transport the goods on the bill of lading to the consignee, i.e. the buyer.

**The bill of lading contract has nine terms:**

1. Common Carrier Liability – the carrier is liable for loss and damage of the goods being transported, except if the goods were improperly packed by the shipper or if the goods themselves would be liable to a normal loss like through evaporation. The carrier is not liable for acts of God, public enemy or public authority.

1. Delay in Transit – the carrier cannot be held liable if the loss or damage is due to a delay in the transportation of the goods.

2. Freight Not Accepted – if the goods are not accepted within the time allocated, the carrier can store the goods at a cost to the owner.

3. Extraordinary Value – the carrier is not liable and does not have to carry items of extraordinary value that are not on the rated in the published classifications or tariffs unless a special agreement with the shipper has been negotiated.

4. Explosives – the carrier has to be given full written disclosure when they are shipping dangerous material, otherwise they are not liable for any losses.

5. Recourse – the carrier cannot make additional charges to the shipper after making a delivery.

6. Substitute Bill of Lading – if the bill of lading is a substitute or exchange for another bill of lading then the current bill of lading has to include all the clauses from previous documents.

7. Alterations – the carrier must note any changes or additions to ensure that they can be enforceable.

1. Claims – this clause specifies the details on how to file a claim against the shipper and the time period after delivery in which the claim will be accepted.

### **Freight Bill**

The freight bill is the carriers invoice to the shipper for all the charges that the carrier has incurred. The carrier's freight bill will include the details of the shipment, the items being shipped, the consignee, the origin, and destination, as well as total weight and total charges.

Some carriers can ask for prepayment from the shipper if the value of the items being shipped is less than the total expected freight charges. If the charges are not prepaid then the carrier can present a freight bill on collect. This implies that the carrier will present the freight bill on the day of delivery.

### **FOB Terms of Sale**

Free on Board (FOB) terms of sales documents which party will be liable for the transportation costs, which party is in control of the movement of the goods, and when the title passes to the buyer.

If the FOB terms of sale indicate that it is FOB Delivered then this implies that the shipper will be responsible for all of the carrier's costs. If the terms of sale show FOB Origin, then this means that the buyer will take the title for the goods when they are shipped and they will incur all the transportation costs.

### **Document transfer fee/document handover fee**

International freight forwarders, NVOCCs and customs brokers often charge for transferring documents to another transportation company at destination. This fee is a part of the ocean freight charges, being paid by the importer at the port of discharge in the International Commercial Term (incoterm) FOB (free on board), and by the exporter at the origin in the incoterms CFR (cost and freight) and CIF (cost, insurance and freight). This fee is separate from documentation fees charged by carriers and NVOCCs as part of the freight charges on a bill of lading and is separate from other fees for document preparation or for release of cargo. Some companies call this an administration fee, document fee, document transfer fee, but

it exists in some form in most destinations and is well known to most shippers. Steamship carriers do not have this fee.

### **National variations**

#### **Australia**

In Australia most licensed Customs Clearance Agents (commonly referred to as Customs Brokers) operate under a freight forwarder.

#### **Bangladesh**

Freight forwarders must have a government license.

#### **Canada**

Transport Canada is the federal department responsible for implementing and enforcing transportation policies and programs. The Canada Border Services Agency is responsible for enforcing most regulations that affect international freight forwarders. International security measures are the dominant concern.

The Canadian International Freight Forwarders Association (CIFFA) was established in 1948 to support and protect the character, status and interest of foreign freight forwarders by establishing uniform trade practice and regulations. CIFFA also plays an educational role by providing certificate and advanced certificate programs.

#### **India**

**Federation of Freight Forwarders' Associations in India (FFFAI)** is the Apex Body and the Sole Representative of 24 Member Associations from all over India representing 5000 Custom House Agents (employing over 1,000,000 people).

#### **Ireland**

International merchandise trade is worth €148 billion to the Irish economy. 82% of manufactured products are exported, further highlighting the importance of freight forwarders to the national economy. Associations including the Irish International Freight Association and FIATA help maintain the professionalism of this industry through educational and representative roles. FIATA offers a Diploma in Freight Forwarding.

#### **Kenya and Tanzania**

In Kenya and Tanzania freight forwarders are commonly referred to clearing and forwarding agents. A license is required, which can be acquired from Kenya Revenue Authority and Tanzania Revenue Authority respectively. Freight forwarders in Kenya and Tanzania are responsible for clearing consignments through Kenya and Tanzania customs, arranging transportation and forwarding the consignment to the consignee. Both exports and imports must clear customs in Kenya/ Tanzania.

### **Nigeria**

Freight-forwarding in Nigeria has been in place since the exporting of groundnut as a cash crop beginning in 1914, though not initially as freight forwarding but as the means of transportation of goods and services from one country to another. Following the methodology of their British forebears, agents were used to facilitate the transport of goods and services.

### **Pakistan**

Pakistan International Freight Forwarders Association PIFFA has more than 500 freight forwarding companies as members. The association is registered with Ministry of Commerce, Govt. of Pakistan, and aims to provide effective representation and support for Pakistan freight services industry to observe the highest standards of professional competence. PIFFA also contributes to educate the freight forwarders by offering short courses and internationally recognized Diploma validated by FIATA. PIFFA is the local representative of FIATA and member association for Pakistan.

### **UK**

In the U.K., freight forwarders are not licensed, but many are members of the British International Freight Association. They consolidate goods from different consignors into full loads for road transport to Europe, known as groupage. Some offer services such as export packing.

### **USA**

Companies that handle domestic U.S. freight must be registered with the U.S. Department of Transportation's Federal Motor Carrier Safety Administration.

Such forwarders are "carriers" who accept freight for transport and are liable for delivering the freight under their own bill of lading.

The legal definition at 49 U.S.C. § 13102 (8) is: "Freight Forwarder—the term 'freight forwarder' means a person holding itself out to the general public (other than as a pipeline, rail, motor, or water carrier) to provide transportation of property for compensation and in the ordinary course of its business — (A) assembles and consolidates, or provides for assembling and consolidating, shipments and performs or provides for break-bulk and distribution operations of the shipments; (B) assumes responsibility for the transportation from the place of receipt to the place of destination; and (C) uses for any part of the transportation a [surface carrier] carrier subject to jurisdiction [of the Department of Transportation] of under this subtitle."

International ocean freight forwarders arranging for shipments to and from the US must be licensed by the Federal Maritime Commission as Ocean Transportation Intermediaries. An Ocean Transportation Intermediary is either an ocean freight forwarder or a non-vessel-operating common carrier (NVOCC). An ocean freight forwarder is "an individual or company in the United States that dispatches shipments from the United States via common carriers and books or otherwise arranges space for those shipments on behalf of shippers; ocean freight forwarders prepare and process documentation and perform related activities pertaining to shipments." An NVOCC is "a common carrier that holds itself out to the public to provide ocean transportation, issues its own bills of lading or equivalent documents, but does not operate the vessels that transport cargo"; or, "a shipper in its relationship with the vessel-operating common carrier involved in the movement of cargo." Companies may obtain both licenses and may act in both capacities. The U.S. legal distinction between the two is that a freight forwarder acts as the agent of a principal (typically a shipper or consignee) whereas the NVOCC is a transportation company (carrier) that is physically responsible for the carriage of goods and acts as its own principal. Companies acting strictly as an Ocean Freight Forwarder typically do not issue their own contract of carriage (bill

of lading) and as agent are generally not liable for physical loss or damage to cargo except in cases of errors in judgment or paperwork or fiduciary responsibility. NVOCCs act as ocean freight carrier and issue their own bill of lading and are legally responsible for physical loss or damage in accordance with the terms and conditions of their bill of lading and tariff. Similar to other countries, freight forwarders that handle international air freight frequently obtain accreditation with the International Air Transport Association (IATA) as a cargo agent; however, they must obtain an Indirect Air Carrier (IAC) certification from the Department of Homeland Security (DHS). If importing merchandise into the US for commercial purposes that are valued over \$2,500, you will need to purchase a Customs Bond