Choosing the Right One for Sea Transport —
Incoterms® 2020

Abstract
The paper presents the main features of Incoterms® 2020, i.e., the International Chamber of Commerce rules for the use of domestic and international trade terms, which came into force on January 1, 2020. The International Chamber of Commerce revises the current Incoterms® rules every few years to eliminate vague and/or imprecise interpretations of the obligations of parties involved in the international trade. The revisions result in changes to existing terms and/or the introduction of new terms that help facilitate the flow of goods both domestically and internationally. Therefore, this paper aims to present the main features of the latest Incoterms® terms that are in force and are used in international trade. In addition, changes to previous Incoterms® terms are examined and presented in order to highlight key differences that may influence the choice of the relevant term. Particular attention has been paid to Incoterms® terms used in sea transport, as sea transport remains the dominant transport sector in the world trade.

Keywords: international trade, sea transport, Incoterms® 2020, buyers, sellers

1. Introduction
The latest Incoterms® 2020 terms contain 11 terms as well as the previous version of Incoterms® 2010. They are enriched in content with more precise definitions and clarifications in order to facilitate international trade. Seven terms are applicable in all transport sectors as well as in multimodal transport, and four terms are intended for sea and inland waterway transport. The purpose of all the terms is to facilitate business for participants in international trade, which is inherently complex and subject to numerous economic, legal, political, and other influences. Knowledge and understanding of Incoterms® are crucial for international trade [4, 16]. Research shows the importance of Incoterms® terms, especially for SMEs, when concluding international exchange agreements [9, 13, 15].
The research problem in this paper relates to determining the changes brought about by the revision of Incoterms® and how the new changes affect the business entities involved in international trade. Therefore, the research objective in this paper is to examine the main features of Incoterms® terms, revisions, and rules, particularly the terms related to sea transport. Knowing the rules and implications of specific terms that can be applied in different business situations can facilitate a company’s operations in international trade. Business facilitation primarily means better communication and understanding between business partners, clearer rules, a reduction in business risks, and a clear distribution of obligations, as well as the assumption of transportation and other trade costs in international business.

The paper consists of five interconnected parts. The Introduction, which presents the research problem, the research objectives, and the structure of the paper, is followed by the second part of the paper, titled The Importance of Sea Transport in International Trade. This part presents data on the role of sea transport in international trade. After the insights gained, the third part follows, entitled The Importance of Incoterms® 2020 for International Trade, which systematically presents the findings on the introduction and revision of the Incoterm terms, important changes from the previous version, and the classification of terms. After learning about the importance of Incoterms® for business, the fourth part, entitled Incoterms® 2020 Terms for Sea Transport, analyzes in detail the terms used for sea transport. This is followed by the Conclusion, which summarizes the most important findings about Incoterms®.

2. The Importance of Sea Transport in International Trade

International trade is permeated by many processes, activities, regulations, and participants. The delivery of products and their movement through different countries, as well as the use of different modes of transport, require the planning and organization of a number of logistics processes. Sea transport is still dominant in international trade compared to other transport sectors. Although the past period was marked by the COVID-19 pandemic, which affected the decline in the volume of activity and slowed down many processes, the data show a trend of increasing activity and results achieved in both international trade (Figure 1) and the transport segment (Figure 2).
According to UNCTAD [19] the value of world exports of goods increased by 26.5% in 2021 after two years of decline. The value of exports is predicted to increase by 13.8% in 2022 compared to 2021. The increase in world trade in goods has been accompanied by an increase in the transport of goods, which can be seen in Figure 2.

Although international trade flows are subject to numerous risks related to economic, financial, political, pandemic, and other challenges that affect economic activity, the data show that after years of declining trade volumes, and thus the transport of goods, both trade and the transport of goods are increasing in both value and volume after brief shocks.
Since 2020 and the COVID-19 pandemic, the growth and recovery of global exports in value and seaborne trade in volume have been noticeable. According to Eurostat [3] the share of sea transport in the trade of goods between EU countries and the rest of the world was 74% by volume in 2021. In terms of value, the share of sea transport in extra-EU trade was 48%. Comparing the data (Figure 3) on the volume of extra-EU trade in goods by mode of transport, it is clear that sea transport has dominated exports and imports of goods in recent decades.

The share of goods transported by sea increased in both directions between 2002 and 2021. According to Eurostat data [3], in 2021, sea transport accounted for 75.7% of EU exports and 72.7% of EU imports. However, comparing the same data in terms of value, sea transport accounted for 43.6% of the value of goods exported from the EU and 52.6% of goods imported into the EU in 2021.

Despite the recovery in 2021, the estimated 3.2% growth in the international sea trade and total shipments of 11 billion tons of goods, there are still many logistical challenges related to operational processes, increased demand, and acute supply-side capacity [20]. The need for efficient operation of seaports, conditioned by the increase in demand, requires seaports to apply modern technological solutions [11, 12].

The complexity of the international trade process can be simplified between sea transport participants by choosing an appropriate Incoterms® term. According to UNCTAD data [19], the Incoterms® term FOB was mainly used in exports, while CIF was used in imports, i.e., the majority of the value of exports of goods was shown by...
Choosing the Right One...

These are the terms classified under the rules applicable to sea transport and inland waterway transport.

Therefore, the main determinants of Incoterms® terms with a special intention on terms for sea transport are analyzed below.

3. Importance of Incoterms® 2020 for International Trade

Logistical processes related to the transport of goods, especially in the international market, involve a number of activities, such as the appropriate packaging of goods for transport, the choice of the optimal means of transport, the transport route, the transport technology, the preparation of numerous documents, customs procedures, insurance, and other activities. International trade involves many actors who organize and carry out these activities. For the smooth running of these processes, it is very important who is obliged to organize and carry out certain activities.

The Incoterms® affect the unequivocal regulation of the obligations of parties involved in the organization, transport, risks of the shipment, delivery, and transport of goods. Incorrect use of Incoterms® can bring unexpected costs or risks, and inoperable contracts [1].

Precisely to facilitate international trade, i.e., to avoid ambiguities and misunderstandings that lead to unnecessary delays, costs, and disputes, the International Chamber of Commerce (ICC) has adopted rules for the use of domestic and international trade terms known as Incoterms® [6]. Their use enables the parties involved in the purchase and sale of goods to have clearly regulated obligations with regard to the organization of the transport of goods, the place of risk-taking, import and export customs formalities, the provision of documents, etc.

The revision of the Incoterms® terms over the last decades is carried out every ten years. The first Incoterms® terms were adopted in 1936. Their adoption was preceded by two studies: the first study was carried out in 1923 with the aim of identifying the six most commonly used terms, followed by the second study in 1928 with the aim of identifying differences and achieving a more precise/clear interpretation of trade conditions (Figure 4). The first published Incoterms® rules were global guidelines covering six terms: FAS, FOB, C&F, CIF, Ex Ship, and Ex Quay. In 1953, revised Incoterms® terms were published with three new terms: DCP (Delivered Costs Paid), FOR (Free on Rail), and FOT (Free on Truck), including rules for other modes of transport. The revision of the clauses in force took place in 1967, when, among other changes, two new trade terms were introduced: DAF (Delivery at Frontier) and DDP (Delivery at Destination). As a result of developments in international transport, especially due to the increasing importance of air traffic, a new term was introduced in the following revision of Incoterms® in 1976: FOB Airport (Free on Board Airport). A few years later, in 1980, the new revision included new achievements in the field
of economic and technical-technological progress, in particular, due to the increase of containerized transport of goods and new documentation-related procedures, and another new trade term FRC (Free Carrier ... Named at Point) was introduced. Ten years later, in 1990, the use of the term “Free Carrier” for different types of transport was simplified and the general term FCA (Free Carrier ... at Named Point) was introduced. Also, the audit recognized the increasing use of electronic commerce, and therefore provisions on the use of electronic messages were also adopted. The 2000 audit covered FAS and DEQ rules on “License, Authorisations and Formalities”. Significant changes to the Incoterms® were made in the Incoterms® 2010 version. Two are particularly noteworthy: the reduction in the number of Incoterms® rules from 13 to 11, i.e., two new DAT terms (Delivered at Terminal) and DAP (Delivered at Place) have replaced the Incoterms® 2000 rules DAF, DES, DEQ, and DDU, and the second change relates to the new classification of Incoterms® terms into two groups: Rules for any mode or modes of transport and Rules for sea and inland waterway transport. The new version of the Incoterms entered into force on 1 January 2020 [6, 14, 2].

The Incoterms® are structured in such a way that for each party to the sale contract, i.e., buyers and sellers, the rules, i.e., the obligations relating to 10 categories, are laid down horizontally, starting with the rules for the seller, marked with a letter and number code, starting with A1, and horizontally on the left are the rules for the buyer, starting with the code B1, which is illustrated in the following table.
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Table 1—Structure of the Rules for Seller and Buyer, Incoterms® 2020

<table>
<thead>
<tr>
<th>Seller</th>
<th>Obligation</th>
<th>Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>General obligations</td>
<td>B1</td>
</tr>
<tr>
<td>A2</td>
<td>Delivery/Taking delivery</td>
<td>B2</td>
</tr>
<tr>
<td>A3</td>
<td>Transfer of risk</td>
<td>B3</td>
</tr>
<tr>
<td>A4</td>
<td>Carriage</td>
<td>B4</td>
</tr>
<tr>
<td>A5</td>
<td>Insurance</td>
<td>B5</td>
</tr>
<tr>
<td>A6</td>
<td>Delivery/transport document</td>
<td>B6</td>
</tr>
<tr>
<td>A7</td>
<td>Export/import clearance</td>
<td>B7</td>
</tr>
<tr>
<td>A8</td>
<td>Checking/packing/marking</td>
<td>B8</td>
</tr>
<tr>
<td>A9</td>
<td>Allocation of costs</td>
<td>B9</td>
</tr>
<tr>
<td>A10</td>
<td>Notices</td>
<td>B10</td>
</tr>
</tbody>
</table>

Source: Authors according to [6]

This structure of the Incoterms® 2020 rules has indicated a change in comparison with Incoterms® 2010. Given the importance of the place of delivery (A2/B2) and the transfer of risks (A3/B3), these rules now come first, immediately after the general obligations. This is followed by the rules for transport (A4/B4) and insurance (A5/B5), which were covered by a single rule [6].

In addition to the above-mentioned changes in the structure of the obligations of sellers and buyers under Incoterms® 2020, other significant changes compared to Incoterms® 2010 are [6]: The focus is on the more detailed presentation of the rules, i.e., the interpretation of the provisions of certain terms, especially when introducing the Incoterms®, with the aim of highlighting the importance of choosing the right term; moreover, the rules are renewed in terms of content and terminology in order to be as understandable as possible for everyday use; a more detailed explanation of the segmentation and connection between sales and ancillary contracts, the DAT term has now been replaced by the DPU term and thus, a new list of terms within Group D has been created (Table 2); different levels of insurance coverage have been introduced in the CIF and CIP rules: a broader coverage of the term CIP, i.e., application of the Institute Cargo Clauses (A), while in the CIF rule, the existing obligation of the seller to take out insurance according to the Institute Cargo Clauses (C) remains.
Choosing the Right One...

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**Table 2 – Differences between Incoterms® 2010 and Incoterms® 2020**

<table>
<thead>
<tr>
<th>Incoterms® 2010</th>
<th>Incoterms® 2020</th>
</tr>
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<tbody>
<tr>
<td>EXW  Ex Works (named place of delivery)</td>
<td>EXW  Ex Works (named place of delivery)</td>
</tr>
<tr>
<td>FAS  Free Alongside Ship (named port of shipment)</td>
<td>FAS  Free Alongside Ship (named port of shipment)</td>
</tr>
<tr>
<td>FCA  Free Carrier (named place of delivery)</td>
<td>FCA  Free Carrier (named place of delivery)</td>
</tr>
<tr>
<td>FOB  Free on Board (named port of shipment)</td>
<td>FOB  Free on Board (named port of shipment)</td>
</tr>
<tr>
<td>CPT  Carriage Paid to (named place of destination)</td>
<td>CPT  Carriage Paid to (named place of destination)</td>
</tr>
<tr>
<td>CFR  Cost and Freight (named port of destination)</td>
<td>CFR  Cost and Freight (named port of destination)</td>
</tr>
<tr>
<td>CIP  Carriage and Insurance Paid to (named place of destination)</td>
<td>CIP  Carriage and Insurance Paid to (named place of destination)</td>
</tr>
<tr>
<td>CIF  Cost Insurance and Freight (named port of destination)</td>
<td>CIF  Cost Insurance and Freight (named port of destination)</td>
</tr>
<tr>
<td>DAT  Delivered at Terminal (named terminal at port or place of destination)</td>
<td>DAP  Delivered at Place (named place of destination)</td>
</tr>
<tr>
<td>DAP  Delivered at Place (named place of destination)</td>
<td>DPU  Delivered at Place Unloaded (named place of destination)</td>
</tr>
<tr>
<td>DDP  Delivered Duty Paid (named place of destination)</td>
<td>DDP  Delivered Duty Paid (named place of destination)</td>
</tr>
</tbody>
</table>

*Source: adapted by the Author according to [5, 6]*

As evident from the table, the list of DAP and DPU terms in Incoterms® 2020 has been changed. The classification of Incoterms® 2020 into two groups has been maintained: Rules for any mode or modes of transport and Rules for sea and inland waterway transport, as in Incoterms® 2010. In the rest of the paper, special attention will be paid to Incoterms® terms that fall within the scope of the Rules for sea and inland waterway transport.

4. **Incoterms® 2020 Terms for Sea Transport**

The terms of Incoterms® 2020 that fall within the scope of Rules for sea and inland waterway transport are as follows [6]: FAS – Free Alongside Ship (named port of shipment) Incoterms® 2020, FOB – Free on Board (named port of shipment) Incoterms® 2020, CFR – Cost and Freight (named port of destination) Incoterms®

The first two terms, FAS and FOB, refer to the seller’s obligation to deliver the goods to the port of shipment, while the terms CFR and CIF oblige the seller to deliver to the port of destination. As mentioned in the previous parts of the paper, FOB is mainly used for exports and CIF for imports, both terms belonging to the group of rules for sea and inland waterway transport.

The Incoterms® term FAS is an abbreviation for Free Alongside Ship, where the port of delivery should always be specified. According to this term, the seller has fulfilled his obligation “when the goods are placed alongside the ship (e.g. on a quay or a barge) nominated by the buyer at the named port of shipment or when the seller procures goods already so delivered” [6]. From that point onwards, the risk of loss or of damage to the goods passes to the buyer, as do all costs incurred thereafter.

The seller is obliged to “clear the goods for export”, while the buyer is obliged to “clear the goods for import or transit through third countries, to pay any import duty or to carry out any import customs formalities” [6].

According to Incoterms® terms FOB, delivery is made on board, which means that the seller “delivers goods to the buyer on board the vessel nominated by the buyer at the named port of shipment or when the seller procures goods already so delivered” [6]. From this point onwards, the risks are transferred to the buyer, as are all costs after delivery.

As under the FAS term, the seller has obligations regarding export formalities, while the buyer has obligations regarding import formalities.

In both cases, the choice of carrier is the buyer’s responsibility, which means that the buyer should contract or arrange for the transport of the goods from the nominated port of shipment at his own expense. However, according to the Incoterms® rules [6], the seller should provide the buyer with all the information available to him, including information on transport safety regulations, which the buyer needs in order to organize the transport and, if parties agreed, the seller should also contract the transport under usual conditions at the buyer’s risk and expense.

In contrast to the FAS and FOB terms of Incoterms® 2020, CFR and CIF terms require the seller to arrange and contract the transport of the goods. In this term group, the seller’s obligations are extended. This means that the seller must also bear the costs of transporting the goods to the nominated port of destination. However, the point of delivery of the goods at which the obligation under Incoterms® is deemed to be fulfilled is not the port of destination, but the point when the goods are handed over to the carrier appointed by the seller, e.g. when the goods are delivered on the ship.

Jurić and Mihić [8] highlight the transfer of risk as one of the most important issues of the purchase and sale agreement, as it is an economic issue. The outcome of this issue decides which party would be charged in the event of damage to the goods from the time of the conclusion of the sale contract until the performance of the contract.

CFR – Cost and Freight (named port of destination) Incoterms® 2020 means for the seller to have delivered the goods by boarding the vessel or by procuring the goods
so delivered. From that point, when the goods are taken on board, the seller is deemed to have fulfilled his obligation, and the risk of loss or damage to the goods is at that point transferred to the buyer.

The same rule applies to CIF – Cost Insurance and Freight (named port of destination) Incoterms® 2020, since the seller is also obliged to take out insurance covering the buyer’s risk of loss of or damage to the goods from the port of shipment to the port of destination. Under the Incoterms® rules, the seller is required to take out an insurance policy to cover the covered cargo in accordance with the Institute Cargo Clauses (C). However, the rules leave the parties the option of agreeing to more extensive coverage if the customer so wishes, at his own cost or risk.

Under both terms, export formalities must be completed by the seller, and import formalities by the buyer.

Which of these four terms will be used when transporting goods by sea depends primarily on the buyers and sellers. Authors Zelenika [21], Zelenika and Pavlić [22] point out that the rules of the terms FAS and FOB are more suitable for buyers. By choosing these terms, buyers determine the place of embarkation and arrange a ship to transport the goods. In this way they can engage the most convenient carrier, shipping company, i.e. the decisions on the choice of transport route and means of transport are within their control and they can thus influence the costs associated with the delivery of the goods. Although the rules do not contain any provisions on the obligation to insure the goods, both sellers and buyers are advised to insure the goods during transport. Sellers should insure the goods by the time of delivery and buyers from the time of delivery.

Since the terms CFR and CIF imply a higher level of obligations on sellers, they are recommended to exporters when selling goods [21, 23]. In accordance with the rules of these terms, routing is on the side of the seller, which means that they do not only sell the goods but also the necessary services to bring the goods to their destination. In this way, they can achieve more economic benefits than if they only sell the goods. In addition, by using domestic transport capacity, they also help strengthen the economic activity of domestic companies. Since organizing and transporting also involves a range of logistics activities related to the shipping of goods, handling, transportation, storage, insurance, and customs clearance, not only sellers but also exporters are advised to consult international freight forwarders as logistics operators that have the know-how, skills, and experience to provide optimal solutions for various business situations.

The authors Unal and Metin [17], in their study on factors influencing the choice of Incoterms® terms, concluded that “transportation costs” are the most important factor, while the “firm size” is the least important factor in the choice of terms. Other factors that have an impact are “relations with forwarding agents, type of goods, the complexity of transportation and distance”, with relationship, with relations with forwarding agents and distance being more important for exporters, while the type of goods and complexity of transportation are more important to importers.

Comparing the Incoterms® 2020 rules with the Incoterms® 2010 rules, it is
evident that there are significantly better explanations of terms for both the seller and buyer in the introductory notes when introducing the world of Incoterms® rules in general, as well as in the detailed elaborated rules. Also important for buyers and sellers are the recommendations on the use of the Incoterms® terms. The Incoterms® rules also contain advice to the parties to use other terms from the group referring to all modes of transport, if the delivery is not planned according to the described rules of the explained terms.

5. Conclusion

Incoterms® 2020, like all previous versions, aims to facilitate business in the international environment by laying down the rules of the game for sellers and buyers. The rules concern the obligations of the buyer and the seller with regard to the place of delivery of the goods, the fulfilment of export and import customs formalities, the insurance of goods in transit and levels of coverage of the goods (Institute Cargo Clauses A or C), the organization and commissioning of transport, the acquisition of documents accompanying the goods, the points of transfer of risk from the seller to the buyer and other obligations. Although they primarily concern the regulation of obligations between the buyer and the seller, they also indirectly concern all other parties involved in the organization of the transport of goods, such as carriers, international freight forwarders, logistics operators, shipping agents, insurance companies, customs services, and many other parties, depending on the particularity of the transaction and of the goods which are the subject of the purchase and sale contract.

Clear defining of the rules enables undisturbed movement of goods from sender to buyer, between and through different countries, through different modes of transport, whether it is one mode of transport or several modes of transport. This avoids or reduces unnecessary risks related to misunderstandings, delays, costs, and risks in international exchange.

The paper analyses the Incoterms® terms 2020, which came into force on 1 January 2020. Although there are no crucial changes in the number and structure of Incoterms® terms, the latest version of Incoterms® makes a special contribution to international exchange as the rules of 11 terms are elaborated in more detail, with implications and recommendations on the choice of terms. The classification of Incoterms® terms has remained unchanged compared to the version of Incoterms® 2010. The Incoterms® terms are still classified into rules applicable to any mode and all modes of transport and rules applicable to sea and inland waterway transport. The term DAT in the Incoterms® 2010 has been replaced by the term DPU, which is not a new term, but has been renamed to indicate that delivery can take place at any location and not necessarily only at the terminal. As it contains a provision for the unloading of goods, it is listed after the term DAP, which does not require the seller to unload the goods from the incoming means of transport.
The terms that refer to sea transport, but also to inland waterway transport, are four terms: FAS, FOB, CFR, and CIF. The differences between the terms mainly relate to who is obliged to contract and organize the transport and to bear the transport costs. In the case of FAS and FOB, this obligation is on the part of the buyer, whereas in the case of CFR and CIF, the seller is the party to the contract of sale who has to organize and pay for the transport. In the case of the place of delivery and transfer of risk, the seller delivers the goods alongside the ship in case of the FAS term, and under FOB, the delivery is carried out on the ship and after the goods have been delivered in this way, the risk and all costs are then transferred to the buyer. In the case of CFR and CIF, however, the seller must contract the carriage of the goods to the port of destination, but his obligation to deliver ends when the goods are delivered to a carrier appointed by the buyer, and from that moment all risks pass to the buyer. An additional obligation of the seller is contracting insurance in accordance with the Institute Cargo Clauses (C). The choice of an appropriate Incoterms® term affects the extent of buyers’ and sellers’ obligations and the risks and costs associated with the transportation of goods. Parties are therefore advised to be careful in their choice of terms, and it is suggested that they consult experts such as international freight forwarders for advice regarding the choice of terms.

Literature

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