CFR (Cost and Freight): Freight costs included – risk transfers on board

CFR (Cost and Freight) is one of the classic trade clauses of the Incoterms, under which the seller bears the freight costs to the agreed port of destination. However, the risk passes to the buyer as soon as the goods are delivered on board the vessel at the port of shipment. For technical buyers, CFR is therefore a clause in which cost responsibility and risk bearing deliberately diverge – and which consequently requires careful contractual and logistical control.

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Key facts at a glance

01 CFR is a pure sea freight clause of the Incoterms and must not be used for container transport or multimodal traffic.

02 The seller bears the costs of main carriage and export customs clearance in the country of export, but risk already passes on board at the port of shipment.

03 Insurance cover is not included under CFR – the buyer must take out transport insurance themselves.

04 For container shipments, Incoterms FOB is generally unsuitable, while CFR is often preferred over a later clause such as CIP when risk transfer on board is desired.

05 The clause corresponds to the former term "CF" and is listed under the abbreviation CFR in all current Incoterms editions.

06 Under CFR, risk bearing does not follow the costs – this discrepancy is the most common mistake in procurement contracts.

Definition: CFR (Cost and Freight)

CFR is an Incoterms clause under which the seller bears the costs of main carriage to the named port of destination. However, risk passes as soon as the goods are placed on board the transport vessel at

the port of shipment. CFR is thus one of the clauses in which transfer of costs and transfer of risk do not coincide.

Position within the Incoterms family

CFR belongs to the group of sea freight clauses and is closely related to Incoterms FOB, CIF, CPT and CIP. While under FOB the buyer organises the main freight themselves, under CFR the seller takes on this task. The difference from CPT lies in the mode of transport: CFR applies exclusively to sea and inland waterway transport, CPT to all modes. Buyers should therefore always reconcile the clause with the physical transport route and switch to CPT or CIP for combined transport.

Distinguishing it from CIF

CFR and CIF differ in only one respect: under CIF (Cost, Insurance and Freight) the seller is obliged to take out transport insurance at the buyer's expense – at least at the minimum cover amount stipulated by the Incoterms. Under CFR, this obligation is dispensed with entirely. In practice this means: whoever agrees CFR bears the sea transport risk as the buyer without insurance support, unless a policy is taken out separately. For high-value plant equipment or sensitive components, CFR is therefore only sensible with additional cover of one's own.

Legal basis and scope

The Incoterms are published by the International Chamber of Commerce (ICC) and are not laws but standard contract clauses. They only take effect if expressly agreed in the purchase contract – ideally stating the Incoterms edition and the exact location, e.g. "CFR Port of Rotterdam, Incoterms 2020". Without stating the edition, interpretation disputes may arise, as details change between revisions. For cross-border transactions within the EU, additional reporting obligations such as Intrastat must also be observed, which capture the mode of transport and place of delivery.

Cost allocation and risk transfer under CFR

The central special feature of CFR is the separation of transfer of costs and transfer of risk. This discrepancy is a frequent source of misunderstanding in procurement negotiations and must be communicated consistently throughout the entire ordering process.

What the seller bears

The seller organises and pays for transport to the named port of destination. This typically includes export packaging, loading at the port of shipment, export customs clearance in the country of origin and the main freight. The Bunker Adjustment Factor, Terminal Handling Charges at the port of shipment and customary documents such as the packing list and commercial invoice are also charged to his account. Not included are import duties, import VAT and terminal charges at the port of destination – these are borne by the buyer.

What the buyer bears

From loading on board, the buyer assumes the full transport risk: perils of the sea, damage from storms, theft or total loss are within his sphere of responsibility from that point onwards, even though the freight costs remain with the seller. In addition, import customs clearance, import duties, port charges at the destination port and onward carriage from the port of destination are incurred. The buyer should therefore take out transport insurance at an early stage and check the warehouse documentation such as packing list and declarations of conformity for completeness.

Practically relevant pitfalls

A common mistake is specifying an imprecise destination – for example "CFR northern Germany" instead of a specific terminal. This makes price comparison and freight cost calculation difficult. Another problem: sellers occasionally choose carriers with unfavourable routes or long replenishment times, which impairs the buyer's delivery performance. Contracts should therefore concretely agree requirements for the means of transport, transit time and notification obligations regarding the shipment date.

Methods and approach: using CFR correctly in the procurement process

CFR should not be chosen as a blanket default but should result from a deliberate weighing-up of costs, risk and logistical control. The selection process can be broken down into several steps.

Clause selection in the sourcing process

The desired clause should already be specified in the Request for Quote (RFQ) so that quotations are comparable. Otherwise sellers may price in hidden freight surcharges that make a cost mark-up calculation impossible. For raw materials with high price volatility, it should additionally be clarified whether freight is shown as a fixed price or as a variable surcharge – here buyers benefit from separate presentation of goods value and freight share.

Risk assessment before clause selection

Before deciding on CFR, a risk assessment should be carried out as part of supply risk management. Key questions: How high is the value of the goods? Which transport routes are used, and how stable are the routes? Is there interest in an own insurance policy with better terms than the CIF minimum cover? For critical goods with long replenishment times, it may make more sense to manage the logistics oneself and choose Incoterms FOB or EXW in order to keep carrier selection and transit time in one's own hands.

Integration into contracts and systems

The chosen clause must be consistently reflected in the purchase order, order confirmation, customs documentation and ERP system. Incorrect clause specifications lead to double customs clearance or

delays at the terminal. Those working with e-sourcing platforms should store the Incoterms as a mandatory field in catalogue management so that deviations between quotation and purchase order are systematically detected. The classification rate for material numbers should also be high enough to allow customs treatment and Intrastat reports to be properly derived.

Key KPIs and assessment criteria in CFR transactions

In CFR procurement, transport costs, risk cover and delivery performance can be managed using specific metrics. These should be evaluated regularly and shared with suppliers as part of supplier evaluation.

Freight and total cost metrics

The key metric is freight costs as a share of goods value, which in practice typically ranges between 3 and 15 per cent depending on commodity type and distance. Also important is the share of variable freight surcharges (bunker, peak season and currency surcharges) in total freight – a high share signals price volatility and argues for longer-term freight contracts. In the cost mark-up calculation, freight should be shown as a separate line item to create comparability between suppliers.

Delivery and process metrics

Relevant are on-time shipment by the seller, transit time between port of shipment and port of destination, and the invoice error rate for freight-related items. Those using an inventory health dashboard can feed delays at the destination port directly into inventory coverage and replenishment time calculations. High transit time variability is a warning signal for carrier changes or turbulence in the supply chain.

Risk cover and damage metrics

In addition to the process metrics, the buyer should keep an eye on insurance cover: the share of shipments with an adequate policy, the average deductible and the damage rate per thousand shipments. A low damage rate justifies higher deductibles and thus lower premiums. All values should be documented in regular supplier meetings and as part of the procurement guidelines.

Risks and controls: typical stumbling blocks with CFR

CFR carries specific risks that, without a clear contract structure and process control, quickly lead to additional costs and liability disputes. The most important control mechanisms can be grouped into contractual, logistical and compliance measures.

Contractual controls

The purchase contract should specify precisely named ports, a target transit time, notification obligations regarding the shipment date and a defined document scope (commercial invoice, packing list, bill of lading). For critical deliveries, a performance bond can be agreed as security for timely

shipment. It should also be regulated what happens if the seller is late with shipment – here a right of termination for cause may apply, provided it is contractually grounded and examined on a case-by-case basis.

Logistical and customs controls

The buyer should plan the delivery chain from the port of destination in good time: forwarder, terminal charges, import customs clearance and onward transport to production. Without clear responsibilities, urgent orders and standstill costs at the port arise. From a compliance perspective, declarations of origin, sanctions list screening and correct Intrastat reports are important. Internal processes such as vendor master data creation should also properly reflect the Incoterms so that posting and cost centre allocation are correct.

Governance and internal transparency

Anyone who, as a buyer, purchases their own freight rates at short notice or concludes carrier agreements for CFR transactions should manage this via established procurement guidelines and approval processes. A functioning whistleblower system can additionally help to uncover irregularities in freight award or in claims settlement at an early stage. Equally important: clear documentation of the risk decision, for example whether insurance was dispensed with or an own policy was taken out.

Current developments: CFR in times of volatile sea freight

Sea freight prices and port situations have fluctuated sharply in recent years. This influences how buyers assess and deploy CFR.

Freight volatility and pricing

Route closures, port congestion and fuel costs have led to sometimes significant fluctuations in sea freight rates in recent years. Under CFR, the seller formally bears the freight costs but passes them on in the product price – with high price volatility in raw materials and freight, additional claims or price adjustments may therefore arise. Buyers are well advised to have freight shares presented transparently and to regulate option models for price changes contractually.

Digitalisation and data foundation

Digital freight and procurement platforms make it easier to compare transport rates and transit times, even though freight is formally the seller's under CFR. With e-sourcing tools and AI in procurement, historical freight costs, carrier performance and damage data can be evaluated and fed into RFQ decisions. This makes clause selection data-based rather than based on gut feeling.

Sustainability and emissions reporting

For corporate reporting and supply chain due diligence, the CO footprint of transport is increasingly coming into focus. Under CFR, the buyer does not bear the freight costs but does hold the risk and de facto demand control – an argument for addressing transport emissions in supplier management and

anchoring climate-relevant criteria in RFQs and procurement guidelines.

Typical metrics

Metric	Typical value
Freight costs as a share of goods value	typically 3–15 % *depending on commodity type, distance and route stability*
On-time shipment	> 95 % *share of the seller's shipments made on schedule*
Transit time variability	< ±3 days *range of variation in lead time between port of shipment and port of destination*
Insured shipments	100 % *particularly important under CFR, where there is no seller's insurance*

Practical example

A mid-sized mechanical engineering company sources press components from Asia and had always agreed CIF as a matter of course without checking the actual insurance cover. Following a damage analysis and a risk assessment as part of supply risk management, the company switched to CFR with its own transport insurance via a framework policy. At the same time, shipment notification obligations and a document set (commercial invoice, packing list, bill of lading) were contractually anchored. The result: better insurance terms, more control over carriers and shorter replenishment times for critical components.

- Switch from CIF to CFR with its own framework insurance, managed via supply risk management
- Contractual fixation of shipment date, transit time and document scope including packing list
- Freight shown as a separate line item to make the cost mark-up calculation comparable across suppliers
- Integration of the Incoterms as a mandatory field in catalogue management and the ERP system

Conclusion

CFR is a well-established Incoterms clause for sea transport under which the seller bears the freight costs to the port of destination, but the transport risk already passes to the buyer on board at the port of shipment. It is precisely this separation of costs and risk that makes the clause attractive but also demanding for buyers: without insurance of one's own, precise contract details and clear logistical planning, unintended risk quickly arises. Anyone using CFR should consciously weigh the clause against Incoterms FOB, CPT and CIF, present freight costs transparently and regularly evaluate

metrics such as freight cost share, transit time and damage rate. In this way, CFR becomes more than a mere contract clause – it becomes a controllable instrument of supply risk management.

Frequently asked questions

? What does CFR mean in procurement?

CFR (Cost and Freight) is an Incoterms clause for sea transport under which the seller bears the freight costs to the named port of destination. However, the risk passes to the buyer as soon as the goods are loaded on board at the port of shipment. Insurance cover is not included under CFR and must be arranged separately by the buyer.

? What is the difference between CFR and CIF?

Both clauses provide that the seller pays the main freight to the port of destination and that risk passes on board. The only difference concerns insurance: under CIF the seller must take out transport insurance with minimum cover, under CFR this is not required. Buyers with favourable insurance frameworks of their own therefore often choose CFR.

? When should you choose CFR instead of FOB?

CFR makes sense when the seller has better freight terms or when the buyer does not want to manage carrier selection themselves. FOB is suitable when the buyer wants to retain control of the logistics and react flexibly to freight fluctuations. Both clauses apply only to sea and inland waterway transport, not to container transport over land.

? Who bears the transport risk under CFR?

The buyer bears the transport risk from the moment the goods are placed on board the vessel at the port of shipment – regardless of who pays the freight costs. This is the key difference from clauses such as CIP, where risk transfer occurs later. The buyer should therefore take out their own transport insurance.

? Is CFR suitable for container transport?

No, according to the Incoterms commentary CFR is intended for general cargo and conventional sea freight. For container transport in multimodal traffic, it is recommended to use CPT or CIP instead, as CFR's risk-transfer logic (on board) does not fit cleanly for containers. In practice, CFR is nevertheless sometimes used incorrectly for containers – with potential for disputes in the event of damage.

? Which additional costs does the buyer bear under CFR?

From the port of destination, the buyer pays terminal charges, import customs clearance, import VAT and onward transport to the plant. Transport insurance is also not included. These landed costs should therefore be budgeted as a separate line item in the procurement budget so that total costs are calculated realistically.

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