FOB (Free On Board): Transfer of Responsibility and Costs in Sea Freight Export

FOB (Free On Board) is one of the classic delivery clauses from the Incoterms catalogue of the International Chamber of Commerce (ICC). It governs when costs and risks pass from the seller to the buyer – under FOB from the moment the goods are delivered on board at the port of shipment. For technical buyers, FOB is a practically relevant steering instrument in overseas procurement because it clearly allocates responsibility for freight, insurance and customs clearance. The following article explains the definition, correct application, typical KPIs, risks and current developments relating to the clause.

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Key facts at a glance

01 FOB (Free On Board) means: the seller delivers the goods on board the vessel at the agreed port of shipment; from that moment, cost and risk are borne by the buyer.

02 The seller handles export packaging, export customs clearance and stowage on board; freight, insurance and import clearance are the buyer's responsibility.

03 FOB is intended exclusively for sea and inland waterway transport and is not suitable for containers or air freight.

04 The place in the contractual document must be named precisely, e.g. "FOB Shanghai Port, Terminal XY".

05 In practice, FOB is often confused with the earlier term FOB (stowed), withdrawn by the ICC – only the Incoterms version and edition stated in the contract is decisive.

06 Typical downstream costs for the buyer are sea freight, transport insurance, destination charges, import duty and VAT as well as the pre-carriage to the buyer's own plant.

Definition: FOB

FOB (Free On Board) is an Incoterm clause under which the seller delivers the goods on board the vessel named by the buyer at the agreed port of shipment. From the moment of delivery on board, the cost and risk of transport pass to the buyer.

Basic principle and allocation of responsibilities

Under FOB, the seller bears all costs and risks up to loading on board: packaging, loading of the pre-carriage transport, export packaging, export customs clearance and terminal consolidation up to the ship's rail. The buyer concludes the contract of carriage, pays the main freight and organises insurance as well as import clearance in the country of destination. The clear separation between transfer of costs and transfer of risk is important: under FOB, both fundamentally coincide, namely with delivery on board. For buyers, this means that pre-carriage to the port of shipment and on-carriage from the port of destination are separate calculation blocks which must not be included in the supplier's material price.

FOB in the context of the Incoterms

The Incoterms are revised periodically by the ICC; the edition named in the contract or purchase contract is decisive. FOB belongs to the group of clauses in which the seller handles export formalities while the buyer organises the main transport. This distinguishes it, for example, from CIF or CFR (see related term Incoterms CFR), under which the seller pays the sea freight, and from EXW, under which the seller provides virtually no transport services. Buyers should always state the Incoterms edition, the precise place and the chosen clause in the procurement contract in order to avoid disputes over interpretation.

Methods and procedure for the FOB agreement

A sound FOB agreement requires three building blocks: the precise handover location, a clear cost allocation in the quotation breakdown and the contractual anchoring of the clause including the Incoterms version.

Specify place and handover point precisely

"FOB China" or "FOB Hamburg" is insufficient. In practice, formulations such as "FOB [port] pier/terminal [name], Incoterms [edition]" have proven their worth. Particularly in large ports with several terminals, the precise place specification determines additional pre-carriage costs. The buyer should obtain written confirmation from the supplier as to which terminal charges, documentation fees and port usage fees are already included in the sales price – borderline cases open to dispute frequently arise here.

Quotation breakdown and cost elements

For FOB quotations, the buyer requests a breakdown by material costs, production, export packaging, the supplier's inland freight, customs clearance and port charges up to on board. Only in this way can

quotations from different suppliers be compared, even if they offer different clauses (for instance FOB versus EXW or CIF). A binding breakdown template in the enquiry is helpful, also covering elements such as down payment, payment terms and discount logic. Anyone working with a raw material sliding price clause additionally links the material component to index values.

Contractual anchoring

The clause belongs in the framework agreement or in each individual purchase order form. A uniform company Incoterms guideline is recommended, stipulating which clauses apply to which procurement strategy and mode of transport. For goods sensitive to sea water, the buyer should additionally document the insurance obligation and the desired scope of cover. Quality milestones such as tooling release or the Initial Sample Inspection Report (ISIR) can also be linked to the transfer of risk, so that it is clear when a defective product is to be treated as a risk position of the buyer.

Key KPIs in FOB procurement

Since FOB shifts the transport risk area to the buyer, key figures on the transport and payment situation come into sharper focus. Measurement should ideally take place per plant and per sourcing region.

Transport and logistics KPIs

Relevant key figures are the share of freight costs in procurement volume (in practice frequently a low single-digit percentage, depending on the material category), landed cost accuracy (plan-actual variance of total costs per purchase order) and adherence to the agreed shipping time at the handover port. For FOB sourcing from Asia, pre-carriage and terminal dwell time are also sensible control variables. The buyer should evaluate the figures monthly in inventory management, since delays at the handover point directly increase safety stock and capital tied up.

Financial KPIs

Because under FOB the buyer commissions and pays for the freight itself, the payment flows also shift. Relevant in practice are the Days Payable Outstanding (DPO) towards the supplier, the average payment period towards freight forwarders and the liquidity effect of down payments or letters of credit. Instruments such as reverse factoring can only be applied to the supplier relationship, not to freight costs – the buyer must therefore consider the financing mechanics separately. An early payment discount process on the material side remains unaffected by the clause, provided the payment period under the purchase contract runs independently of transport.

Quality and process KPIs

Even under FOB, the buyer's responsibility does not end at the ship's rail. Key figures on shortage part management quality, process capability of critical characteristics and the results of incoming goods inspections belong in the supplier rating model. This makes it possible to identify whether difficulties were already visible at the handover point or only occurred in the destination country.

Risks and controls with FOB

The greatest danger with FOB lies not in the clause itself but in its uncritical application: the wrong mode of transport, vague place specifications and unclear cost demarcation give rise to expensive renegotiations.

Unsuitable modes of transport and misuse of the clause

FOB is designed for break-bulk and bulk cargo transport by sea. With container freight, the handover point in practice is the container terminal, not loading on board; the ICC generally recommends FCA instead of FOB here. Nevertheless, many Asian suppliers name FOB for containers out of habit. Buyers should check whether the clause fits the actual transport process, or deliberately agree FCA and document this in the procurement guideline.

Cost slicing and double charging

A frequent point of dispute is local charges between the factory gate and the ship's side, such as Terminal Handling Charges or documentation fees. Anyone who does not allocate these items contractually will, in case of doubt, pay them twice or become involved in disputes over late payment. Control instruments are a detailed cost element list, a comparison with benchmark values of the freight forwarder and a reporting obligation for suppliers in the event of charge changes. In addition, the category team – in the interest of functioning category governance – should define clause rules per commodity group.

Safeguarding measures in the procurement process

Additionally recommended are an insurance obligation for the buyer from the transfer of risk onwards, a defined escalation procedure for delays at the port of shipment and the link to shortage part management if goods are defective at the handover point. For critical parts, the buyer can agree an audit or pre-shipment inspection in advance and secure the release via tooling release and ISIR documentation.

Current developments relating to FOB

The application of FOB is changing due to three drivers: the dominance of containers in sea transport, the increasing digitalisation of freight documentation and rising sustainability requirements in the supply chain.

Shift towards FCA in container traffic

Since the majority of world trade is handled in containers, clauses with a more flexible handover point are gaining in importance. Buyers switching from FOB to FCA must explicitly regulate responsibility for loading and the pre-carriage of the container in order to avoid creating a gap in the transfer of risk. The switch is particularly worthwhile if the supplier does not unload directly at the quay anyway.

Digitalisation and data quality

Electronic bills of lading, track-and-trace platforms and standardised reference data improve the traceability of the handover point. Anyone wishing to track FOB processes digitally should ensure data quality in the enquiry and purchase order: correct port and terminal codes, unambiguous shipment references and consistent descriptions. Without clean reference data, freight costs cannot later be properly allocated to cost objects or projects.

Sustainability and emissions tracking

For CO balances and reporting obligations relating to supply chain transport, the choice of clause is relevant because it determines who collects the emissions data. Buyers pursuing a recycled content quota or sustainability requirements in the material environment should also include the transport route in the assessment. FOB fits well here, because the buyer controls the main freight itself and can therefore procure emissions data in a targeted manner. Comparing several shipping options in the context of multiple sourcing also increases transparency.

Typical metrics

Metric	Typical value
Freight cost share of procurement volume	typically 2–8 % *Depending on material category and distance; for overseas sourcing rather at the upper end.*
Landed cost plan-actual variance	< 5 % *Usual benchmark for stable FOB sourcing; larger variances indicate unclear cost elements.*
Adherence to agreed shipping time	> 95 % *Share of shipments ready at the handover port within the agreed time window.*
Days Payable Outstanding (DPO) towards suppliers	typically 30–60 days *Independent of the transport clause; under FOB, the liquidity effect additionally shifts to freight and insurance payments.*

Practical Example

A medium-sized mechanical engineering company sources cast parts from Asia and had previously always agreed a blanket "FOB China" with its suppliers. When a new procurement strategy was drawn up, it emerged that landed costs varied considerably because terminal charges were sometimes included in the supplier price and sometimes in the freight costs, and two suppliers used different ports. The buyer therefore introduced a standardised FOB agreement with a specific port and terminal name, an assigned cost element list and a fixed shipping time window. In parallel, a comparison between

planned and actual landed cost was established for each shipment.

- Precise specification of place (port, terminal, Incoterms edition) in the framework agreement and purchase order
- Cost element catalogue per quotation breakdown, including export customs, port charges and export packaging
- Monthly analysis of landed cost variance and pre-carriage times in inventory management
- Linking of quality release (ISIR, tooling release) to the transfer of risk at the ship's rail point

Conclusion

FOB is a proven clause for sea freight export in which the transfer of responsibility at the ship's rail is clearly regulated. It gives buyers full control over freight costs, insurance and import clearance, but also requires a clean cost demarcation and a precise specification of place in the contract. It is important to use the clause only for suitable modes of transport and to consistently interlock it with quality and logistics processes. Anyone who systematically embeds FOB in their own procurement strategy and transparently evaluates the downstream costs reduces the risk of renegotiations and improves planning reliability across the entire supply chain.

Frequently asked questions

? What does FOB mean in procurement?

FOB (Free On Board) is an Incoterm clause under which the seller delivers the goods on board the vessel at the agreed port of shipment. From that moment, you as the buyer bear the cost and risk of onward transport. The seller covers export packaging and export customs clearance; freight, insurance and import clearance are your responsibility.

? Who pays the freight under FOB?

Under FOB, you as the buyer conclude the contract of carriage and pay the main freight as well as transport insurance. The seller bears the costs up to delivery on board, i.e. inland freight, export packaging, export customs and port charges up to the ship's rail. In addition, the buyer incurs the destination charges and import clearance.

? When does risk pass under FOB?

Risk passes at the moment the goods are delivered on board the named vessel at the agreed port of shipment. Before the ship's rail, the seller bears the transport risk; thereafter, damage, loss and delay fall within your area of responsibility. Transport insurance from that point onwards is therefore strongly recommended.

? Is FOB suitable for container transport?

Strictly speaking, FOB is intended for classic sea freight with bulk or break-bulk cargo, not for containers. With container transport, the practical handover point is often the terminal rather than

loading on board; the ICC generally recommends FCA in this case. Nevertheless, FOB is frequently agreed for containers in practice – in that case, you should additionally specify the concrete handover and cost rules in writing.

? What is the difference between FOB and CIF?

Under FOB, you as the buyer arrange and pay for the sea freight yourself; the seller only delivers on board. Under CIF, the seller concludes the contract of carriage and insurance and bears the costs to the port of destination, although risk passes at the port of shipment. The choice depends on whether you want to control your logistics centrally or have the supplier handle the billing.

? Which costs are included in the sales price under FOB?

Typically, the FOB price includes the goods themselves, export packaging, the supplier's inland freight to the port, export customs clearance and port charges up to loading on board. Not included are sea freight, insurance, destination charges, import duty and VAT. Request a detailed breakdown to avoid double charging.

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