Indicative reference costs for budgeting purposes: international freight, insurance, and quality assurance

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Below are updated **indicative** reference costs for international freight, insurance, and quality assurance as a percentage of product value for some key product categories to support budgeting.

This information is based on actual international freight cost transactional data from the Global Fund's Pooled Procurement Mechanism and forecasts freight, insurance and quality assurance reference costs based on current knowledge.

- Insurance and quality assurance forecast reference costs are relatively straightforward to forecast.
- The international freight market is not straightforward. It is a dynamic fluid market influenced by a wide range of factors: such as geo-political events, equipment/trade specific challenges, and country specific challenges. Freight costs are very complex to forecast in any form – whether as a value, trending percentage or as a proportion of product value.

This guidance document provides an insight as to the forecast freight costs as a proportion of product value even though they are not directly related to product value. This approach comes with some limitations by design; therefore, the following considerations are essential to consider and contextualize for each specific situation.

Freight

1. **International freight cost factors** – International freight costs are contingent upon several factors, such as but not limited to:
    - Weight and volume (density)
    - Geography (origin, destination)
    - Delivery arrangements (modality, route, incoterm, final in-country destination)
    - Product-specific characteristics (temperature requirements, packaging, type of equipment needed)

- Other factors such as oil price, global trade economics, supply and demand, port/airport infrastructure, as well as global disruptions, local crisis or restrictions.

Determining freight budgets is further complicated as airlines further implement minimum pricing methodologies that **disproportionally impact smaller shipments** as they will be charged the minimum price regardless of size. In this situation during implementation, the PPM Procurement Agents will be able to propose alternative ways to lessen such impact, including through consolidating shipments, modal optimization, and use of courier services.

2. **Challenges of forecasting international freight costs as a percentage of product value** - For simplicity, the guidance on budgeting of freight costs has been presented as a percentage of product value. This approach has **significant limitations** especially for categories that are not very homogeneous in their weight/volume/cost characteristics. Similarly, this can be the case for specific orders that may not have a typical composition, whether large or small having significantly different costs vs. this guidance document.

   Due to the variability resulting from the above factors, the median and interquartile range (25^{th} / 75^{th} percentiles) have been presented for you to make your specific judgements (including potentially outside of these ranges). Historical costs for similar products using similar freight modalities can be used for budget assumptions' validation.

3. **Impact of product prices** - Another important consideration when looking at percentages of international freight cost forecasts as percentage of product value, is that product prices also decrease or increase over time. This **fluctuation of product value could skew the percentage result and limit interpretation over time - purely as a factor of the mathematics**. An example, when the product cost halves, and no change is made to the freight cost, the freight cost expressed as a percentage of product cost would have doubled.

4. **Freight cost variations per health product category** - As mentioned above, the percentage of product value approach has some assume level of homogeneity and typicality. Some categories can contain items with very different characteristics of volume, weight, and value. For this reason, it is challenging to provide indicative reference costs for categories such as diagnostics, laboratory, and medical supplies, and "other pharmaceuticals" as product specifications can vary significantly. Medical and laboratory supplies being particularly challenging that can range from equipment or supplies with high value and low volume to very low value bulky items such as cardboard safety boxes. For such categories, referencing previous actual or specifically quoted costs should be a major input into the consideration.
   For the budgeting purposes of ITN and PPE health product categories, it is advised to follow the 75^{th} percentile indicative freight costs (below), due to the complexities involved with these volumetrically large products.

5. Transport mode considerations - **Air freight can be many times more expensive than ocean freight; almost all products are advised to be shipped by ocean** if

shipment volumes are sufficient, products' shelf-life are not too short or when low-temperature-controlled transit conditions can be met.

With thoughtful planning, container volumes can reach most countries by ocean freight. ITNs should be transported by ocean only. Indicative quantities for key products to fill shipping containers for economical shipment is provided in a subsequent table below.

6. **Utilize latest product reference prices** - These indicative international freight costs are based on current health product pricing. It is important to ensure that estimated freight cost budgeting shown below as percentages are applied to the latest reference prices. This is especially important for ITNs where there may have been a shift in product specifications (e.g. from pyrethroid to dual AI). The latest reference prices for products can be found within wambo.org or on the following category pages
   - For covid-related products: https://www.theglobalfund.org/en/covid-19/health-product-supply/
   - For other health products: https://www.theglobalfund.org/en/sourcing-management/health-products/

In the current uncertain international freight market, it is recommended for the budgeting purposes for the ITN and PPE health product categories that are relatively low cost very bulky items, that not less than the 75th percentile indicative freight costs (below) are used.

Indicative international freight costs[1] as proportion of product value: by freight modality[2]						
	Ocean			Air		
Product categories	25th percentile	median	75th percentile	25th percentile	median	75th percentile
ARVs	2%	3%	8%	11%	23%	75%
ANTMs	6%	10%	16%	26%	52%	118%
Essential Medicines	9%	23%	39%	13%	41%	110%
ITNs (see note immediately above this table)	15%***	20%***	30%***		N/A*	
IRS	4%	5%	15%		N/A*	
HIV-RDT	7%	11%	18%	16%	23%	49%
Malaria-RDT	12%	18%	25%	38%	54%	79%
Laboratory & medical Supplies	*See detailed table below*					
Viral load and early infant diagnosis	N/A**	19%	N/A**	12%	17%	24%
Condoms & lubricants	13%	23%	56%		N/A*	
PPE (see note immediately above this table)	13%***	30%***	53%***		N/A*	
COVID-19 Ag-RDTs	3%	5%	8%	8%	13%	18%
COVID-19 PCR tests		N/A**		6%	10%	16%
COVID-19 Novel antivirals	3%	5%	6%	16%	29%	40%

* Air freight is not recommended for these products that would have prohibitive air costs Most PPE should be shipped by ocean, except for any urgently required volumes.
** Insufficient data to provide robust guidance.
*** For ITNs and PPE product categories, it is currently advised to follow the 75th percentile indicative freight costs for budgeting purposes.
**** Sufficient data has now been obtained and verified to finalize this guidance

Indicative international freight costs[3] as proportion of product value: by freight modality [4]						
	Ocean			Air		
Laboratory & medical supplies sub-categories	25th percentile	median	75th percentile	25th percentile	median	75th percentile
Analyzer reagents and consumables (including Covid-19)	N/A**	11%	N/A**	9%	17%	54%
General consumables	18%	49%	111%	63%	113%	176%
Imaging equipment	N/A**	14%	N/A**	15%	38%	68%
Medical equipment	N/A**	21%	N/A**	21%	29%	44%
Other laboratory reagents	14%	19%	32%	23%	57%	159%

** Insufficient data to provide robust guidance

[1] Based on transactional data and forecasts based on current knowledge, DAP incoterm
[2] See the Category and Product-level Procurement and Delivery Planning Guide for indicative lead times by product category.
[3] Based on transactional data and forecasts based on current knowledge, DAP incoterm
[4] See the Category and Product-level Procurement and Delivery Planning Guide for indicative lead times by product category

Indicative feasible quantities: Ocean-freight[5]			
Unit	**20ft container**	**40ft container**	**High capacity 40ft container**
Pack of "1-month"[6]	50,000 - 75,000	90,000 - 150,000	
Single courses	300,000 - 360,000	660,000 - 750,000	
Single RDT	300,000	625,000	
Single ITN	9,400 - 17,045	20,530 - 35,230	22,700 - 40,250
"Single" PPE		600,000	

Insurance

Incremental country risk insurance surcharges for high-risk countries may apply in addition to the below rates.

Indicative insurance costs as a proportion of product value and freight cost	
Pharmaceuticals (ARVs, ANTMs, Essential Medicines, COVID19 Treatments)	0.0800%
Vector Control (ITNs, IRS)	0.4386%
Diagnostics (HIV-RDTs, Malaria-RDTs, GeneXpert, COVID-19 Diagnostics	0.3856%
Laboratory and medical supplies	0.3856%
Condoms & lubricants	0.0781%
COVID-19 PPE	0.1400%

Quality Assurance/Quality Control (QA/QC) costs

QA/QC costs apply to product categories where there is a mandatory pre-shipment testing as per the Global Fund's Quality Assurance Policy.

Indicative QA/QC costs[7] as proportion of product value	
IRS	2.6%
ITNs	0.4%
Condoms & lubricants	4.8%

[5] Actual quantities per container may vary mainly according to item size, packaging type and pallet requirements and configuration; partially filled containers with quantities well below these thresholds may not be workable and/or cost-efficient by ocean.
[6] Or equivalent multi-month packs (e.g., 90 or 180 tablets), although thresholds will be lower.
[7] Based on current knowledge, median value, ocean freight only