

MARINE DELAY IN START-UP INSURANCE

ROLE OF MARINE INSURANCE IN ECONOMIC PROTECTION OF CONSTRUCTION PROJECTS

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Introduction

Many economic trends in modern world, economy like privatization, rehabilitation and reform regimes in developing countries in Afro – Asian range lead to tremendous increasing in infrastructure projects

Especially after wars like Afghanistan, Iraq, and Lebanon.

The most common infrastructure projects examples are:

- Power plants
- Transportation systems
- Airports and sea ports
- Roads, bridges, tunnels
- Water supply systems

Moreover, other large scale industrial projects, which contain huge, associated risks.

Parallel to these developments the financial difficulties make the revenue generation capacity of the projects more and more critical.

However, a sharp increase in demand for marine delay in start up has taken place in all developed and developing countries.

Marine Advanced Loss of Profit (ALOP) or Marine Delay in Start up

(Marine DSU) is relatively a new type of marine insurance vis-à-vis other types of marine insurance like cargo, hull and freight.

It is essential and plays a vital rule in the logistic system of infrastructure projects and industrial project during construction period.

This paper aims at providing a synoptic picture of marine DSU insurance cover, technical terms, underwriting and problems.

Marine DSU role in logistic process

In new era of transport and logistic, effective logistic management means "five rights" supply of "right product ", "right place ", "right time ", "right condition " and "right cost ".

Right time is the core of transportation system, which required adding time utility by making something available at the right time (Lambert; Stock, 1993).

For any project especially huge projects, delay in material delivery beyond scheduled time harms the project dramatically.

Cargo insurance has no role to play in the case of delay according to all forms of Institute Cargo Clauses (A), (B), and (C) (Witherby, 2005).

Condition 3.5 under all Institute sets of clauses excludes loss damage or expense proximately caused by delay, even though the delay is caused by a risk insured against (Hudson, 2003)

Marine DSU does not overcome this problem because it does not provide any cover for loss or damage to the subject-matter insured caused by delay.

Nevertheless, DSU provides insurance against consequential damage (loss of profit) to project under construction caused by delay in start-up resulting of delay in marine transport phase due to risk insured against under marine cargo insurance policy.

Therefore, the marine DSU plays a vital role in logistic system by mitigates the impact of delay in start up on ability of project to generate the profit during delay period.

The risk

The short cut to define insurance cover is to determine the risks to be covered by insurance policy.

For construction projects, we can classify the risks, which face the project to two bundles (Howard, 1997):

- On-site risks (usually are covered by engineering insurance policies including Contractor all Risks (CAR) and Erection all Risks (EAR) or similar policies.
- Off-site risks (usually are covered by marine cargo insurance policies through Institute Cargo

Clause (ICC) and Marine Delay in Start up (DSU))

- One of marine DSU that there is no standard policy wording like cargo insurance, so wordings, clauses and condition usually differ from company to another, but at the end of the day there is a some type of common thread running through all of them.
- The basic risk covered by marine DSU can be summarized as follows:
- Loss of Profit due to delay in the commencement of project, due to loss of, damage to or delay in the delivery of the property caused by:
- Any risk covered by marine cargo insurance, war and strikes risks (depend on marine cargo covered agreed. the most common covers: Institute Cargo Clauses "A". CL.252 dated 1/1/82, Institute War Clauses (Cargo) CL.255 dated 1/1/82 and Institute Strike Clauses (Cargo) CL.256 dated 1/1/82 and/or similar air clauses
- Any mechanical breakdown of or damage to the hull and machinery are covered under Institute Voyage Clauses - Hulls CL285 1.10.83 and/or Institute War and Strikes Clauses Hulls - Voyage CL295 1.10.83.
- Any mechanical breakdown of or damage to any other conveyance.
- Any risks covered under an Aircraft All Risks Policy (including War, Hi-jacking and allied perils).

- Obviously General Average, Salvage are covered by previous marine (cargo and hull) clauses.

Some wordings only restrict the cover to delay due to accident as insured under relevant marine cargo insurance policy (Bommeli, 2003).

The most common exclusions are:

- Loss due to any delay caused by or resulting from any restriction imposed by a public authority.
- Fines or damages for breach of contract
- Any loss, damage or expense due to or arising out of, directly or indirectly, nuclear reaction, radiation or radioactive contamination, regardless of how it was caused.
- Loss of or damage to the property

The Insured

During project construction, there is a mutual insurable interest in construction work, for both of principal and contractor.

Bank that provides loans for construction projects, often requires to be named as insured under insurance cover. (Bommeli, 2003).

In the light of lack of public finance and arising of BOT and BOO models the principals and contractors are considered as one entity (IMIA, 2000).

The Sum Insured

According to the economic theory, the main objective of any profit-making organization is Profit maximization and to generate reasonable ROI.

Therefore, delay in start up of project harmfully affects the economic target of project in question.

Actually, the loss of delay in start up is **Gross Profit** means the amount, or difference, by which sales revenue exceeds the cost of sales (Bennett, 2006).

This term has different concept in insurance technical jargon, the economic theory and accounting practice.

Gross profit consists of two different amounts:

Fixed cost: Cost that are invariants with respect to output, (included are the interest scheduled principle payments and hire on leased equipments) it is the amount that must be paid regardless the level of production.

Net Profit: The expected profit which has been lost due to delay in start up, and which would have been received if the delay not taken place.

Obviously, the variable costs cannot be covered under ALOP insurance, because this type of cost varies as output changes.

It is incurred only if there is no delay. As they are function of the output level.

By definition variable cost begins at zero when there is no production, simply it is the part of total cost that grows with output (Samuelson & Nordhaus, 1995)

Figure (2) illustrate the sum insured under the marine DSU, which is

usually determined in feasibility study.

If AC, BD and AE lines are variable cost, total cost and total revenue respectively.

The fixed cost (FC) is the difference between total cost and variable cost (CD) (obviously equal to AB).

While net profit is the difference between total revenue and total cost (DE).

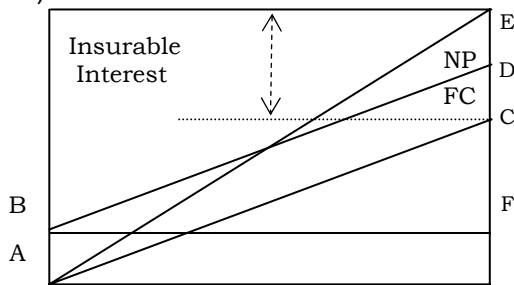


Figure (1): Marine DSU's Sum Insured

Therefore, the insurable interest is the gross profit (net profit plus fixed cost).

The Periods and Claims

1. Periods

DSU insurance policy includes many types of periods (Bommeli .2003).

Insurance Period: during which an insured event must occur to trigger the identifiable delay (starts with inception of shipment and ends with either the scheduled business commencement date (SBCD) cited in the work contact or completion date whichever is earlier).

Indemnity period: is the maximum length of time during which insurers agree to indemnity usually is between 6-24 months.

Deductible period (Time excess): also referred to as the waiting period, this period is usually about 3 months and delay within this period is not indemnifiable.

Figure (2) illustrate insurance period, indemnity period, deductible period, and the relationships between them.

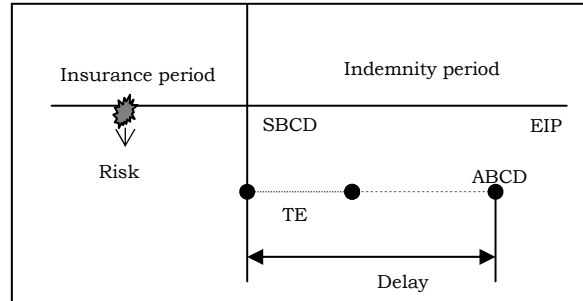


Figure (2): Indemnity and deductible periods
Source: based on (Bommeli, 2003)

So the indemnifiable delay is this which caused by insured peril during insurance period and beyond the time excess (the period a-ABCD).

2. Claims

Claim consists of the gross profit during indemnifiable part of delay.

The general formula of claim for gross profits is ((Bommeli, 2003) :

$$Claim = GP \times \frac{Delay - TE}{Delay}$$

If **GP:** gross profit during delay
TE: Time excess

Again, the gross profit amount is as estimated in feasibility study and if there are any economic changes (e.g. market prices), the sum insured must be reviewed accordingly.

Rationally increased costs of working (ICOW) must be a part of claim, these costs refer to any amount paid by insured to minimize or diminish the

loss and reduce the delay period, but economically it must be less than the amount of loss thereby avoided (Bommeli, 2003).

These costs may consist (IMIA, 2000):

- Use of additional personnel, working in several shifts and over the weekends
- Transport of spare parts by air, wherever possible
- Provisional repairs
- Speeded-up manufacture of spare parts for a higher price
- Use of leased machinery

Underwriting

The underwriting of marine DSU is slightly complicated because this type of insurance is a combination of engineering and cargo insurance.

Actually, there is no academic or professional works, which deal with the marine DSU underwriting or specific discipline in this respect.

Practically there are no rules, as some insurance companies like Swiss Re write this type of business by the way of endorsement attached to CAR or EAR policies, while other companies like AIG has considered it as a marine business and issue an integrated policy to cover both marine cargo and marine DSU.

Anyhow the main underwriting criteria for marine DSU are:

1. The marine cargo underwriting considerations

There is no doubt that the evaluation of risk which may lead to physical

damage harmfully impact the project's schedule, is the first step to write the DSU business

Therefore, in marine DSU the insured cargo itself should be written in the normal manner, the focus would be on (Mellert, 2000):

- Cargo itself (value and maximum limit per vessel, properties, sensitivity, packaging, dimensions, in hold /on deck.)
- Conveyance (vessel age, flag, liner/tramp, type, P&I, Inland conveyance)
- Voyage (length, route, transshipment, port facilities, warehousing quality)
- Physical environment (Geographical and natural issues)
- Socio-economic environment (Moral hazard, insured, consignee, ship owner)

In short what we are going to insure, How, Where and Who.

For infrastructure and large projects, some additional consideration must be taken into account.

- Used materials and equipment need very special assessment in relation to replacement possibility, repairing facilities, and cost in distention, Used machinery clause (non- institute clause) will be appropriate to control risk
- Any heavy or high irregular items need to special care in loading, unloading and handling.

The quality of carrying vessel can be controlled through implementation of Institute Classification Clause. CL.354.

2. DSU exclusive underwriting criteria

In addition to ordinary marine cargo underwriting criteria there are some other issues should be focused on in marine DSU underwriting .as follows:

2.1 Cargo related criteria

The concept of "**critical items**" is very important and core factor in marine DSU, the definition of critical items may differ from one insurance company to another according to underwriting practice and guidelines.

The main guideline that the critical items are those, which have a delay impact on project as whole if they are totally lost or badly damaged.

From author point of view, the critical item is one, which may need repairing or remanufacturing, testing and commissioning period more than time excess period or those which have an impact on critical path of project.

Those items need special consideration by underwriters in the term of their values, ratio of sum insured and shipping dates, methods and schedule.

2.2 Project related criteria

- Project schedule (Gantt chart is required).
- Critical path which is the longest continuous path of activities from beginning to end of a project. The

total time elapsed on the critical path, which will have zero total float, is the short duration of the project, so any delay in critical path activities will lead to delay in project as whole.

- Fixed cost of project including interests, loan instalments, rent and other fixed costs.
- Expected net profits according to feasibility study.
- Contingency plans should be analyzed to determine how to minimize the extent of a potential loss and establish appropriate and cost effective loss prevention measures to reduce interruption and delay (Bommeli, Swiss Re, 2003).
- Any waiver of subrogation rights in respect of any party (other than those named as insured (Al-Ajami, 2005).

2.3 Cover Limits

- If a Deferred Unpacking clause are required and if 50/50 clause is applicable.
- Indemnity period and time excess required.
- Reinsurance facilities and limits available.

Rating

The rate depends on underwriting process, indemnity period, time excess and sum insured.

In market, practice there is no standard rate because the characteristics of the projects are

widely different but it is approximately between 0.60% - 1.3% (does not include marine cargo rate) and usually is expressed in the term of days.

Marine DSU Problems

Marine DSU has some problematic features, which can be summarized as follows:

- Lack of qualified underwriters especially in Middle East and African market, especially that marine DSU underwriting requires a team of expertise, An ideal team consist of marine underwriter, Engineering underwriter, marine loss control expertise and claim handler.
- Projects under construction are considered as a multi-line account because brokers and clients prefer to place CAR, EAR and Marine DSU with the same company and this may lead to some type of adverse selection.
- Heterogeneous portfolio of risks, which may lead to some difficulty in portfolio management and reinsurance arrangements.
- Soft market conditions may force the extension of the incidents covered under the DSU beyond the basic Marine Transit policy (Copland, 2001)
- Overlap of insured and non-insured perils may lead to some complications in claim settlement.
- There is no reinstatement available; the cover cannot be

reinstated since only one delay is permissible (Bommeli, 2003).

- Marine DSU need surveying and marine loss control efforts specially for critical items and "Shipping Schedule Clause" usually used and any shipping dates being delayed or deferred by more than stated period (approximately one month), underwriters are to be promptly notified. ■

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